LAXMI CHARITABLE TRUST'S
SMT. H.L.U. & SH. M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. E. BALASAHEB DEVKATA MARG, ANDHERI (E), MUMBAI - 400 069

Teaching Plan and Implementation Record (2021-24)

Department	BMMC
Name of Teacher	Prof. Manisha Mithal Tayade

Class: BMMC Semester: I Subject: Fundamentals of Mass Communication Subject Code: [illegible]

No. of lectures Allotted per week: 04 No. Of lectures Covered per Semester: 39 No. Of lectures Allotted per Semester: 48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per week
August	Module I: Introduction and Overview 1. Meaning and importance of Mass Communication 2. Forms of Communication Intra Personal Communication, Interpersonal Communication, Group Communication, Mass Communication, Electronic, Satellite, Interactive, Digital Communication etc. 3. Models of Communication: Gerbner's Model, Psychological Model, Gatekeeping Model, DeFleur's Model of the Twice-Differentiated Audience Model, Hub Model, Sadhanawadam Module II: History of Mass Communication 1. From Oral to Communication (Kirtan, Dawandi, Powada, Jagran) 2. From Electric to Electronic communication, From Electric to Digital Communication, Contemporary Scene in Indian Communication Landscape	Module I: Introduction and Overview 1. Meaning and importance of Mass Communication 2. Forms of Communication Intra Personal Communication, Interpersonal Communication, Group Communication, Mass Communication, Electronic, Satellite, Interactive, Digital Communication etc. 3. Models of Communication: Gerbner's Model, Psychological Model, Gatekeeping Model, DeFleur's Model of the Twice-Differentiated Audience Model, Hub Model, Sadhanawadam Module II: History of Mass Communication 1. From Oral to Communication (Kirtan, Dawandi, Powada, Jagran) 2. From Electric to Electronic communication, From Electric to Digital Communication, Contemporary Scene in Indian Communication Landscape	10 (10 lectures lecture conducted from Module [illegible])
September	Module III: Major Forms of Mass Media 1. Traditional and Folk Media 2. Print: Books, Newspapers, Magazines 3. Broadcast: Television, Radio 4. Film 5. Internet	Module III: Major Forms of Mass Media 1. Traditional and Folk Media 2. Print: Books, Newspapers, Magazines 3. Broadcast: Television, Radio Practical not covered as per Topic proposed	8+2 (includes lecture conducted of lectures less as per TT due to unavoidable reasons. Capacity Charcoal)

			group to other subjects.
October	4. Films 5. Internet Module IV: Impact of Mass Media on Society 1.a. Social Impact (with social reformers who have successfully used mass communication) b. Political impact (with political leaders who have successfully used mass communication) c. Economic Impact (With how economic changes were brought about by mass communication) d. Development Impact (With how the government has successfully used in mass communication) 2. Impact of mass media on a. Education, b. Children c. Women d. Culture e. Youth f. Development Module V: The New Media and Media Convergence 1. Elements and features of new media. Technologies used in new media. 2. Major Challenges to new media Acquaintance, personal, social and national 3. Future prospects	4. Films 5. Internet Module IV: Impact of Mass Media on Society 1.a. Social Impact (with social reformers who have successfully used mass communication) b. Political impact (with political leaders who have successfully used mass communication) c. Economic Impact (With how economic changes were brought about by mass communication) d. Development Impact (With how the government has successfully used in mass communication) 2. Impact of mass media on a. Education, b. Children c. Women d. Culture e. Youth f. Development Module V: The New Media and Media Convergence 1. Elements and features of new media. Technologies used in new media. 2. Major Challenges to new media Acquaintance, personal, social and national 3. Future prospects	29 80 lectures extra as per TT (To complete the portion)
November		Remedial lectures	30 (Includes remedial lectures) Portion over as on 30th November and Events months Nigeria Exam (10th November 2021)

Signature of Coordinator: Signature of Subject Teacher:

LADDA CHARITABLE TRUST'S
SMT. M.C.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI - 400 069

Teaching Plan and Implementation Record (TPIR-04)

Department:	Academic:
Name of Teacher:	Mr. Sumeet Singh
Class: BA(MC) Semester: I	Subject: Visual Communication Subject Code: [illegible]
No. of lectures Allotted per week: 04	No. Of lectures Covered per Semester: 47 No. Of lectures Adjusted per Semester: 00

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
August	Module I: Development in Visual Communication Introduction to Visual Communication 1. History and Development of Visuals 2. Need and Importance of Visual Communication 3. Visual Communication as a process and as an Expression, Language and Visual Communication 4. Visible Concepts a. Photo and Representational Charts b. Maps c. Chronologies 5. Invisible Concepts a. Communication Theories b. Feelings or attitudes Module II: Theories of Visual Communication 1. Normal Theories a. Gestalt b. Constructivist c. Ecological 2. Perceptual Theories a. Semiotics b. Cognitive	Module I: Development in Visual Communication Introduction to Visual Communication 1. History and Development of Visuals 2. Need and Importance of Visual Communication 3. Visual Communication as a process and as an Expression, Language and Visual Communication 4. Visible Concepts a. Photo and Representational Charts b. Maps c. Chronologies 5. Invisible Concepts a. Communication Theories b. Feelings or attitudes Module II: Theories of Visual Communication 1. Normal Theories a. Gestalt b. Constructivist c. Ecological 2. Perceptual Theories a. Semiotics b. Cognitive	23 (Syllabus Completed) Note: Module (III) lectures will be per TT Conducted due to Digital teaching Sessions
September	Module III: Impact of Colour Colour and Design in Visual Communication (Part)	Module III: Impact of Colour Colour and Design in Visual Communication	24 (Includes internal exams) (Lectures will be due to digital teaching)

	1. Color Theory	1. Color Theory	Activity: Digital marketing webinar Garnish Chakraborty, Business and B2B Marketing
October	2. Psychological Implications of color 3. Colors and Visual Pleasure 4. Elements of Design Module IV: Channels of Visual Communication Topic: Mediums of Visual communication: a. Painting and Photography b. Film and Television, Documentaries, Script Writing and Visualization c. Comics and cartoons, Digital Images, Animation and VFX d. News Papers, Advertisements, Photojournalism e. Folk and Performing Arts, Theatre Module V: Language and Culture in the age of Social Media Visual Communication in the Age of Social Media a. Ethics b. Impact of Language and Culture, Images and Messages, Signs and Symbols (CEP, etc.)	2. Psychological Implications of color 3. Colors and Visual Pleasure 4. Elements of Design Module IV: Channels of Visual Communication Topic: Mediums of Visual communication: a. Painting and Photography b. Film and Television, Documentaries, Script Writing and Visualization c. Comics and cartoons, Digital Images, Animation and VFX d. News Papers, Advertisements, Photojournalism e. Folk and Performing Arts, Theatre Module V: Language and Culture in the age of Social Media Visual Communication in the Age of Social Media a. Ethics b. Impact of Language and Culture, Images and Messages, Signs and Symbols (CEP, etc.)	16
November	c. Audience Behavior d. Culture Socialization, Group Visual e. Visual Stereotyping in Social Media	c. Audience Behavior d. Culture Socialization, Group Visual e. Visual Stereotyping in Social Media **Remedial lectures**	2+4 (includes remedial lectures) Business and B2B Networking and Trends webinar Angus Kum Tchin Networking 2021

Signature of Coordinator: _____ Signature of Subject Teacher: _____

LAXMI CHANDMAL TRUST'S
SHETH J.T. & SHRIMATI V.D. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, SYKES RD (E), MUMBAI – 400 060

Teaching Plan and Implementation Record (2023-24)

Department:	[illegible]
Name of Teacher	Ms. Namrata Singh
Class: [illegible] Semester: I	Subject: History of Media

No. of lectures allotted per week: [illegible] | No. Of lectures Covered per Semester: 42 | No. Of lectures scheduled per Semester: 48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
August	Module I Introduction: Evolution of Press in India: 1. Newspaper: The Rise of the Voice of India during British Rule 2. India's Freedom Struggle and role of Media 3. Independence and Rise of Newspapers Newspapers: A Social Aspect for Freedom Struggle, Press Acts of India 4. Press during the Emergency Period Module II Language Press: History of Indian Language Press in India: 1. Rise of Hindi Language Newspapers (detailed report on Vernacular Press in India referring to Newspapers) 2. Regional genre and its popularity of Indian Regional Languages in various regards 3. Vernacular Press Act, 1878	Module I Introduction: Evolution of Press in India: 1. Newspaper: The Rise of the Voice of India during British Rule 2. India's Freedom Struggle and role of Media 3. Independence and Rise of Newspapers Newspapers: A Social Aspect for Freedom Struggle, Press Acts of India 4. Press during the Emergency Period Module II Language Press: History of Indian Language Press in India: 1. Rise of Hindi Language Newspapers (detailed report on Vernacular Press in India referring to Newspapers) 2. Regional genre and its popularity of Indian Regional Languages in various regards 3. Vernacular Press Act, 1878	17 (3 hours for lecture assessment from [illegible] 31 lecture cases as per TT)
September	Module III Documentary and Films: History of Documentary and Films: 1. Genesis of Documentary and Short Films (Screening of a few documentary is essential: Raj Hindustan Hamara, Tulsi, The Vanishing Tribe) 2. Rise of Documentaries: P.S. Patty, G.G. Sadhikar, K.S.Hariharan Paul Zile and Walt Richardson, Anand Patwardhan 3. Evolution of Film Making in India: Short Motion, Photographic or Moving Films 4. Origin of Dark Comedy	Module III Documentary and Films: History of Documentary and Films: 1. Genesis of Documentary and Short Films (Screening of a few documentary is essential: Raj Hindustan Hamara, Tulsi, The Vanishing Tribe) Practicals not covered as per topics proposed	16+1 (include internal exam) (2 lectures free as per TT due to Library work, Guardians, Classes, University exam)

			[illegible]
[illegible]	1. Role of Documentaries: P.V. Pathy, D.G. Tendulkar, K. L. Khandpur, Paul Zils and Tali Wilkinson, Anand Patwardhan 2. Evolution of Film Making in India: Brief History, Photography in Moving Films 3. Origin of Short Cinema 4. Origin of Short Films in which is India, Role of Nanda and Mihir Ajay 5. Great Masters of Short Cinema Module IV: Broadcasting History of Radio and Television in India 1. Radio and Television as Mass Media 2. Radio and Television Broadcasting a. The beginning of Radio and Television News b. A New Era in Broadcasting in India c. Satellite Television and Privatization in Broadcasting d. Advertising in India 3. Internet Protocol Television Module V: Media Icons Role of Media Icons in the History of Indian Media 1. Raja Rammohan Roy 2. Bal Gangadhar Tilak 3. M.K. Gandhi 4. B.R. Ambedkar 5. K.P.Karuna Moyee 6. K.C. Mammen Mapillai 7. Maulana Abul Kalam Azad	1. Role of Documentaries: P.V. Pathy, D.G. Tendulkar, K. L. Khandpur, Paul Zils and Tali Wilkinson, Anand Patwardhan 2. Evolution of Film Making in India: Brief History, Photography in Moving Films 3. Origin of Short Cinema 4. Origin of Short Films in which is India, Role of Nanda and Mihir Ajay 5. Great Masters of Short Cinema Module IV: Broadcasting History of Radio and Television in India 1. Radio and Television as Mass Media 2. Radio and Television Broadcasting a. The beginning of Radio and Television News b. A New Era in Broadcasting in India c. Satellite Television and Privatization in Broadcasting d. Advertising in India 3. Internet Protocol Television Module V: Media Icons Role of Media Icons in the History of Indian Media 1. Raja Rammohan Roy 2. Bal Gangadhar Tilak 3. M.K. Gandhi **Portion not covered as per major proposal** 4. B.R. Ambedkar 5. K.P.Karuna Moyee 6. K.C. Mammen Mapillai 7. Maulana Abul Kalam Azad **Remedial Sessions**	[illegible]
[illegible]			[illegible]

Signature of Coordinator

Signature of Subject Teacher

LAXMI CHARITABLE TRUST'S
SHETTY AND KARKERA COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANTHERLI (E), MUMBAI – 400 099

Teaching Plan and Implementation Record (2023-24)

Department:	**BAMMC**
Name of Teacher:	Ms. Namrata Singh

Class: BAMMC **Semester:** I **Subject:** Foundation Course- I **Subject Code:** [illegible]

No. of lectures allotted per week: [illegible] **No. Of lectures Conducted per Semester:** [illegible] **No. Of lectures Allotted per Semester:** [illegible]

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
August	1. Overview of India Society Understand the Multicultural diversity of Indian Society through its demographic compositions. Population distribution according to religions, caste, and gender Appreciate the concept of Linguistic diversity in relation to the Indian situation Understand regional variations according to rural, urban, and tribal characteristics Understanding the concept of diversity as difference 2. Concept of Disparity-I Understand the concept of disparity as arising out of stratification and inequality Explore the disparities arising out of gender with special reference to violence against women. Female Foeticide (declining sex ratio), Portrayal of Women in Media Appreciate the inequalities faced by people with disabilities and understand the issues of people with physical and mental disabilities 3. Concept Disparity-II Examine inequalities experienced due to the caste system and inter-group conflicts arising thereof.	1. Overview of India Society Understand the Multicultural diversity of Indian Society through its demographic compositions. Population distribution according to religions, caste, and gender Appreciate the concept of Linguistic diversity in relation to the Indian situation Understand regional variations according to rural, urban, and tribal characteristics Understanding the concept of diversity as difference 2. Concept of Disparity-I Understand the concept of disparity as arising out of stratification and inequality Explore the disparities arising out of gender with special reference to violence against women. Female Foeticide (declining sex ratio), Portrayal of Women in Media Appreciate the inequalities faced by people with disabilities and understand the issues of people with physical and mental disabilities **Portion not cover as per proposed topics**	1st [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

September	3. Concept Disparity-II Economic inequalities manifested due to the caste system and inter-group conflicts arising thereof. Understand inter-group conflicts arising out of communalism. Examine the causes and effects of conflicts arising out of regionalism and linguistic differences. 4. The Indian Constitution: Philosophy of the Constitution as set out in the Preamble The Structure of the Constitution: the Preamble, Main Body, and Schedules, Fundamental Duties of the Indian Citizen Tolerance.	3. Concept Disparity-II. Economic inequalities manifested due to the caste system and inter-group conflicts arising thereof. Understand inter-group conflicts arising out of communalism. Examine the causes and effects of conflicts arising out of regionalism and linguistic differences. **Portion not cover as per proposed topics**	4+2 (Include mental exams) 10 lectures due to pre TT, due to examination supervision, Guardians, Guardi Classes and Aspire (Activity) Activities.
October	4. The Indian Constitution: Philosophy of the Constitution as set out in the Preamble The Structure of the Constitution: the Preamble, Main Body, and Schedules, Fundamental Duties of the Indian Citizen Tolerance. Power, and Communal harmony as crucial values in strengthening the social fabric of Indian society. Basic features of the Constitution. 5. Significant Aspects of Political Processes The party system in Indian Politics Local self government in Urban and Rural areas The 73rd & 74th Amendments and their implications for inclusive politics Role and significance of women in politics.	4. The Indian Constitution: Philosophy of the Constitution as set out in the Preamble The Structure of the Constitution: the Preamble, Main Body, and Schedules, Fundamental Duties of the Indian Citizen Tolerance. Power, and Communal harmony as crucial values in strengthening the social fabric of Indian society. Basic features of the Constitution. 5. Significant Aspects of Political Processes The party system in Indian Politics **Portion not cover as per the schedule**	14 02 lectures due to pre TT because giving to other subjects
November	Local self government in Urban and Rural areas The 73rd & 74th Amendments and their implications for inclusive politics Role and significance of women in politics.	Local self government in Urban and Rural areas The 73rd & 74th Amendments and their implications for inclusive politics Role and significance of women in politics. **Remedial and Revision lectures**	2+2 (Include mental exams) Portion over as per DM, Revision and Cover revision lectures from 11th November, 2022

Signature of Coordinator: Signature of Subject Teacher:

[illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Report (2023-24)

Department:	[illegible]
Name of Teacher:	Mr. Charan Shah

Class: [illegible] Semester: [illegible] Subject: Effective Communication-I Subject Code: [illegible]

No. of lectures scheduled per week: [illegible] No. of lectures conducted per Semester: [illegible] No. of lectures scheduled per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
August	Module I Introduction to Communication 1. The concept of communication: Communication, its concepts, process, importance of Communication in Media, Difference between Technical and General Communication, Barriers to Communication, Measures to Overcome the Barriers to Communication 2. Types of Communication: Types of Communication: Verbal Communication: Importance of verbal communication Advantages of verbal communication: Significance of Non-verbal Communication 3. Oral Communication and Media: Anchoring, news, moderation, interview, public speaking, mock plays, panel discussions, news wrap, elocution, debates and group discussion 4. Listening Skills: Listening Process, Classification of listening, Purpose of Listening, Common Barriers in the Listening Process, Measures to Improving Listening, Listening as an organized Skill in Workplace. Module II Reading: English, Hindi or Marathi 1. Types of Reading: Types of reading, skimming and scanning Reading examples newspaper/ Magazine article, TV.	Module I Introduction to Communication 1. The concept of communication: Communication, its concepts, process, importance of Communication in Media, Difference between Technical and General Communication, Barriers to Communication, Measures to Overcome the Barriers to Communication 2. Types of Communication: Types of Communication: Verbal Communication: Importance of verbal communication Advantages of verbal communication: Significance of Non-verbal Communication 3. Oral Communication and Media: Anchoring, news, moderation, interview, public speaking, mock plays, panel discussions, news wrap, elocution, debates and group discussion 4. Listening Skills: Listening Process, Classification of listening, Purpose of Listening, Common Barriers in the Listening Process, Measures to Improving Listening, Listening as an organized Skill in Workplace. Module II Reading: English, Hindi or Marathi 1. Types of Reading: Types of reading, skimming and scanning Reading examples newspaper/ Magazine article, TV.	12 (Theoretical Periods, commencement from: [illegible] 21 August from as per TT time table + Implementation Activities

September	Dialect and documentary, radio bulletins, advertising, copy-points, tutorial in English, Hindi or Marathi. Recognizing aspects of language particularly in media. Importance of spelling. 2. Various aspects of language: Recognizing various aspects of language particularly related to media. Vocabulary: 100 media words. 3. Grammar and Usage: Grammatical structure, spelling, the structure of sentences, Active/ Passive voice, tenses, idioms, Phrases, proper usage of homophones, homonyms etc. Module III: Thinking and Presentation 1. Thinking: Types of thinking (rational, logical, critical, lateral, etc.) Errors in thinking, Formulate, Time scale, Egocentricity, Prejudices, alternate Thinking.	Dialect and documentary, radio bulletins, advertising, copy-points tutorial in English, Hindi or Marathi. Recognizing aspects of language particularly in media. Importance of spelling. 2. Various aspects of language: Recognizing various aspects of language particularly related to media. Vocabulary: 100 media words. 3. Grammar and Usage: Grammatical structure, spelling, the structure of sentences, Active/ Passive voice, tenses, idioms, Phrases, proper usage of homophones, homonyms etc. **Practice not covered as per Topic assignment**	[illegible]
October	Module III: Thinking and Presentation 1. Thinking: Types of thinking (rational, logical, critical, lateral, etc.) Errors in thinking, Formulate, Time scale, Egocentricity, Prejudices, alternate Thinking. 2. Presentation: Presentation, its importance, steps in making a presentation, delivering a Presentation. Module IV: Translation 1. Introduction to Translation: Concept, importance, need for translation, challenges in translation problems, and importance of information and Technology in translation.	Module III: Thinking and Presentation 1. Thinking: Types of thinking (rational, logical, critical, lateral, etc.) Errors in thinking, Formulate, Time scale, Egocentricity, Prejudices, alternate Thinking. 2. Presentation: Presentation, its importance, steps in making a presentation, delivering a Presentation. Module IV: Translation 1. Introduction to Translation: Concept, importance, need for translation, challenges in translation problems, and importance of information and Technology in translation.	[illegible]
November	2. Interpretation: Meaning, Difference between interpretation and translation. 3. Role of a translator: Translator and its Role in Media, Qualities, importance of Translators Challenges faced by the translator.	2. Interpretation: Meaning, Difference between interpretation and translation. 3. Role of a translator: Translator and its Role in Media, Qualities, Importance of Translators Challenges faced by the translator. **Remedial Lectures**	[illegible]

Signature of the coordinator: _____ Signature of Subject Teacher: _____

[illegible] CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI - 400 069

Teaching Plan and Implementation Record (2023-24)

Programme:		[illegible]	
Name of Teacher:		[illegible]	
Class: [illegible] Semester: I	Subject: Current Affairs		Subject Code: [illegible]
No. of lectures allotted per week: [illegible]	No. of lectures conducted per semester: [illegible]		No. of lectures allotted per semester: [illegible]

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
August	Module I: Current National issues 1. Three political stories of national importance 2. Political Leaders Introduction of the leaders (brief profile of any three) 3. One developing economic / business story 4. One developing environment story (issue) 5. One story of current importance from any other genre Module II: Policy and Governance 1. Ministries of Government of India Autonomous Government bodies 2. Ministry of Home Affairs Enforcement Organizations, Internal Security, Police 3. Communal violence Review of latest episodes of communal tensions 4. Terrorism in J&K Background, Political players, Update on the current situation 5. Review of any three Central Government projects and Policies	**(During every current affairs lecture, students came with 3 current news and discussed it)** Module I: Current National issues 1. Three political stories of national importance 2. Political Leaders Introduction of the leaders (brief profile of any three) **Discussed about Narendra Modi and his [illegible] development and on-going projects** 3. One developing economic / business story 4. One developing environment story (issue) **Discussed about pollution [illegible] Delhi city as case study** 5. One story of current importance from any other genre Module II: Policy and Governance 1. Ministries of Government of India Autonomous Government bodies 2. Ministry of Home Affairs Enforcement Organizations, Internal Security, Police 3. Communal violence Review of latest episodes of communal tensions 4. Terrorism in J&K Background, Political players, Update on the current situation **Portion not covered as per the proposed topic.**	**[illegible]** **(Semester lecture commenced from [illegible])** **[illegible]**

September	5. Review of any local Central Government projects and Policies. Module III: Investment Affairs: 1. Security Council: Structure and role 2. Issues that currently engage the SC 3. Role of United Nations General Assembly. (Also mark regular of the UNGA) 4. Issues that currently engage the UNGA 5. Find conflicts: issues of international importance Module IV: Maharashtra Issues: 1. Political parties track and challenge politics of leaders 2. An update on the current political dynamics of Maharashtra	5. Review of any local Central Government projects and Policies. Module III: Investment Affairs: 1. Security Council: Structure and role 2. Issues that currently engage the SC 3. Role of United Nations General Assembly. (Also mark regular of the UNGA) **Partners are invited as per the proposed topic**	6-12 (includes holidays weekend) 7 hrs (includes 30 min of CT class or 1 district update) Geographic, Economic & Security and Human Economic Interface
October	4. Issues that currently engage the UNGA 5. Find conflicts: issues of international importance Module IV: Maharashtra Issues: 1. Political parties track and challenge politics of leaders 2. An update on the current political dynamics of Maharashtra 3. Issues relating to the marginalized and displaced tribes 4. The interviews on Hindi and thoughts: mainstreaming, health issues, etc. 5. Update from ongoing new projects Module V: Technology: 1. Mobile Applications for Journalists Mobile apps help in content creation. Examples of Mobile apps used for journalistic worldwide 2. Artificial Intelligence and Content Automation Tools: Introduction to AI and data science. Introduction to Content Automation tools. Examples of content automation tools in content creation	4. Issues that currently engage the UNGA 5. Find conflicts: issues of international importance Module IV: Maharashtra Issues: 1. Political parties track and challenge politics of leaders 2. An update on the current political dynamics of Maharashtra **Discussion the current political scenario with students and how women from also a part of leaders/ing people** 3. Issues relating to the marginalized and displaced tribes 4. The interviews on Hindi and thoughts: mainstreaming, health issues, etc. **Talked about innovative happening with all over the world** 5. Update from ongoing new projects Module V: Technology: 1. Mobile Applications for Journalists Mobile apps help in content creation. Examples of Mobile apps used for journalistic worldwide 2. Artificial Intelligence and Content Automation Tools: Introduction to AI and data science.	14 (includes holiday on Oct 2) 7 hrs

November	Introduction to Content Automation tools, Examples of content automation tools in content creation. 3. Augmented Reality and Virtual Reality in Media. Introduction to Augmented Reality, Introduction to Virtual Reality, Examples of Augmented Reality games and apps, Examples of Virtual Reality news websites worldwide. 4. Digital Gaming Industry: Introduction to Digital Gaming Industry.	Introduction to Content Automation tools, Examples of content automation tools in content creation. 3. Augmented Reality and Virtual Reality in Media. Introduction to Augmented Reality, Introduction to Virtual Reality, Examples of Augmented Reality games and apps, Examples of Virtual Reality news websites worldwide. 4. Digital Gaming Industry: Introduction to Digital Gaming Industry. Beautiful Lecture	B.Tech (Lecturer in Computer Science) Passout civil in the 1996 Secondary and Overall Graduate degree from CSE Foundation, PCCT

Signature of Coordinator: _____ Signature of Subject Teacher: _____

LAYAK CHARITABLE TRUST'S
SMT. [illegible] & SH. M.Y. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. E. BAHASAHEB [illegible] MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (TICI-24)

Department	BAMMC
Name of Teacher	Ms. Charmi Shah

Class: BAMMC Semester: 5	Subject: Effective Communication-II	Subject Code: BAMMC[illegible]-104
No. of lectures allotted per week: 04	No. Of lectures Covered per Semester: 44	No. Of lectures Allotted per Semester: 48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
December	Module 1 Writing 1. Report Writing Report Writing (English, Hindi or Marathi) General report and News report writing: Basics and Content (Headlines, Sub-headline). Various type of Reports 2. Organizational Writing (English, Hindi or Marathi) Internal communication E-mail: E-mail Etiquette, Overcoming Problems in E-mail Communication. Notice Action communication Circulars: Guidelines for writing a circular: Language and writing style of a circular: Format of a circular.	Module 1 Writing 1. Report Writing Report Writing (English, Hindi or Marathi) General report and News report writing: Basics and Content (Headlines, Sub-headline, Various type of Reports) 2. Organizational Writing (English, Hindi or Marathi) Internal communication E-mail: E-mail Etiquette, Overcoming Problems in E-mail Communication. Notice Action communication **Portion not covered as per proposed topics**	27 (Extension lectures commenced from 11/12/2023) 07 lectures done as per TT due to Cultural days, Christmas and New Year Holidays
January	Circulars: Guidelines for writing a circular: Language and writing style of a circular: Format of a circular. Notices: Purpose: Issues: Important points to remember while writing a notice Letters of Complaints, Claims and Adjustments Customer Grievance letters. Letters under the Right to Information Act Press Release	Circulars: Guidelines for writing a circular: Language and writing style of a circular: Format of a circular. Notices: Purpose: Issues: Important points to remember while writing a notice Letters of Complaints, Claims and Adjustments Customer Grievance letters. Letters under the Right to Information Act Press Release	17 04 lectures done as per TT due to Digital marketing add-on course and Annual Day

	Letter to the Editor 1. Writing for Publicity Materials (English, Hindi or Marathi) Headline, Sub-headline, Body copy, Slogan, Radio Jingles, Advertising spot Module-II Editing Editing (English, Hindi and Marathi) Principles of Editing Paraphrasing, Substitution of words, Rearrangement of sentences, Re-organizing sentences expected in a paragraph, Use of link words (Principles of Coherence and Cohesion) Writing Synopsis, Abstracts, Precis writing, Newspaper Editing and Magazine editing.	Letter to the Editor 1. Writing for Publicity Materials (English, Hindi or Marathi) Headline, Sub-headline, Body copy, Slogan, Radio Jingles, Advertising spot Module-II Editing Editing (English, Hindi and Marathi) Principles of Editing Paraphrasing, Substitution of words, Rearrangement of sentences, Re-organizing sentences expected in a paragraph, Use of link words (Principles of Coherence and Cohesion) **Practicals are conducted as per programmed topics**	
February	Writing Synopsis, Abstracts, Precis writing, Newspaper Editing and Magazine editing. Module-III Paraphrasing and Summarizing 1. Paraphrasing: Meaning, How to use paraphrase in communication, Paraphrase vs plagiarism, Translation 2. Summarization: Summarizing contents, the points and sub points and the logical connection between the points	Writing Synopsis, Abstracts, Precis writing, Newspaper Editing and Magazine editing. Module-III Paraphrasing and Summarizing 1. Paraphrasing: Meaning, How to use paraphrase in communication, Paraphrase vs plagiarism, Translation **Practicals are conducted as per programmed topics**	12-14 Lectures (internal marks) 02 lectures (for as per TT due to given on other subjects)
March	2. Summarization: Summarizing contents, the points and sub points and the logical connection between the points Module-IV Interpretation of Technical Data Interpret Technical Data, Bread graphs, Maps, Charts, Write content based on the data provided	2. Summarization: Summarizing contents, the points and sub points and the logical connection between the points Module-IV Interpretation of Technical Data Interpret Technical Data, Bread graphs, Maps, Charts, Write content based on the data provided **Remedial lectures / Doubt solving lectures**	7-11 Lectures (internal marks) 06 lectures (for further TT due to ATKT students participation)

Signature of Coordinator: _____ **Signature of Subject Teacher:** _____

[illegible] CHARITABLE TRUST'S
[illegible] ARTS, SCIENCE & COMMERCE
DR. V. BANDARKAR'S [illegible] COLLEGE, [illegible]

Teaching Plan and Implementation Report (2023-24)

Department:		**BA(VOC)**	
Name of Teacher:		**Ms. Namrata [illegible]**	
Class: BA(VOC) [illegible]	**Subject:**	**Foundation Course: II**	**Subject Code:** [illegible]
No. of lectures Allotted per week: [illegible]	**No. of lectures Conducted per Semester:** [illegible]		**No. of lectures Allotted per Semester:** [illegible]

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
December	1. Globalization and Indian Society Understanding the concepts of Globalization, privatization & globalization. Growth of Information technology and communication and its impact [illegible] Impact of globalization on industry: changes in employment and increasing migration. Changes in agrarian sector due to globalization. Rise in Corporate farming and increase in farmer's suicides 2. Human Rights Concept of Human Rights: Origin and Evolution of the concept. The Universal Declaration of Human Rights.	1. Globalization and Indian Society Understanding the concepts of Globalization, privatization & globalization. Growth of Information technology and communication and its impact [illegible] **Portion not covered as per prescribed topics**	[illegible] lectures commenced from [illegible] [illegible] lectures held as per TT due to [illegible] Vice, Digital marketing, online course and [illegible]
January	Impact of globalization on industry: changes in employment and increasing migration. Changes in agrarian sector due to globalization. Rise in Corporate farming and increase in farmer's suicides 2. Human Rights Concept of Human Rights: Origin and Evolution of the concept. The Universal Declaration of Human Rights.	Impact of globalization on industry: changes in employment and increasing migration. Changes in agrarian sector due to globalization. Rise in Corporate farming and increase in farmer's suicides 2. Human Rights Concept of Human Rights: Origin and Evolution of the concept. The Universal Declaration of Human Rights. Human Rights jurisprudence with special reference to Fundamental Rights, [illegible] in the Constitution.	11 All lectures held as per TT due to Digital marketing, online course, Vibes, [illegible]

	Human Rights, environmental with special reference to Constitutional Rights vested in the Constitution 1. Ecology: Importance of Environmental studies in the current developmental context.	**Portion not covered as per proposed topics**	and Natural Disc
February	1. Ecology: Importance of Environmental studies in the current developmental context. Understanding concepts of Environment, Ecology and their interrelationships. Environment as natural capital and concerns for quality of human life. Environmental Degradation: causes and impact on human life. Sustainable development: concept and contemporary priority and environment. 4. Understanding Stress and Conflict Causes of stress and conflict in individuals and society. Agents of socialization and the role played by them in developing the individual. Significance of values, ethics and propriety in developing the state school. Understanding and propriety as significant factors in causing conflict in society.	1. Ecology: Importance of Environmental studies in the current developmental context. Understanding concepts of Environment, Ecology and their interrelationships. Environment as natural capital and concerns for quality of human life. Environmental Degradation: causes and impact on human life. Sustainable development: concept and contemporary priority and environment. 4. Understanding Stress and Conflict Causes of stress and conflict in individuals and society. Agents of socialization and the role played by them in developing the individual. Significance of values, ethics and propriety in developing the state school. **Portion not covered as per proposed topics** Understanding and propriety as significant factors in causing conflict in society. Aggression and violence as the public expression of conflict	11.1.2. includes internal exams 2 lectures lost as you 2.3. Day to PCM Reading and group or other activity
March	Stress and propriety as significant factors in causing conflict in society. Aggression and violence as the public expression of conflict 5. Managing Stress and Conflict in Contemporary Society Types of conflicts and use of coping mechanisms for managing individual stress. Modern Theory of self-actualization. Different methods of expressing conflict in society. Conflict resolution and efforts towards building peace and harmony in society	5. Managing Stress and Conflict in Contemporary Society Types of conflicts and use of coping mechanisms for managing individual stress. Modern theory of self-actualization. Different methods of expressing conflict in society. Conflict resolution and efforts towards building peace and harmony in society **Remedial Activity** Assignment of Subject Teacher	10.1. includes internal exams 10 lectures lost as you go to other activity. Calculated Day to M.M.S. AB.L Leave and portion work

Principal with verification

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department:	**SLOTS:**
Name of Teacher:	**Ch. Venkata Swati**

Class: [illegible] **Semester:** [illegible] **Subject:** **Literature Writing** **Subject Code:** [illegible]

No. of lectures Allotted per week: [illegible] **No. Of lectures Conducted per Semester:** [illegible] **No. Of lectures Allotted per Semester:** [illegible]

Month of Teaching	Topic Proposed	Topic Covered	No. of lectures per topic
November	Module-4 Guidelines: 1. Literature Reflection: Role-special emphasis on use of [illegible] production, capital labor and [illegible] 2. Foundation Building: Meaning, scope of study, [illegible] 3. Literary critics: Hermeneutics and [illegible] theory 4. Literature of Dissent [illegible]: Role emphasis on writing [illegible] topic and structure Module-4 Teaching Skills: 1. Relational words: Identifying subordinate words and phrases and connecting them 2. Giving instructions: Giving subordinate words, phrases and [illegible] in a meaningful way, [illegible] grammatical errors 3. Giving explanations: Giving subordinate words, phrases and [illegible] in a meaningful way, [illegible] grammatical errors	Module-4 Guidelines: 1. Literature Reflection: Role-special emphasis on use of [illegible] production, capital labor and [illegible] 2. Foundation Building: Meaning, scope of study, [illegible] 3. Literary critics: Hermeneutics and [illegible] 4. Literature of Dissent [illegible]: Role emphasis on writing [illegible] topic and structure **Revision and covered as per proposed topics**	[illegible]
January	Module-4 Teaching Skills: 1. Relational words: Identifying subordinate words and phrases and connecting them 2. Giving instructions: Giving subordinate words, phrases and [illegible] in a meaningful way, [illegible] grammatical errors 3. Giving explanations: Giving subordinate words, phrases and [illegible] in a meaningful way, [illegible] grammatical errors 4. Giving Feedback: Giving subordinate words, phrases and [illegible] in a meaningful way, [illegible] grammatical errors	Module-4 Teaching Skills: 1. Relational words: Identifying subordinate words and phrases and connecting them 2. Giving instructions: Giving subordinate words, phrases and [illegible] in a meaningful way, [illegible] grammatical errors 3. Giving explanations: Giving subordinate words, phrases and [illegible] in a meaningful way, [illegible] grammatical errors 4. Giving Feedback: Giving subordinate words, phrases and [illegible] in a meaningful way, [illegible] grammatical errors	[illegible]

[illegible]

[illegible]

[illegible]

	Module 3: Writing for the Web 1. Content is King: Importance of content 2. Live to tweet: Writing for Post-modern social media like Twitter, etc	**Portion not covered as per process of topics**	
March	Module 3: Writing for the Web 1. Content is King: Importance of content 2. Live to tweet: Writing for Post-modern social media like Twitter, etc 3. Copywriting: Art and principles of creative, crisp, and attractive copy 4. Real Time content: Difference in writing for print vs digital 5. Keywords: Navigating keywords for Search Engine Optimization	Module 3: Writing for the Web 1. Content is King: Importance of content 2. Live to tweet: Writing for Post-modern social media like Twitter, etc 3. Copywriting: Art and principles of creative, crisp, and attractive copy 4. Real Time content: Difference in writing for print vs digital 5. Keywords: Navigating keywords for Search Engine Optimization **Remedial lectures**	10-12 Cancelled Unscheduled lectures All lectures have no lectures cancelled due to SEM 2 ESE/CT exams and portion over.
Signature of Coordinator:		**Signature of Subject Teacher:**	

[illegible]

[illegible]

Teaching Plan and Implementation Report (2022-23)

Department	[illegible]
Name of Teacher	Ms. [illegible]
Class: [illegible] Semester: [illegible]	Subject: Media Studies and Culture Subject Code: [illegible]
No. of lectures Allotted per week: 04	No. of lectures Conducted per Semester: 48 / No. of lectures Allotted per Semester: 48

Month of Teaching	Topic Proposed	Topic Covered	No. of lectures per topic
December	1. Introduction to Cultural Studies 1. Introduction to subject, Evolution of culture, Need of cultural studies, Features and Significance of cultural studies. 2. Concepts related to culture: Socialization, enculturation, Encounter or acculturation, cultural objects/ cultural shock. 3. Theories: Stuart Hall: encoding and decoding, Technocultural and Gill. Elihu Katz, Media commodification, John Fiske: Culture & Industry	1. Introduction to Cultural Studies 1. Introduction to subject, Evolution of culture, Need of cultural studies, Features and Significance of cultural studies. 2. Concepts related to culture: Socialization, enculturation, Encounter or acculturation, cultural objects/ cultural shock. **Position not over as per topics proposed**	4 (4 lectures lectures conducted from 12.12.2022 to 30 January 2023 as per T.T)
January	3. Theories: Stuart Hall: encoding and decoding, Technocultural and Gill. Elihu Katz, Media commodification, John Fiske: Culture & Industry II. Culture & Media Construction, Commodification, migrant and recent trends. 1. Construction of culture: social, economic, political, religious and ideology 2. Culture, industry and media: commodification, economy, copyright/patents, consumerism, popular culture, global culture 3. Media and its impact on the cultural aspect of the society. 4. Culture, society and communication – with reference to Film, TV, social media, advertisements etc. 5. Recent trends and future consequences of hampering cultural diversity in a globalized, media	3. Theories: Stuart Hall: encoding and decoding, Technocultural and Gill. Elihu Katz, Media commodification, John Fiske: Culture & Industry II. Culture & Media 1. Introduction of Media, Representations, stereotypes, popular culture, Power cyber culture, Media and its impact on the culture. **Position not over as per topics proposed**	6 (6 lectures have been taken by Esther and Mahima Sadhu and Rupashri Dey Sarkar)

[illegible]

February	7. Culture, industry and media: commodification, stereotypes, representation, stereotypes, popular culture, power, cyber culture 1. Media and its impact on the cultural aspect of the society 8. Cultural industry and communication - with reference to film, TV, social media, advertisements etc. 9. Recent trends in Culture consumption: Changing values, Ideologies & its Relevance in the Contemporary society **III. Gender & Media Culture:** **Role and influence of Media:** 1. The influence of media on issues of gender (theory, media representation, stereotypes, women and men, masculinity, images, video etc.) 2. Role of media in social construction of gender. Changing attitudes & behaviour for empowerment of women. **Dimensions of change:** 3. Gender inequality and media 4. Hegemonic masculinity in media 5. Gender issues in news media (TV, radio, newspapers & online news)	7. Culture, industry and media: commodification, stereotypes, representation, stereotypes, popular culture, power, cyber culture 1. Media and its impact on the cultural aspect of the society 8. Cultural industry and communication - with reference to film, TV, social media, advertisements etc. 9. Recent trends in Culture consumption: Changing values, Ideologies & its Relevance in the Contemporary society **III. Gender & Media Culture:** **Role and influence of Media:** 1. The influence of media on issues of gender (theory, media representation, stereotypes, women and men, masculinity, images, video etc.) 2. Role of media in social construction of gender. Changing attitudes & behaviour for empowerment of women. **Dimensions of change:** 3. Gender inequality and media 4. Hegemonic masculinity in media 5. Gender issues in news media (TV, radio, newspapers & online news) **Portion not covered as per discussed topics proposed.**	11. Candidates assessed in terms of their performance as per TT due to gender in other subjects
March	IV. Globalization & Media Culture: Global, Local Consumer and the Recent Trends. 1. Media imperialism 2. Globalization and Local culture: Issues and Perspectives. Threat to regional and local identities, Impact of global culture and its relevance in media and gender 3. Consumer culture and media in the era of globalization 4. Digital Media culture: Recent trends and challenges 5. Media and Globalization: Global economy, News, global culture, News homogenization & fragmentation, glocalization, marginalization, globalization & power	IV. Globalization & Media Culture: Global, Local Consumer and the Recent Trends. 1. Media imperialism 2. Globalization and Local culture: Issues and Perspectives. Threat to regional and local identities, Impact of global culture and its relevance in media and gender 3. Consumer culture and media in the era of globalization 4. Digital Media culture: Recent trends and challenges 5. Media and Globalization: Global economy, News, global culture, News homogenization & fragmentation, glocalization, marginalization, globalization & power **Remedial lectures:** **Signature of Subject Teacher:**	11. Candidates assessed in terms of their performance as per TT due to Term I (CFA 2) exam and practical exam

Signature of Coordinator:

LAXMI NARAYAN TRUST'S
SHRI JAI & SHRI M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. V. BAMANKHOLE MARG, ANDHERI (E), MUMBAI - 400 069

Teaching Plan and Implementation Record (2023-24)

Department		**JOURNALISM**	
Name of Teacher		Mr. Chetan Naik	
Class: SYMMC Semester: II	**Subject:** Journalism in Journalism		**Subject Code:** [illegible]
No. of lectures Allotted per week: [illegible]	**No. Of lectures Conducted per Semester:** [illegible]	**No. Of lectures Allotted per Semester:** [illegible]	

Month of teaching	**Topic Proposed**	**Topic Covered**	**No. of lectures per topic**
November	Module 1 History of Journalism in India Changing face of Journalism from Gutenberg to New Media Journalism in India: Earliest Publications The rise of Nationalist Press, Post 1947 The Emergency 1975 Post Emergency Post Liberalisation of the Economy Issues in Magazines, Media Journalism How Technology Advancement has helped Media	Module 1 History of Journalism in India Changing face of Journalism from Gutenberg to New Media Journalism in India: Earliest Publications The rise of Nationalist Press, Post 1947 **Portion not covered as per topics proposed**	[illegible]
January	The Emergency 1975 Post Emergency Post Liberalisation of the Economy Issues in Magazines, Media Journalism How Technology Advancement has helped Media New Media with special reference to Blog the citizen Journalism Module II News and its Process Definition of News The News Process from the Event to the Reader What makes a good story? Anatomy of a News story What makes a good story?	The Emergency 1975 Post Emergency Post Liberalisation of the Economy Issues in Magazines, Media Journalism How Technology Advancement has helped Media New Media with special reference to Blog the citizen Journalism Module II News and its Process Definition of News The News Process from the Event to the Reader **Portion not covered as per topics proposed**	[illegible]

February	What makes a good story? Anatomy of a news story Types of Beats: Crime, Environmental, Entertainment, Educational, Agricultural, Sports, etc Module (II) Principles and Forms What makes a Good Journalist: Objectivity, Accuracy, Without fear or favour, Balance Personality Difference between a PR and a Journalist Criteria for Newsworthiness Hard News, Soft News and Blend of the two News Reports, Features, Editorials Module (V) Careers in Journalism Reporter, Feature Writer, Music, Film Journalist, Real Time Journalist, Investigate Journalist, Rural Journalist, In-depth Journalist, Lifestyle Journalist Module (V) Covering an Event (Sign Class) Background Research	What makes a good story? Anatomy of a news story Types of Beats: Crime, Environmental, Entertainment, Educational, Agricultural, Sports, etc Module (II) Principles and Forms What makes a Good Journalist: Objectivity, Accuracy, Without fear or favour, Balance Personality Difference between a PR and a Journalist Criteria for Newsworthiness Hard News, Soft News and Blend of the two News Reports, Features, Editorials Module (V) Careers in Journalism Reporter, Feature Writer, Music, Film Journalist, Real Time Journalist, Investigate Journalist, Rural Journalist, In-depth Journalist, Lifestyle Journalist Module (V) Covering an Event (Sign Class) Background Research	(V) - 2 (Includes essential courses of journalism and a or lecture)
March	Finding a News Angle Capturing the Right Pictures for a Photo Feature Writing Headlines, Captions and Lead	Finding a News Angle Capturing the Right Pictures for a Photo Feature Writing Headlines, Captions and Lead.	(V) 2 (Includes essential lectures) (2 lectures less as per TT due to Non LSDET exams and portion over)
Signature of Coordinator:		**Signature of Subject Teacher:**	

[illegible]

[illegible]

Teaching Plan and Implementation Record (DRCC)

Department:	Year:
Name of Teacher:	[illegible]
Class: [illegible] Semester: [illegible] Subject: Introduction to Advertising	Subject Code: [illegible]
No. of lectures Allotted per week: [illegible] No. of lectures Conducted per Semester: [illegible]	No. of lectures Allotted per Semester: [illegible]

Month of Teaching	Topic Proposed	Topic Covered	No. of lectures per week
December	Module I Introduction to Advertising 1. Introduction to Advertising: Evolution, Importance, Functions, Benefits, Limitations, Ethics and Effects of Advertising 2. Types of Advertising: Consumer, Industrial, Retail, Classified, Classified, Public Service, Generic, Personal, Institutional, Social & Political Advocacy 3. Ethics and Laws in Advertising: Politics, Sentimental, Sexual appeals, Stereotypes, Misleading ads, Controversial, Comparative, Advertising code of ethics, Regulatory bodies, Laws and regulations 4. Social, Cultural and Economic impact of Advertising: Women and advertising, Children and advertising	Module I Introduction to Advertising 1. Introduction to Advertising: Evolution, Importance, Functions, Benefits, Limitations, Ethics and Effects of Advertising 2. Types of Advertising: Consumer, Industrial, Retail, Classified, Classified, Public Service, Generic, Personal, Institutional, Social & Political Advocacy 3. Ethics and Laws in Advertising: Politics, Sentimental, Sexual appeals, Stereotypes, Misleading ads, Controversial, Comparative, Advertising code of ethics, Regulatory bodies, Laws and regulations 4. Social, Cultural and Economic impact of Advertising: Women and advertising, Children and advertising, Senior citizens and advertising, Pop culture and advertising	[illegible]
January	Senior citizens and advertising, Pop culture and advertising 5. Theories: Attention Theory, AIDA, Hierarchy, Dissonance Theory Module II Integrated Marketing Communication and Tools 1. IMC – Importance, Role, Tools, Communication process, The 4 Ps, Planning Process	Senior citizens and advertising, Pop culture and advertising 5. Theories: Attention Theory, AIDA, Hierarchy, Dissonance Theory Module II Integrated Marketing Communication and Tools 1. IMC – Importance, Role, Tools, Communication process, The 4 Ps, Planning Process	[illegible]

	2. Print Media and OOH Media: Basic concepts, Types of Newspapers advertising, Advantages and Disadvantages of Newspaper advertising, Magazines, Factors to consider for Magazine advertising, OOH Advertising, Classification advertising, Transit advertising, Posters, Directory advertising. 3. Broadcast Media: Radio advertising, Advantages and Disadvantages of Radio advertising, Television advertising and its Advantages and disadvantages, Film advertising and product placement: advantages and disadvantages. 4. Public Relations: Meaning of Public Relations, Types of PR, Difference between PR and Advertising, Difference between Publicity and Advertising, advantages and disadvantages of Public Relations, Advantages and Disadvantages of Publicity. 5. Sales Promotion and Direct Marketing: Growth and Types of Sales Promotion, Advantages and disadvantages, Growth of Direct marketing and its roles.	2. Print Media and OOH Media: Basic concepts, Types of Newspapers advertising, Advantages and Disadvantages of Newspaper advertising, Magazines, Factors to consider for Magazine advertising, OOH Advertising, Classification advertising, Transit advertising, Posters, Directory advertising. 3. Broadcast Media: Radio advertising, Advantages and Disadvantages of Radio advertising, Television advertising and its Advantages and disadvantages, Film advertising and product placement: advantages and disadvantages. 4. Public Relations: Meaning of Public Relations, Types of PR, Difference between PR and Advertising, Difference between Publicity and Advertising, advantages and disadvantages of Public Relations, Advantages and Disadvantages of Publicity. 5. Sales Promotion and Direct Marketing: Growth and Types of Sales Promotion, Advantages and Disadvantages, Growth of Direct marketing and its roles.	
	Module-III 1. Introduction to Creativity: Importance of Creative process, Creative strategy development determining message theme, Big idea, Positioning strategies, Types of Appeals. 2. Role of different elements in ads: Logo, Jingle, Company signature, Slogan Tagline, Illustration, Creating Radio commercials: sounds, sounds, clarity, enhancement, etc. 3. Elements of copy: Headline, Sub headline, Layout, Body copy, Types of Copy and slogan creating storyboard.	Module-III 1. Introduction to Creativity: Importance of Creative process, Creative strategy development determining message theme, Big idea, Positioning strategies, Types of Appeals. 2. Role of different elements in ads: Logo, Jingle, Company signature, Slogan Tagline, Illustration, Creating Radio commercials: sounds, sounds, clarity, enhancement, etc. 3. Elements of copy: Headline, Sub headline, Layout, Body copy, Types of copy and slogan creating storyboard.	27.7 (Including internal assessment 07 marks) [illegible] 77
Telework	Module-IV: Types of Advertising Agency: Department, Careers and Latest Trends in Advertising. 1. Types of Advertising Agency: Full service, Creative Boutique, Media buying agency, In-house agency, Specialized agencies and others. 2. Various departments in an agency: Account handling, Production, Art, Copy, Media, Public relations, Human resources, Finance and others.	Module-IV: Types of Advertising Agency: Department, Careers and Latest Trends in Advertising. 1. Types of Advertising Agency: Full service, Creative Boutique, Media buying agency, In-house agency, Specialized agencies and others. 2. Various departments in an agency: Account handling, Production, Art, Copy, Media, Public relations, Human resources, Finance and others.	

March	1. Latest Trends: Rural advertising, Academic advertising, Internet advertising, Email advertising, Advertisement, Advertorial, Mobile Advertising.	1. Latest Trends: Rural advertising, Academic advertising, Internet advertising, Email advertising, Advertisement, Advertorial, Mobile advertising. **Remedial lectures / Doubt solving lectures**	1.1.1 Unchallenging remedial lectures/ 12 hour lectures are conducted Pre to Post 1 ADET student and graduate
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI NARAYANA TRUST'S
[illegible] & SIR M V COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. V. RAMNARAYANAN MARG, ANDHERI (E), MUMBAI - [illegible]

Teaching Plan and Implementation Record (2021-24)

Department	[illegible]
Name of Teacher	Mr. Chaitanya Shah
Class: [illegible] Semester: [illegible]	**Subject: Introduction to Photography** — **Subject Code: [illegible]**
No. of lectures Allotted per week: [illegible]	**No. Of lectures Covered per Semester:** [illegible] — **No. Of lectures Allotted per Semester:** [illegible]

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	1. Camera: The Story teller 1. **The Body:** The tactical multitasker. • The heart of the system • How the camera sees differently than human eyes • Limitations and Wonders of camera • Formats of camera: Small Full Frame, Half Frame • APS-C, Medium, Large (camera movements) • Figure-ground frame • Types of camera: DSLR, Point & Shoot, Mirrorless 2. **Aperture:** The eye of the camera • Depth of field • Controls amount of light entering lens • Factor in Exposure calculations • Action factor of Depth of field and Bokeh (creative) • F numbers and aperture scale • Application of Depth of Field in advertising and journalism 3. **Shutter:** The Clock ticker • Blend between a still and image sensor • Controls the amount of light • Major factor in Exposure calculations • Multiplayer in controlling motion • Motion blur, Blurred frames and Long exposure effects	1. Camera: The Story teller 1. **The Body:** The tactical multitasker. • The heart of the system • How the camera sees differently than human eyes • Limitations and Wonders of camera • Formats of camera: Small Full Frame, Half Frame • APS-C, Medium, Large (camera movements) • Figure-ground frame • Types of camera: DSLR, Point & Shoot, Mirrorless 2. **Aperture:** The eye of the camera • Depth of field • Controls amount of light entering lens • Factor in Exposure calculations • Action factor of Depth of field and Bokeh (creative) • F numbers and aperture scale • Application of Depth of Field in advertising and journalism 3. **Shutter:** The Clock ticker • Blend between a still and image sensor • Controls the amount of light • Major factor in Exposure calculations • Multiplayer in controlling motion • Motion blur, Blurred frames and Long exposure effects	10 (Part-1 completed from 14.6.2021) 10 lectures was as per TT

[illegible]

	• Applications of wireless Mini Presenter in Administration and presentations • Synchronization with Flash, Creative Show series **4. Image sensor:** The retina that sees • The image sensor on recorder • Video CCD (digital) • Video Photochemistry • Digital, Photochemistry • Types of Sensors: CCD and CMOS • DSC Photoconductivity (Sensors Pixel Speed) **5. Viewfinder:** The interactive monitor • The control room/site monitor • Employee camera settings • Aperture, Shutter and ISO • Monitoring monitor, Focusing monitor, Exposure monitor • Frame counter, File format etc	• Applications of wireless Mini Presenter in Administration and presentations • Synchronization with Flash, Creative Show series **4. Image sensor:** The retina that sees • The image sensor on recorder • Video CCD (digital) • Video Photochemistry • Digital, Photochemistry • Types of Sensors: CCD and CMOS • DSC Photoconductivity (Sensors Pixel Speed) **5. Viewfinder:** The interactive monitor • The control room/site monitor • Employee camera settings • Aperture, Shutter and ISO • Monitoring monitor, Focusing monitor, Exposure monitor • Frame counter, File format etc	
Only	**1. Lens: Imaging device** **a. The eye of camera:** Focusing the eye • Main player in image formation, Focusing the object • (Photographing the image) • Speed of the Lens (light intake ability) • Numbers and Markings on the Lens • AF, EE, F, IS, OS, IOP etc **7. Focal length:** Which lens to consider • The factor to consider for Type of Photographic and • choosing lens for the purpose • Main determining factor Fixed v/s Variable focal length **8. Image size:** Size chose The magnification ratio of a lens (longer focal length = Bigger image size) **9. Coverage angle:** Using wide angle lens • Frame contents in Composition • How much of a scene a lens takes in from a viewpoint? • Split focusing distance, Hyperfocal, Bokeh, Photochemistry **10. Types of lenses:** The right one for the task at hand • Prime Lens v/s Zoom lens • Prime = Fixed focal length • Zoom = Variable focal length • Normal, Wide angle and Telephoto	**1. Lens: Imaging device** **a. The eye of camera:** Focusing the eye • Main player in image formation, Focusing the object • (Photographing the image) • Speed of the Lens (light intake ability) • Numbers and Markings on the Lens • AF, EE, F, IS, OS, IOP etc **7. Focal length:** Which lens to consider • The factor to consider for Type of Photographic and • choosing lens for the purpose • Main determining factor • Fixed v/s Variable focal length **8. Image size:** Size chose The magnification ratio of a lens (longer focal length = Bigger image size) **9. Coverage angle:** Using wide angle lens • Frame contents in Composition • How much of a scene a lens takes in from a viewpoint? • Split focusing distance, Hyperfocal, Bokeh, Photochemistry **10. Types of lenses:** The right one for the task at hand • Prime Lens v/s Zoom lens • Prime = Fixed focal length • Zoom = Variable focal length • Normal, Wide angle and Telephoto	Or Equation Zoom and FF, due to their approximate grade or other reasons, considered for a week, and the one on the occasion of Photographer

- Special purpose lenses: Macro, Fish-eye, Tilt-shift

1. Light: Parameters of Light: The essential one material

1.1. Intensity and Exposure: Perfect Size

How much light: considerations for exposure

Exposure triangle (A.S.ISO): The model of exposure

1.2. Direction and Lighting: Lighting for Cinema, Television and photography

Photo where: direction begets shadow

Shadow = Depth

Lighting = Modeling

Three point lighting

Key: Mood

Fill: Contrast level (lighting ratio)

Rim/hair: Separation on backgrounded light

Types of lighting

Portrait, Effect, Ambience and Mood in drama

1.3. Quality and Audience: Why there are controller and reflectors

Hard soft or Semi hard

Effective size of light source

Small: Hard, Contrast, Sharp

Medium: Mid soft, moderate contrast, soft shadow

Large: Extra soft, low contrast, shadowless

Modifiers: Umbrella, Soft box, Reflector, Diffusers

Grid, Gobos

1.4. Colour and Mood: What tells Cozy or Cold

Colour of light concept: Main distinguishing factor

Kelvin: Colour temperature Pure light: True colours

White balance: Neutralizing

Preset white balance and RAW

Colour and Mood (warm/cold)

1.5. Measure: The Director in you is the King

Light meter: Main input of exposure

Incident (.5): Reflected (whitewash / blacklight)

In built meter and Metering modes:

Average, Center weighted, Spot, Matrix, Focus priority

Exposure Modes: M, A, S, P and Smart program modes

Errors in colourful metering: Exposure compensation

- Special purpose lenses: Macro, Fish-eye, Tilt-shift

1. Light: Parameters of Light: The essential one material

1.1. Intensity and Exposure: Perfect Size

How much light: considerations for exposure

Exposure triangle (A.S.ISO): The model of exposure

1.2. Direction and Lighting: Lighting for Cinema, Television and photography

Photo where: direction begets shadow

Shadow = Depth

Lighting = Modeling

Three point lighting

Key: Mood

Fill: Contrast level (lighting ratio)

Rim/hair: Separation on backgrounded light

Types of lighting

Portrait, Effect, Ambience and Mood in drama

1.3. Quality and Audience: Why there are controller and reflectors

Hard soft or Semi hard

Effective size of light source

Small: Hard, Contrast, Sharp

Medium: Mid soft, moderate contrast, soft shadow

Large: Extra soft, low contrast, shadowless

Modifiers: Umbrella, Soft box, Reflector, Diffusers

Grid, Gobos

1.4. Colour and Mood: What tells Cozy or Cold

Colour of light concept: Main distinguishing factor

Kelvin: Colour temperature Pure light: True colours

White balance: Neutralizing

Preset white balance and RAW

Colour and Mood (warm/cold)

1.5. Measure: The Director in you is the King

Light meter: Main input of exposure

Incident (.5): Reflected (whitewash / blacklight)

In built meter and Metering modes:

Average, Center weighted, Spot, Matrix, Focus priority

Exposure Modes: M, A, S, P and Smart program modes

Errors in colourful metering: Exposure compensation

Target

(1) Conducts interest students (2) Industry Visit as per T.T. for FYBMMC orientation and FYM Meeting

	4. Composition: Art of Seeing: Way of participating in subject 1. Frames and Aspect ratio • Dimensions of lateral and perspective • Aspect ratio (1:1, 4:3, 16:9, 16:10, 2:3) **2. Visual indicators** • Lines, Shapes, Size, Tones, Colour, Textures, Space and Content of interest, Subjects, Aesthetic, Geometry of Objects **3. Rules of composition** • Rule of thirds/ Balance/ Leading lines/ Frame within frame, Enhancing depth/ Diagonal composition/ Shadow/ Pattern breaking **4. Breaking the rules** • Cropping, Panorama, Flattening **5. Viewpoint and Perspective** • 1, 2 and 3 point perspective: Vanishing points and convergence • Normal: The way we see • Enhanced: Exaggerated depth • Compressed: Feeling of distance twice away • Forced: Unrealistic • Aligned: Back projection and green screen applications **1. Digital Imaging: Electronic format** **1. Image sensor:** Format, CMOS/ APS-C, Medium format, Large format **2. Megapixel:** Pixel and its values, Total number of pixels, File size **3. Resolution:** Pixel Per Inch/ Quality of Image, Megapixel print size **4. Image magnification:** Viewing distance, Image size and Resolution (how large an image can be for given megapixel) **5. File Formats:** RAW, JPEG, TIFF (Bit and Compression) advantages and limitations of Raw format • Viewing distance, Image size and Resolution • How large an image can be for given megapixel • RAW, JPEG, TIFF (Bit and Compression) advantages and limitations of Raw format	**4. Composition: Art of Seeing: Way of participating in subject** 1. Frames and Aspect ratio • Dimensions of lateral and perspective • Aspect ratio (1:1, 4:3, 16:9, 16:10, 2:3) **2. Visual indicators** • Lines, Shapes, Size, Tones, Colour, Textures, Space and Content of interest, Subjects, Aesthetic, Geometry of Objects **3. Rules of composition** • Rule of thirds/ Balance/ Leading lines/ Frame within frame, Enhancing depth/ Diagonal composition/ Shadow/ Pattern breaking **4. Breaking the rules** • Cropping, Panorama, Flattening **5. Viewpoint and Perspective** • 1, 2 and 3 point perspective: Vanishing points and convergence • Normal: The way we see • Enhanced: Exaggerated depth • Compressed: Feeling of distance twice away • Forced: Unrealistic • Aligned: Back projection and green screen applications **1. Digital Imaging: Electronic format** **1. Image sensor:** Format, CMOS/ APS-C, Medium format, Large format **2. Megapixel:** Pixel and its values, Total number of pixels, File size **3. Resolution:** Pixel Per Inch/ Quality of Image, Megapixel print size **4. Image magnification:** Viewing distance, Image size and Resolution (how large an image can be for given megapixel) **5. File Formats:** RAW, JPEG, TIFF (Bit and Compression) advantages and limitations of Raw format • Viewing distance, Image size and Resolution • How large an image can be for given megapixel • RAW, JPEG, TIFF (Bit and Compression) advantages and limitations of Raw format	4+2 (including tutorial) Sessions (2 hours) how to put T.T. chart in 4 hands 2 hands-on, Students will practice on it
Signature			

Signature of Coordinator: Signature of Subject Teacher:

[illegible]

[illegible]

Teaching Plan and Implementation Record (2021-22)

Department:	[illegible]
Name of Teacher:	[illegible]
[illegible] Semester: [illegible]	Subject: Media Studies — Subject Code: [illegible]
No. of lectures delivered per week: [illegible]	No. of lectures delivered per fortnight: [illegible] — No. of lectures delivered per fortnight: [illegible]

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	[illegible] 1. [illegible] [illegible] [illegible] [illegible] [illegible] Media Theories 2. Hypodermic and Phenomenistic Theories • [illegible] • [illegible]	[illegible] 1. [illegible] [illegible] [illegible] [illegible] [illegible] Media Theories 2. Hypodermic and Phenomenistic Theories • [illegible] • [illegible]	[illegible] (Note: [illegible] commenced from [illegible] [illegible] lectures extra as per [illegible])
July	• [illegible] [illegible] • [illegible] • [illegible] [illegible] 1. [illegible] • [illegible] • [illegible]	• [illegible] [illegible] • [illegible] • [illegible] [illegible] 1. [illegible] • [illegible] • [illegible]	[illegible] ([illegible] lectures extra as per [illegible])

	• Feminist: Theodor Adorno and Max Horkheimer • Raymond Williams: Technological Determinism • Harold Innis: Bias of Communication Media and Identity • Feminist: Racism/Ethnicity • Cultivation/Mainstreaming	• Feminist: Theodor Adorno and Max Horkheimer • Raymond Williams: Technological Determinism • Harold Innis: Bias of Communication Media and Identity • Feminist: Racism/Ethnicity • Cultivation/Mainstreaming	
August	Media effects 1. Theories on Media effects • Media effects and behavior • Media effect theories and the arguments against media effect theories • Agenda-Setting Theory • Cultivation Theory • Politics and Media: media bias, media decency, media consolidation New Media and the age of Internet 1. Meaning Making Perspectives Theory Analysis: Participatory culture Internet as Public sphere: Habermas vs Twitter McLuhan's concept of Global Village in the age of Netflix Uses and Gratifications in the age of the Internet	Media effects 1. Theories on Media effects • Media effects and behavior • Media effect theories and the arguments against media effect theories • Agenda-Setting Theory • Cultivation Theory • Politics and Media: media bias, media decency, media consolidation New Media and the age of Internet 1. Meaning Making Perspectives Theory Analysis: Participatory culture Internet as Public sphere: Habermas vs Twitter McLuhan's concept of Global Village in the age of Netflix Uses and Gratifications in the age of the Internet	11+1 (includes internal evaluation) 06 lectures left as per TT plan in journals exists
September		**Remedial lectures**	02 (includes only remedial lectures)
Signature of Coordinator:		Signature of Subject Teacher:	

GOSHI CHARITABLE TRUST'S
SHETH L.U.J. & SHRI M.U. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI - 400 069

Teaching Plan and Implementation Record (2022-24)

Department	Mobile BA(VM)
Name of Teacher	Nimesh Thakur
Class: BA(VM) Semester - III	Subject: Computers and Multimedia I — Subject Code: [illegible]
No. of lectures Allotted per week: [illegible]	No. Of lectures Covered per Semester: 47 — No. Of lectures Allotted per Semester: 48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	**MODULE 1 Photoshop: Pixel based Image editing Software** **1. Introduction to Photoshop** • Image editing Basics • Images via Scanner • When to use Photoshop and when to use drawing tools **2. Photoshop Workspace** • The tools, Toolbox controls • Property bar, Options bar, Floating palettes **3. Working with images** • Image mode, Image size, canvas size • Image resolution, size, and resampling • What is the perfect resolution? • Cropping to size and resolution • Resizing vs resampling **4. Image Editing** • Levels, Curves • Contrast adjustment • Colour adjustment Photo filters **5. Working with Text** • Text layers, Character palette, Paragraph palette • Text warping, Text outlines, Text attributes • Working on simple presentation page design	**MODULE 1 Photoshop: Pixel based Image editing Software** **1. Introduction to Photoshop** • Image editing Basics • Images via Scanner • When to use Photoshop and when to use drawing tools **2. Photoshop Workspace** • The tools, Toolbox controls • Property bar, Options bar, Floating palettes **3. Working with images** • Image mode, Image size, canvas size • Image resolution, size, and resampling • What is the perfect resolution? • Cropping to size and resolution • Resizing vs resampling **4. Image Editing** • Levels, Curves • Contrast adjustment • Colour adjustment Photo filters **5. Working with Text** • Text layers, Character palette, Paragraph palette • Text warping, Text outlines, Text attributes • Working on simple presentation page design	10 (Note: 5 [illegible] and [illegible] [illegible] [illegible]

	MODULE 1 CorelDraw: Vector based Drawing software **1. Introduction to CorelDraw** CorelDraw Interface, Tool Box, Importing files in CorelDraw, Different file formats **2. Using text** Artistic and paragraph text, Formatting Text, Embedding Objects into text, Wrapping Text around Object, Linking Text to Objects Text CC	**MODULE 1 CorelDraw: Vector based Drawing software** **1. Introduction to CorelDraw** CorelDraw Interface, Tool Box, Importing files in CorelDraw, Different file formats **Portion not covered as per syllabi prescribed.**	
July	**2. Using text** Artistic and paragraph text, Formatting Text, Embedding Objects into text, Wrapping Text around Object, Linking Text to Objects Text CC **3. Exploring tools** Basic shapes: Cut, Erase, Combine, Shaping tool, Nodes, Handles, Contour Convert to Curves, Reshaping, Creating Spirals, Copy **4. Applying effects** Power of Blends, Distortion and contour Effects, Envelopes, Lens effects, Transparency, Creating Depth Effects and Power Clips **5. Exporting in CorelDraw** Exporting, Types of exports, Exporting for other software **MODULE 2 QuarkXpress: InDesign: Layout Software** **1. Introduction to QuarkXpress** List the menus, List the tools, Benefits of using Quark, Applications of Quark **2. Text Edits in Quark** Format of text, Purpose of text selection, Aligning text in different design formats, Text alignment with embedded images **3. Using palettes** Using palettes for different types of publications made in quark, Magazine in quark, Newspaper in quark. **4. Colour correction in quark** Embedding images in proper formats, Colour correction on the images. Affecting according to the color map of the publication.	**2. Using text** Artistic and paragraph text, Formatting Text, Embedding Objects into text, Wrapping Text around Object, Linking Text to Objects Text CC **3. Exploring tools** Basic shapes: Cut, Erase, Combine, Shaping tool, Nodes, Handles, Contour Convert to Curves, Reshaping, Creating Spirals, Copy **4. Applying effects** Power of Blends, Distortion and contour Effects, Envelopes, Lens effects, Transparency, Creating Depth Effects and Power Clips **5. Exporting in CorelDraw** Exporting, Types of exports, Exporting for other software **MODULE 2 QuarkXpress: InDesign: Layout Software** **1. Introduction to QuarkXpress** List the menus, List the tools, Benefits of using Quark, Applications of Quark **2. Text Edits in Quark** Format of text, Purpose of text selection, Aligning text in different design formats, Text alignment with embedded images **3. Using palettes** Using palettes for different types of publications made in quark, Magazine in quark, Newspaper in quark. **4. Colour correction in quark** Embedding images in proper formats, Colour correction on the images.	14 (It includes one date in each month and given to other subjects, since Holidays and Mahapurush Holiday)

	4. Exporting files Types of files, Exporting for different publications/templates: Newspaper, magazine, etc. **MODULE 4 Premiere Pro: Audio-visual: Video editing software** **1. Introduction to editing** Editing importance, Great editing examples, Editing for different formats (files all formats etc.) **2. Introduction to premiere** How premiere helps in editing, Understanding the workflow, Importing files, Experimenting with video and audio layers, Basics of editing (use layers different windows etc.)	Adjusting according to the color need of the publication. **4. Exporting files** Types of files, Exporting for different publications/templates: Newspaper, magazine, etc. **Portfolio not covered as per topics proposed.**	
August	**MODULE 4 Premiere Pro: Audio-visual: Video editing software** **1. Introduction to editing** Editing importance, Great editing examples, Editing for different formats (files all formats etc.) **2. Introduction to premiere** How premiere helps in editing, Understanding the workflow, Importing files, Experimenting with video and audio layers, Basics of editing (use layers different windows etc.) **3. Understanding file formats** Understanding different file formats (AVI, MPEG, MOV, MP4, etc.), Importing raw footage for editing, Performing video checks: white editing **4. Using colour grading** What is color grading, Examples of color grading, Using filters and presets in color grading, Applying presets on layers for editing **5. Exporting and rendering** Exporting in different formats, Choosing right format for exporting, Managing quality while exporting, Rendering and maximum file format, Improving quality and time to render techniques **Module 5 Sound Design: Sound Effects, Sound Editing Software**	**MODULE 4 Premiere Pro: Audio-visual: Video editing software** **1. Introduction to editing** Editing importance, Great editing examples, Editing for different formats (files all formats etc.) **2. Introduction to premiere** How premiere helps in editing, Understanding the workflow, Importing files, Experimenting with video and audio layers, Basics of editing (use layers different windows etc.) **3. Understanding file formats** Understanding different file formats (AVI, MPEG, MOV, MP4, etc.), Importing raw footage for editing, Performing video checks: white editing **4. Using colour grading** What is color grading, Examples of color grading, Using filters and presets in color grading, Applying presets on layers for editing **5. Exporting and rendering** Exporting in different formats, Choosing right format for exporting, Managing quality while exporting, Rendering and maximum file format, Improving quality and time to render techniques	[illegible]

	1. Introduction to Digital Audio Sound waves, Audio band pitch volume Understanding Digital audio Sampling, bit rate **2. Concept of Dolby Digital** Mono, Stereo, Quadraphonic Surround sound, 5.1 Channel, Subwoofer difference in Dolby Digital and DTS, More about DTS Three way sound speaker	**Module 2 Sound Forge/Pro tools/ Sound Editing Software** **1. Introduction to Digital Audio** Sound waves, Audio band pitch volume Understanding Digital audio Sampling, bit rate **Portion not covered as per proposed topic**	
Sugandha	**2. Concept of Dolby Digital** Mono, Stereo, Quadraphonic Surround sound, 5.1 Channel, Subwoofer difference in Dolby Digital and DTS, More about DTS Three way sound speaker **3. Sound Recording** Recording Equipment Microphone and Types of microphone Recording Environment, Microphone, Power amps, Sound card Input from audio sources, Extract audio from CD Different audio saving formats Wave, WMA, OGG, MP3 Digital Component software **4. Working with Sound** Headphone, Pro tools interface, Transport toolbar Working with audio file Basic editing, cutting parts, Time special Using Markers, Regions and Crossfades Sound processing techniques Channel converter, Bit depth converter **5. Advanced Sound Processing** Fades, Edits Reverb, Chorus Moving sounds Noise gating, Equalizer Changing pitch and Time duration Soundtrack editor Create your audio CD and mark chapters	**2. Concept of Dolby Digital** Mono, Stereo, Quadraphonic Surround sound, 5.1 Channel, Subwoofer difference in Dolby Digital and DTS, More about DTS Three way sound speaker **3. Sound Recording** Recording Equipment Microphone and Types of microphone Recording Environment, Microphone, Power amps, Sound card Input from audio sources, Extract audio from CD Different audio saving formats Wave, WMA, OGG, MP3 Digital Component software **4. Working with Sound** Headphone, Pro tools interface, Transport toolbar Working with audio file Basic editing, cutting parts, Time special Using Markers, Regions and Crossfades Sound processing techniques Channel converter, Bit depth converter **5. Advanced Sound Processing** Fades, Edits Reverb, Chorus Moving sounds Noise gating, Equalizer Changing pitch and Time duration Soundtrack editor Create your audio CD and mark chapters **Remedial lectures and Doubt solving**	1+2 Lectures scheduled Subject's HR teacher was on part TT duty in Outside Channels Activities and Diploma level
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, JOGESHWARI (E), MUMBAI – 400 060

Teaching Plan and Implementation Record (2023-24)

Department	BAMMC
Name of Teacher	Mrs. Hemlata Nikhil Tiwari

Class: BAMMC Semester: III Subject: Corporate Communication and Public Relations Subject Code: BAMMC22PR-302

No. of lectures Allotted per week: 04 No. Of lectures Covered per Semester: 47 No. Of lectures Allotted per Semester: 48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	Module I Foundations of Corporate Communication 1. Introduction to Corporate Communication Meaning, Need and scope of Corporate Communication towards Indian Media Scenario 2. Key Concept in Corporate Communication Corporate Identity- Meaning and Features Corporate Image- Meaning, Factors influencing Corporate image, Corporate Image creation sustainability & restoration Corporate Reputation & Management- Meaning, Advantages of Good Corporate Reputation 3. Ethics and law in Corporate Communication Importance of Ethics in Corporate Communication Professional Code of Ethics Mass Media Laws: Defamation, Invasion of Privacy, Copyright Act, Cyberspace and RTI	Module I Foundations of Corporate Communication 1. Introduction to Corporate Communication Meaning, Need and scope of Corporate Communication towards Indian Media Scenario 2. Key Concept in Corporate Communication Corporate Identity- Meaning and Features Corporate Image- Meaning, Factors influencing Corporate image, Corporate Image creation sustainability & restoration **Portion not covered as per topic proposed.**	7 (Week V commenced from 14.6.2023 as Session has to as per TT due to Yoga day celebration, Rakshabandhan and given to other subjects)
July	Corporate Reputation & Management- Meaning, Advantages of Good Corporate Reputation 3. Ethics and law in Corporate Communication Importance of Ethics in Corporate Communication Professional Code of Ethics Mass Media Laws: Defamation, Invasion of Privacy, Copyright Act, Cyberspace and RTI	Corporate Reputation & Management- Meaning, Advantages of Good Corporate Reputation 3. Ethics and law in Corporate Communication Importance of Ethics in Corporate Communication Professional Code of Ethics Mass Media Laws: Defamation, Invasion of Privacy, Copyright Act, Cyberspace and RTI	17 01 lecture extra as per TT

	Module-II Understanding Public Relations: 1. Introduction and growth of PR Indian Scenario Meaning, Definitions, Scope, Objectives and Significance of PR in Business Tracing Growth of PR in India, Internal & External PR. Reasons for Emerging International Public Relations. Mangers Collaborations from countries between India and International PR agencies. Advantages & disadvantages of Public Relations. 2. Role of PR in various sectors Healthcare, Entertainment, Banking and Finance, Real Estate, Fashion and Lifestyle and Service 3. Theories and Tools of PR Greening, Pseudo events, Publicity, Propaganda, Persuasion, Situational theory, Diffusion theory and Various tools of Public Relations (Press conference,	Module-II Understanding Public Relations: 1. Introduction and growth of PR Indian Scenario Meaning, Definitions, Scope, Objectives and Significance of PR in Business Tracing Growth of PR in India, Internal & External PR. Reasons for Emerging International Public Relations. Mangers Collaborations from countries between India and International PR agencies. Advantages & disadvantages of Public Relations. 2. Role of PR in various sectors Healthcare, Entertainment, Banking and Finance, Real Estate, Fashion and Lifestyle and Service **Portion not covered as per topic progress.**	
August	3. Theories and Tools of PR Greening, Pseudo events, Publicity, Propaganda, Persuasion, Situational theory, Diffusion theory and Various tools of Public Relations (Press conference, Press release, Media Dockets, Advertorials, Sponsorship) Module-III (1) PR : Range of Functions 1. Media Relations: Importance of Media Relations, Sources of Media Information, Building Effective Media Relations, Principles of Good Media Relations, Media analysis & evaluation. 2. Employee Communication Sources of Employee Communications, Organizing Employee Communications, Benefits of Good Employee Communications, Steps in Implementing an Effective Employee Communications Programme, Role of Management in Employee Communications 3. Crisis Communication	3. Theories and Tools of PR Greening, Pseudo events, Publicity, Propaganda, Persuasion, Situational theory, Diffusion theory and Various tools of Public Relations (Press conference, Press release, Media Dockets, Advertorials, Sponsorship) Module-III (1) PR : Range of Functions 1. Media Relations: Importance of Media Relations, Sources of Media Information, Building Effective Media Relations, Principles of Good Media Relations, Media analysis & evaluation 2. Employee Communication Sources of Employee Communications, Organizing Employee Communications, Benefits of Good Employee Communications, Steps in Implementing an Effective Employee Communications Programme, Role of Management in Employee Communications 3. Crisis Communication	19+2 (include internal assessment)

	Impact of Crises, Role of Communication in Crisis, Guidelines for Handling Crisis, Issue Building, Case Studies such as Nestle, Maggie, Indigo, Cadbury Dairy Milk, Nike Ralfie, Hybrid, etc. Module-IV: Latest Trends, Tools & Technology role of Social media in CCPR. 1. Emerging trends, tools & technology: Today's Communication Technology, Importance of Technology in Corporate Communication.	Impact of Crises, Role of Communication in Crisis, Guidelines for Handling Crisis, Issue Building, Case Studies such as Nestle, Maggie, Indigo, Cadbury Dairy Milk, Nike Ralfie, Hybrid, etc. Module-IV: Latest Trends, Tools & Technology role of Social media in CCPR. 1. Emerging trends, tools & technology: Today's Communication Technology, Importance of Technology in Corporate Communication.	
Segmentation	Pros and cons of technology used in Corporate Communication. 2. New Media Tools: Mobiles, Online game Business, Article marketing, Online advertisement, Blogs. 3. Role of Social Media: Role of Social Media in Influencer marketing, Identifying brand threats, influencing consumer's choices, loyalty marketing in acquisition phase, Viral Marketing, engaging and interacting consumers, E-Public Relations and co-organization.	2. New Media Tools: Mobiles, Online game Business, Article marketing, Online advertisement, Blogs. 3. Role of Social Media: Role of Social Media in Influencer marketing, Identifying brand threats, influencing consumer's choices, loyalty marketing in acquisition phase, Viral Marketing, engaging and interacting consumers, E-Public Relations and co-organization. **Revision and doubt solving lectures / Remedial lectures**	No Consultant Remedial lectures on Revision, tips to pass TT and to Complete Classwork, Classwork, Doubts, Assign Chapters and TT Schedule.

Signature of Coordinator: _____ Signature of Subject Teacher: _____

[illegible]

[illegible]

Teaching Plan and Implementation Report (2023-24)

Department	[illegible]
Name of Teacher	Ms. Charmy Shah
Class: [illegible] Semester: [illegible]	Subject: Film Communication-I / Subject Code: [illegible]
No. of lectures Allotted per week: [illegible]	No. [illegible] lectures Conducted per Semester: [illegible] / No. [illegible] lectures Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	Module 1: History Still pictures to moving images a. History of Cinema b. Birth of Visual Art c. Understanding the Language of Cinema d. Transition from Documentary to Feature Film Module 2: Understanding aspects of film appreciation a. Literature, Technology and Art Director: the Cinema Writer: the Back Power	Module 1: History Still pictures to moving images a. History of Cinema b. Birth of Visual Art c. Understanding the Language of Cinema d. Transition from Documentary to Feature Film Module 2: Understanding aspects of film appreciation a. Literature, Technology and Art Director: the Cinema Movement ideas: Point ideas, Design Lucia Bhansali and other terms Structure of an idea Writer: the Back Power	3 (Three-T) (Attendance) Hours (w.e.f. 2023) (1) Total hours are just 1.5
July	3. Aspects of Film 1: Visual Aspects and Editing Mise-en-Scene (Art Direction, Costume, Lighting, Cinematography) Cinematography Creating Meaning through editing 2. Aspects of Film 2: Film Sound Three components of Film Sound The relationship between Sound and Image Module 3b: The Early Cinema: early India a. Early contributions to the Medium and Form	3. Aspects of Film 1: Visual Aspects and Editing Mise-en-Scene (Art Direction, Costume, Lighting, Cinematography) Cinematography Creating Meaning through editing 2. Aspects of Film 2: Film Sound Three components of Film Sound The relationship between Sound and Image Module 3b: The Early Cinema: early India a. Early contributions to the Medium and Form	10 (1) Attendance Hours are just 1.5

	[illegible] a. [illegible] b. [illegible]	[illegible] a. [illegible] b. [illegible]	
August	[illegible] Major Film movements and its impact a. The major cinema movements and their film makers b. Hollywood Cinema: Brief history of Hollywood, Top studios, academy awards, global audience of Hollywood cinema c. Indian new cinema: Origin and impact on world cinema, work of Ritwiks Ghoseliha and Satyajit Ray etc d. Japanese cinema: Work of Yasujiro ozu, Akira Kurosawa, Hayao Miyazaki, etc e. Asia cinema: Contribution of Abbas Kiarostami, Majid Majidi, etc. [illegible] Mainstream Indian Cinema and parallel Indian Cinema a. Art vs Commercial b. Indian Phenomenon Cinema (Commercial) The Angry Young Men The Indian Diaspora and Bollywood Contemporary Bollywood Cinema Globalization and Indian Cinema, The examples Five a. Conflict and of Indian Cinema: Experience work of Bimal Roy, Guru Dutt, Raj Kapoor and V. Shantaram b. Indian New Wave cinema: Mrinal Sen, Adoor Kopal, Girish Kasaravalli, Adi Subba	[illegible] Major Film movements and its impact a. The major cinema movements and their film makers b. Hollywood Cinema: Brief history of Hollywood, Top studios, academy awards, global audience of Hollywood cinema c. Indian new cinema: Origin and impact on world cinema, work of Ritwiks Ghoseliha and Satyajit Ray etc d. Japanese cinema: Work of Yasujiro ozu, Akira Kurosawa, Hayao Miyazaki, etc e. Asia cinema: Contribution of Abbas Kiarostami, Majid Majidi, etc. [illegible] Mainstream Indian Cinema and parallel Indian Cinema a. Art vs Commercial b. Indian Phenomenon Cinema (Commercial) **Many South movies were discussed in the class (Hindi, Malayalam and many more)** The Angry Young Men The Indian Diaspora and Bollywood Contemporary Bollywood Cinema **Practice was conducted as per rights acquired.**	[illegible] Checkbook prepared. Exams is [illegible] as per [illegible] Rule in [illegible]
September	Globalization and Indian Cinema, The examples Five a. Conflict and of Indian Cinema: Experience work of Bimal Roy, Guru Dutt, Raj Kapoor and V. Shantaram b. Indian New Wave cinema: Mrinal Sen, Adoor Kopal, Girish Kasaravalli, Adi Subba c. Parallel cinema: Contribution of Shyam Benegal, Govind Nihlani, Gautam Ghose, Mani Kaul, Kumar Shahani etc	Globalization and Indian Cinema, The examples Five a. Conflict and of Indian Cinema: Experience work of Bimal Roy, Guru Dutt, Raj Kapoor and V. Shantaram b. Indian New Wave cinema: Mrinal Sen, Adoor Kopal, Girish Kasaravalli, Adi Subba c. Parallel cinema: Contribution of Shyam Benegal, Govind Nihlani, Gautam Ghose, Mani Kaul, Kumar Shahani etc. **Revision exercises**	[illegible] [illegible] Checkbook prepared. [illegible] Exams [illegible] as per [illegible] Rule in [illegible] Council Chairman [illegible]

Signature of Coordinator: _____ Signature of Subject Teacher: _____

LADIES CHARITABLE TRUST'S
SHETH L.U.A. & SHE M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	BAMMC
Name of Teacher	Ms. Namrata Singh

Class: BAMMC **Semester:** II **Subject:** Radio Program Production I **Subject Code:** [illegible]

No. of lectures Allotted per week: 04 **No. Of lectures Covered per Semester:** 56 **No. Of lectures Allotted per Semester:** 48

Months of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	1. Introduction Introduction to Radio, History of Radio Growth & Development, Radio as a Mass Medium: uses & Characteristics, Writing for the Radio: Who are you talking to? What do you want to say? Structure & Signposting, The Script	1. Introduction Introduction to Radio, History of Radio Growth & Development, Radio as a Mass Medium: uses & Characteristics, Writing for the Radio: Who are you talking to? What do you want to say? Structure & Signposting, The Script	8 (Data'd commenced from 10 in 2023)
July	2. The Work of Producer Ideas, The Audience, Resource Planning, Preparation of Material, The Studio Session, Post Production, Technician, Editor, Advertisement & Manager 3. The Radio Studio Studio Layout, The studio desk, Mixer, Control Panel console or Board Digital Mixers, Studio Software,	2. The Work of Producer Ideas, The Audience, Resource Planning, Preparation of Material, The Studio Session, Post Production, Technician, Editor, Advertisement & Manager 3. The Radio Studio Studio Layout, The studio desk, Mixer, Control Panel console or Board Digital Mixers, Studio Software,	17 (41 lectures done as on 31)

	Digital Competence	Digital Competence	
August	A. News Policy & Practice Non Values- Accuracy, Realism, & Truth The Newsroom Operation. The news conference & press release. News reading and presentation. The seven Ps, News Reading, Pronunciation, Vocal Stressing, Errors & Emergencies.	A. News Policy & Practice Non Values: Accuracy, Realism, & Truth The Newsroom Operation. The news conference & press release. News reading and presentation. The seven Ps, News Reading, Pronunciation, Vocal Stressing, Errors & Emergencies.	(a-iii) (no holiday national events) 01 lecture less as per TT
September	C. Interviewing What the Interviewer should know? Preparation before the Interview and the Pre-Interview discussion. Devil's Advocate. Question Technique: Multiple and Leading Questions	C. Interviewing What the Interviewer should know? Preparation before the Interview and the Pre-Interview discussion. Devil's Advocate. Question Technique: Multiple and Leading Questions **Household Interview**	12+2 (no holiday national holiday) 02 lectures less as per TT due to Ganesh Chaturthi holiday
Signature of Coordinator:		**Signature of Subject Teacher:**	

LADHI CHARITABLE TRUST
SMT. H. L. T. & SIR M. V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. V. BALIGA NAGAR MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	BAMMC
Name of Teacher	Ms. Chandni Shah
Class: BAMMC Semester: IV	Subject: Media Laws and Ethics
No. of lectures Allotted per week: 04	No. Of Students Covered per Semester: 40

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per week
November	MODULE I: Constitution and Media 1. Core values of the Constitution, Refreshing Preamble, remote features of the Indian Constitution 2. Freedom of Expression: Article 19 (1) (a), Article 19(2) 3. Judicial Infrastructure: Hierarchy of the Courts, Independency of the Judiciary, Legal terminologies 4. Social responsibility of the media: Social Responsibility Theory, Emerging issues in Social Responsibility, Theory in India's context 5. Social Media: Threat of fake news and facts verification, Social media literacy MODULE II: Regulatory Bodies: 1. Press Council of India i. Brief History, Statutory status ii. Structure and Importance iii. Powers and Immunity 2. TRAI: Role of Telecom Regulatory Authority of India 3. IBF i. Indian Broadcasting Foundation ii. Broadcasting Content Complaints Council iii. Broadcasting Audience Research Council	MODULE I: Constitution and Media 1. Core values of the Constitution, Refreshing Preamble, remote features of the Indian Constitution 2. Freedom of Expression: Article 19 (1) (a), Article 19(2) 3. Judicial Infrastructure: Hierarchy of the Courts, Independency of the Judiciary, Legal terminologies Portions not covered as per topics discussed	01 (Orientation lecture, assessment, Notes: [illegible] 22 lectures, [illegible] remaining)

[illegible]	6. Social responsibility of the media: Social Responsibility Theory, Emerging issues in Social Responsibility Theory in media in [illegible] 7. Social Media: Threat of Fake news and fact verification Social media literacy MODULE II: Regulatory Bodies 1. Press Council of India i. Brief History, Statutory status ii. Structure and Importance iii. Powers and Immunities 2. TRAI: Role of Telecom Regulatory Authority of India 3. CBFC i. Indian Broadcasting Foundation ii. Broadcasting Content Complaints Council iii. Broadcasting Audience Research Council 4. ASCI i. Advertising Standard Council of India ii. Mission iii. Structure iv. Complaints Complaints Council	6. Social responsibility of the media: Social Responsibility Theory, Emerging issues in Social Responsibility Theory in media in [illegible] 7. Social Media: Threat of Fake news and fact verification Social media literacy MODULE II: Regulatory Bodies 1. Press Council of India i. Brief History, Statutory status ii. Structure and Importance iii. Powers and Immunities 2. TRAI: Role of Telecom Regulatory Authority of India Portfolio are covered as per digital discussion	[illegible] 12 lectures hours as per TT slot by [illegible] Cultural Fest Days, [illegible] and [illegible]
Advertising	5. CBFC i. Indian Broadcasting Foundation ii. Broadcasting Content Complaints Council iii. Broadcasting Audience Research Council 4. ASCI i. Advertising Standard Council of India ii. Mission iii. Structure iv. Complaints Complaints Council 5. Affiliates i. News Broadcasters Association ii. Structure iii. Mission iv. Role MODULE III: Media Laws 1. Constitution and IPR	5. CBFC i. Indian Broadcasting Foundation ii. Broadcasting Content Complaints Council iii. Broadcasting Audience Research Council 4. ASCI i. Advertising Standard Council of India ii. Mission iii. Structure iv. Complaints Complaints Council 5. Affiliates i. News Broadcasters Association ii. Structure iii. Mission iv. Role MODULE III: Media Laws 1. Constitution and IPR	[illegible] 10 lectures hours as per TT slot in Term Test Syllabus, PTM meetings, [illegible] Cultural Fest [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

	What is copyright, Intellectual Property Rights, Exceptions, Major Amendments, Recent Case Studies 2. Defamation Defences, Civil, Criminal, Exceptions, Recent Case Studies 3. IT Act i. Information Technology Act, 2000 ii. Amendments 2008 iii. Section 66A iv. Section 67 v. Case Studies 4. Coverage i. Coverage of Court ii. Coverage of Parliament 5. More acts i. Drugs and Magic Remedies (Objectionable Advertisement) Act ii. Evidence and Nature (Prevention of improper Use) Act MODULE IV: Media Laws 1. Right to Privacy i. Evolution ii. Right to Privacy a fundamental Right 2. Morality and Obscenity i. Indecent Representation of Women's Act ii. 292, 293, 292, 293 iii. Change in perception with time	What is copyright, Intellectual Property Rights, Exceptions, Major Amendments, Recent Case Studies 2. Defamation Defences, Civil, Criminal, Exceptions, Recent Case Studies 3. IT Act i. Information Technology Act, 2000 ii. Amendments 2008 iii. Section 66A iv. Section 67 v. Case Studies 4. Coverage i. Coverage of Court ii. Coverage of Parliament **Portions not covered as per topics discussed**	
Addendum	5. More acts i. Drugs and Magic Remedies (Objectionable Advertisement) Act ii. Evidence and Nature (Prevention of improper Use) Act MODULE IV: Media Laws 1. Right to Privacy i. Evolution ii. Right to Privacy a fundamental Right 2. Morality and Obscenity i. Indecent Representation of Women's Act ii. 292, 293, 292, 293 iii. Change in perception with time	5. More acts i. Drugs and Magic Remedies (Objectionable Advertisement) Act ii. Evidence and Nature (Prevention of improper Use) Act MODULE IV: Media Laws 1. Right to Privacy i. Evolution ii. Right to Privacy a fundamental Right 2. Morality and Obscenity i. Indecent Representation of Women's Act ii. 292, 293, 292, 293 iii. Change in perception with time	[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

	3. Unfair Trade Practices Unfair Trade Practices and the Competition Act 2002 4. OSAs i. Official Secrets Act ii. Contemporary iii. Case Studies 5. RTI i. Right to Information Act, 2005 ii. Brief History iii. Importance and current issues MODULE V: Media Ethics and Social Responsibility 1. Why Ethics What is ethics, man? Why do we need ethics? 2. Ethical Responsibility of Journalist i. Code of conduct for journalist ii. Conflict of interest iii. Misrepresentation iv. Stunt News v. Paid news vi. Pain-death and challenges of Tightrope Jaba news vii. Techniques of fact verification 3. Ethical responsibility of advertisers i. Violation of ethical norms by advertisers ii. Case studies iii. Internships Internship of journalists, reporters, news anchors, engineers, 5 CFP	3. Unfair Trade Practices Unfair Trade Practices and the Competition Act 2002 4. OSAs i. Official Secrets Act ii. Contemporary iii. Case Studies 5. RTI i. Right to Information Act, 2005 ii. Brief History iii. Importance and current issues MODULE V: Media Ethics and Social Responsibility 1. Why Ethics What is ethics, man? Why do we need ethics? 2. Ethical Responsibility of Journalist i. Code of conduct for journalist ii. Conflict of interest iii. Misrepresentation iv. Stunt News v. Paid news vi. Pain-death and challenges of Tightrope Jaba news vii. Techniques of fact verification 3. Ethical responsibility of advertisers i. Violation of ethical norms by advertisers ii. Case studies iii. Internships Internship of journalists, reporters, news anchors, engineers, 5 CFP	
Remarks		Remarks/Suggestions / Reader advising Suggestions	Checked by Principal Principal
Signature of Coordinator		Signature of Subject Teacher	

LADIES CHARITABLE TRUSTS

SETHU S.C. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE

DR. S. RADHAKRISHNAN MEMORIAL UNIVERSITY, MADURAI – [illegible]

Teaching Plan and Implementation Report (2023-24)

Department:	NAME:
Name of Teacher:	Mr. Charan Teja
Class & Sem: Semester – (V)	Subject: Mass Media Research
No. of lectures allotted per week: 04	No. of lectures Covered per Semester: 44

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
November	Module I: Research in Media – Introduction to Mass Media Research Relevance, Scope of Mass Media Research and Role of Research in Media Steps involved in Research Process Observation and Descriptive Research Discovery of Research Problem, Identifying Dependent and Independent Variables, Developing Hypothesis Module II: Design: Research Design Concepts, Types and Uses Research Designs: i. Exploratory ii. Descriptive and iii. Causal Research Designs: i. Exploratory	Various publications online Research papers and theses. Module I: Research in Media – Introduction to Mass Media Research Relevance, Scope of Mass Media Research and Role of Research in Media Steps involved in Research Process Observation and Descriptive Research Discovery of Research Problem, Identifying Dependent and Independent Variables, Developing Hypothesis Module II: Design: Research Design Concepts, Types and Uses Portions are covered as per topics proposed	(4) (Explanation sessions assessment from NLMOOCS) (1) Internet data on per TV use in Kerala translation
December	Research Designs: i. Exploratory ii. Descriptive and iii. Causal Module III: Data Collection: Data Collection Methodology i. Primary Data Collection Methods	Research Designs: i. Exploratory ii. Descriptive and iii. Causal Module III: Data Collection: Data Collection Methodology i. Primary Data Collection Methods	(1) (1) Internet data on media habits, Content Post Copy, Interviews & Data [illegible]

	i. Depth Interviews ii. Focus Group iii. Survey iv. Observation v. Experimentation 2. Secondary Data Collection Methods 3. Literature Review 4. Designing Questionnaire and Measurement Techniques i. Types and Forms of Questionnaire ii. Projective Techniques iii. Attitude Measurement Scales	i. Depth Interviews ii. Focus Group iii. Survey iv. Observation v. Experimentation **Portions are covered as per topics proposed**	
January	2. Secondary Data Collection Methods 3. Literature Review 4. Designing Questionnaire and Measurement Techniques i. Types and Forms of Questionnaire ii. Projective Techniques iii. Attitude Measurement Scales 5. Sampling Process 6. Data Tabulation and Research Report Format MODULE IV: Analysis Content Analysis 1. Definition and Uses 2. Qualitative and Quantitative Approach 3. Steps in Content Analysis 4. Designing Means of a Quantification System 5. Limitations of Content Analysis	2. Secondary Data Collection Methods 3. Literature Review 4. Designing Questionnaire and Measurement Techniques i. Types and Forms of Questionnaire ii. Projective Techniques iii. Attitude Measurement Scales 5. Sampling Process 6. Data Tabulation and Research Report Format **Portions are covered as per topics proposed**	[illegible]
February	MODULE IV: Analysis Content Analysis 1. Definition and Uses 2. Qualitative and Quantitative Approach 3. Steps in Content Analysis 4. Designing Means of a Quantification System 5. Limitations of Content Analysis MODULE V: Applications of Research: Applications of Research in Mass Media 1. Readership and Circulation Survey 2. TRP 3. BARC 4. Audience Research 5. Exit Polls 6. Advertising Research Research	MODULE IV: Analysis Content Analysis 1. Definition and Uses 2. Qualitative and Quantitative Approach 3. Steps in Content Analysis 4. Designing Means of a Quantification System 5. Limitations of Content Analysis MODULE V: Applications of Research: Applications of Research in Mass Media 1. Readership and Circulation Survey 2. TRP 3. BARC 4. Audience Research **Portions are covered as per topics proposed**	[illegible]

March	5. Exit Polls 6. Advertising Consumer Research MODULE VI: The Semantics. The Semantics of the Mass Media 1. What is Semantics or Media? 2. Why is Semantics Important? 3. What are the Codes in Semantics? 4. Semantics and Media	5. Exit Polls 6. Advertising Consumer Research MODULE VI: The Semantics. The Semantics of the Mass Media 1. What is Semantics or Media? 2. Why is Semantics Important? 3. What are the Codes in Semantics? 4. Semantics and Media Remedial lectures / Doubts solving lectures	Grade Class Rubric remedial lectures
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHANDMALL TRUST'S
SHETH J.J. & SH. M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN ROAD, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Report (2023-24)

Department	BAMMC
Name of Teacher	Ms. Charmy Shah
Class: BAMMC Semester: IV	Subject: Film Communication – II Subject Code: [illegible]
No. of lectures allotted per week: 04	No. Of lectures Covered per Semester: 56 No. Of lectures allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
November	Module 2 Regional Cinema Regional Film and Filmmakers: Marathi (V. Shantaram), Bengali (Satyajit Ray, Ritwik Ghatak), Malayalam/ Tamil/ Telugu/ Kannada (Film makers: K. Balachander, K. Vishwanath, Adoor Gopalakrishnan) etc Module 3 Hindi Cinema 3.1 Popular Hindi Commercial Film(Bollywood) 3.2 Pad ka Parsal 3.3 Economic contribution of cinema 3.4 Convergence of Art and Commercial	Module 2 Regional Cinema Regional Film and Filmmakers: Marathi (V. Shantaram), Bengali (Satyajit Ray, Ritwik Ghatak), Malayalam/ Tamil/ Telugu/ Kannada (Film makers: K. Balachander, K. Vishwanath, Adoor Gopalakrishnan) etc Portion not covered as per topics proposed	10 (Syllabus lecture commenced from [illegible] Exclusive lect as per TT due Overall Excursion and guests in other subjects)
December	Module 3 Hindi Cinema 3.1 Popular Hindi Commercial Film(Bollywood) 3.2 Pad ka Parsal 3.3 Economic contribution of cinema 3.4 Convergence of Art and Commercial 3.5 Genre & person (Romance, Thriller, Biographic, Actual, Musical etc.) Module 4 Contemporary Era Contemporary Era Cellulod to Digital (1980-1990) Digital Exploration (1990-present)	Module 3 Hindi Cinema 3.1 Popular Hindi Commercial Film(Bollywood) Major Films were discussed like Kis ko Dhan Kai ki Jaan 3.2 Pad ka Parsal 3.3 Economic contribution of cinema 3.4 Convergence of Art and Commercial 3.5 Genre & person (Romance, Thriller, Biographic, Actual, Musical etc.) Portion not covered as per topics proposed	10 ([illegible] lectures lost as per TT due to a Excursion and Mock Viva conducted)
January	Module 4 Contemporary Era Contemporary Era Cellulod to Digital (1980-1990) Digital Exploration (1990-present) Media Convergence and Film Viewing Culture	Module 4 Contemporary Era Contemporary Era Cellulod to Digital (1980-1990) Digital Exploration (1990-present) Media Convergence and Film Viewing Culture	10 5 Lectures lost as per TT due to FYJC teaching, [illegible]

	Module 4: Film Making Film Production to Film Distribution 4.1 Aspects of Production Systems: Financial, Administrative and Creative 4.2 Stages of Film Making : 1. Pre-Production 4.3 Stages of Film Making : 2. Actual Production 4.4 Stages of Film Making : 3. Post-Production 4.5 Film and Censorship 4.6 B2B Systems in Film Industry Distribution Promotion Marketing Branding Internet	The Action, Animal on OTT and many movies was discussed along with their promotion strategies Module 4: Film Making Film Production to Film Distribution 4.1 Aspects of Production Systems: Financial, Administrative and Creative Portion not covered as per topics proposed:	given to other subjects
February	4.2 Stages of Film Making : 1. Pre-Production 4.3 Stages of Film Making : 2. Actual Production 4.4 Stages of Film Making : 3. Post-Production 4.5 Film and Censorship 4.6 B2B Systems in Film Industry Distribution Promotion Marketing Branding Internet MODULE 5: Film Culture 5.1 Introduction to Film Institutes, Film Bodies and Trade Associations such as FTII, NFAI, Films Division, DFF, IFFI, CBFC, IFFSA, NGF, WICA, etc. 5.2 Film Festival What is a Film Festival? Major Film Festivals in India and Abroad 5.3 Film Awards Names and Types of Film Awards Major Film Awards in India and Abroad	4.2 Stages of Film Making : 1. Pre-Production 4.3 Stages of Film Making : 2. Actual Production 4.4 Stages of Film Making : 3. Post-Production 4.5 Film and Censorship 4.6 B2B Systems in Film Industry Distribution Promotion Marketing Branding Internet MODULE 5: Film Culture 5.1 Introduction to Film Institutes, Film Bodies and Trade Associations such as FTII, NFAI, Films Division, DFF, IFFI, CBFC, IFFSA, NGF, WICA, etc. 5.2 Film Festival What is a Film Festival? Major Film Festivals in India and Abroad 5.3 Film Awards Names and Types of Film Awards Major Film Awards in India and Abroad	[illegible] (including [illegible])
March		Remedial lectures / Doubt solving lectures	

Signature of Coordinator: Signature of Subject Teacher:

[illegible] CHARITABLE TRUST'S
SMT. [illegible] & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
(DR. S. RADHAKRISHNAN MARG, ANTOP HILL) MUMBAI – [illegible]

Teaching Plan and Implementation Record (2023-24)

Department	BAMMC
Name of Teacher	Ms. Namrata Singh

Class: BAMMC Semester: IV Subject: Writing and Editing for Media Subject Code: [illegible]

No. of lectures scheduled per week: 04 No. Of lectures Covered per Semester: 51 No. Of lectures Allotted per Semester: 48

Month of Teaching	Topic Proposed	Topic Covered	No. of lectures per topic
November	Print Media 1. Writing for print media 1. What makes news? (determinants of news) 2. Art and basic rules of writing 3. Steps and elements of writing editorial, features and review 4. Writing for Newspaper and Magazines 5. Writing a News story/feature (research skills & journalistic attributes) 6. Leads, not ending and story structure 7. Writing style and the stylebook 8. Public Relations and corporate writing: various forms 9. Writing for Advertisements Radio and Television 1. Writing for Broadcast Media 2. Radio and Television: Challenges, strengths and weaknesses 3. Writing for Television and Radio programmes	Print Media 1. Writing for print media 1. What makes news? (determinants of news) 2. Art and basic rules of writing 3. Steps and elements of writing editorial, features and review **Portion not covered as per topics discussed.**	[illegible]

December	4. Writing for Newspapers and Magazines 5. Writing a News story/Feature stories/Article/Editorials (differences) 6. Leads, nut starting and story structure 7. Writing style and the stylebook 8. Public Relations and corporate writing: various forms 9. Writing for Advertisements Radio and Television 1. Writing for Broadcast Media 1. Radio and Television: Challenges, strengths and weaknesses 2. Writing for Television and Radio programs 3. Script writing formats 4. Writing for interviews, live news and daily news 5. Radio podcasting / online radio and new trends Storyboarding for Television commercials	4. Writing for Newspapers and Magazines 5. Writing a News story/Feature stories/Article/Editorials (differences) 6. Leads, nut starting and story structure 7. Writing style and the stylebook 8. Public Relations and corporate writing: various forms 9. Writing for Advertisements Radio and Television 1. Writing for Broadcast Media 1. Radio and Television: Challenges, strengths and weaknesses 2. Writing for Television and Radio programs **Portions not covered as per topics discussed.**	(if) (i) Assignments from as per TT due to Christmas and New Year vacations
January	3. Script writing formats 4. Writing for interviews, live news and daily news 5. Radio podcasting / online radio and new trends Storyboarding for Television commercials Digital Media 1. Digital Media: A mission opportunity 2. Differences between newspaper writing and writing for the Web: headline writing, deck heads, subheads, links and hyperlinked content 3. How to produce well-written webpages: Written content for the web, digital spaces and digitally distributed media 4. Development of web-specific style guides, convergence of new and voice on digital 5. Emerging fields of personal publishing, including blogging and micro blogging for publishing on LinkedIn 6. Dealing with breaking news and fake news in real time 7. Writing for Advertisements through Email and SMS 8. Writing Blogs	3. Script writing formats 4. Writing for interviews, live news and daily news 5. Radio podcasting / online radio and new trends Storyboarding for Television commercials Digital Media 1. Digital Media: A mission opportunity 2. Differences between newspaper writing and writing for the Web: headline writing, deck heads, subheads, links and hyperlinked content 3. How to produce well-written webpages: Written content for the web, digital spaces and digitally distributed media 4. Development of web-specific style guides, convergence of new and voice on digital 5. Emerging fields of personal publishing, including blogging and micro blogging for publishing on LinkedIn 6. Dealing with breaking news and fake news in real time 6. Writing for Advertisements through Email and SMS 7. Writing Blogs	(if) (i) Assignments from as per TT due to Holidays Tasks, Video Pitch and Annual Day

February	4. Editing: Evaluation on Content: 1. Checking spelling and grammar. Check news/magazine copies for headlines (types, appeals), soft leads. Use of graphics and illustrations for construction and information flow in Newspapers. 2. Rewriting leads 3. Achieving fitness with spacing requirements in any newspaper, magazine or webpage 4. Checking Advertising agency copies, checking headlines/sub headlines (types, appeals) and maintaining sequence and flow in body copy. 5. Online editing: editing requirements, content, layout, clarity, style, consistency, online headlining, website design	4. Editing: Evaluation on Content: 1. Checking spelling and grammar. Check news/magazine copies for headlines (types, appeals), soft leads. Use of graphics and illustrations for construction and information flow in Newspapers. 2. Rewriting leads 3. Achieving fitness with spacing requirements in any newspaper, magazine or webpage 4. Checking Advertising agency copies, checking headlines/sub headlines (types, appeals) and maintaining sequence and flow in body copy. 5. Online editing: editing requirements, content, layout, clarity, style, consistency, online headlining, website design	[illegible] [illegible] [illegible] [illegible] 03 lectures were as per TT and practical were
March		Remedial lectures : Doubt solving lectures	2 remedial lectures
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.A & SHAH V.V COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI - 400 069

Teaching Plan and Implementation Record (2025-26)

Department	BAMMC
Name of Teacher	Mr. Naveen Singh
Class: BAMMC Semester: IV	Subject: Radio Program Production-II
No. of lectures Allotted per week:04	No. Of lectures Covered per Semester: 53

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
October	1. The Discussion 1. Format 2. Selection of Participants	1. The Discussion 1. Format 2. Selection of Participants	02 (Lectures lectures conducted from 16/10/2025)
November	1. Preparation 4. Speaker Control & Technical Control 1. Ending the Programme 1. Commentary 1. Preparation work with the Base Studio 2. Different Sports 3. Communicating Mood & Coordinating the images	1. Preparation 4. Speaker Control & Technical Control 1. Ending the Programme 1. Commentary 1. Preparation work with the Base Studio 2. Different Sports 3. Communicating Mood & Coordinating the images **Portion not covered as per proposed topics**	18 06 lectures less as per TT due to Diwali vacations
December	4. Content & Style 5. News Actors & Sports actors 7. Using the Internet and Social Media	4. Content & Style 5. News Actors & Sports actors 7. Using the Internet and Social Media	09 7 lectures less as per TT due to exam days, Christmas and

	1. An online presence 2. Internet radio 3. Radio podcasts 4. Internet Research 5. Making the best use of Social Media 6. Phone-ons 1. Technical facilities, Programme classifications, 2. The open line & choosing the calls, 3. The Role Of The Host And The Host Style	1. An online presence 2. Internet radio 3. Radio podcasts 4. Internet Research 5. Making the best use of Social Media 6. Phone-ins 1. Technical facilities, Programme classifications, 2. The open line & choosing the calls, 3. The Role Of The Host And The Host Style **Portion not covered as per topics proposed**	Mock Trial evaluation
January	4. Phone-ons 1. Technical facilities, Programme classifications, 2. The open line & choosing the calls, 3. The Role Of The Host And The Host Style 4. Reference Material, Use of Twitter, 5. Linking Programmes together, personal connecting, the Presenter as Curator 5. Making Commercials 1. Copy Policy 2. The Target Audience	4. Phone-ins 1. Technical facilities, Programme classifications, 2. The open line & choosing the calls, 3. The Role Of The Host And The Host Style 4. Reference Material, Use of Twitter, 5. Linking Programmes together, personal connecting, the Presenter as Curator **Portion not covered as per topics proposed**	11 (6 lectures lost as per TT due to Mock Trials including Sports DAYS I-II The Mock examination revision)
February	5. Making Commercials 1. Copy Policy 2. The Target Audience 3. The Product or Service 'promote' 4. Mixing & Treatment 5. Music and effects	5. Making Commercials 1. Copy Policy 2. The Target Audience 3. The Product or Service 'promote' 4. Mixing & Treatment 5. Music and effects	13+2 (including internal exams) (3 lectures extra as per TT and guidelines issue)
March		**Remedial lectures/ Doubt solving sessions**	2 (as extra remedial lectures)

Signature of Coordinator: _____ Signature of Subject Teacher: _____

LAXMI CHARITABLE TRUST'S
SMT. H.L.T.J. & SMT. M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. E. RADHAKRISHNAN MARG, AGHOHI (E), MUMBAI - [illegible]

Teaching Plan and Implementation Record (2015-16)

Department:	BAMMC
Name of Teacher:	Ms. Hussain Shaikh
Class: BAMMC - Semester- IV	Subject: Computers & Multimedia- II
No. of lectures Allotted per week: 04	No. Of lectures Covered per Semester: 48

Months of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
December	1. Photoshop: Advanced Image Editing 1. Working with multiple images Mixing Selections marquee, Lasso, Magnetic lasso, Feather Shift tool, Erase tool Pen tool and image tracing Crop tool, Tonng tool 2. Image Effects Editing Burning, Dodging Smudge, Sharpen, Blur Eyedropper, Changing colour Swatches, Colour pick Filters 3. Working with Layers Layer Masks Changing Background Gradient Morning lighting aligning layers Applying Transformations Masking layers Matte and colorizing Layer effects, Adjustment layers 4. Members of Blend Modes Blend modes Advanced blending options Layer blends 5. Fully Editable Text Text on arc Glyphs, Character Type mask tool, Image to text Text to path and Direct selection Path selection (black arrow) Creating Professional design using all the tools 2. Adobe Illustrator: Vector-based Drawing software 1. Introduction to Adobe Illustrator Illustrator Interface, Tool Box, Panels and Bars Importing files in Illustrator, Different file formats	1. Photoshop: Advanced Image Editing 1. Working with multiple images Mixing Selections marquee, Lasso, Magnetic lasso, Feather Shift tool, Erase tool Pen tool and image tracing Crop tool, Tonng tool 2. Image Effects Editing Burning, Dodging Smudge, Sharpen, Blur Eyedropper, Changing colour Swatches, Colour pick Filters 3. Working with Layers Layer Masks Changing Background Gradient Morning lighting aligning layers Applying Transformations Masking layers Matte and colorizing Layer effects, Adjustment layers 4. Members of Blend Modes Blend modes Advanced blending options Layer blends 5. Fully Editable Text Text on arc Glyphs, Character Type mask tool, Image to text Text to path and Direct selection Path selection (black arrow) Creating Professional design using all the tools 2. Adobe Illustrator: Vector-based Drawing software 1. Introduction to Adobe Illustrator Illustrator Interface, Tool Box, Panels and Bars Importing files in Illustrator, Different file formats	04 (Lectures increase commensurate with time as per TT but in Practicals we cover well as Backlog in October and November due to holidays, exams)

	2. Using text frames and paragraph text, Formatting Text, Embedding (Objects into text, Wrapping Text around Objects, and Linking Text to Objects 3. Creating Simple designs Text-based logo replications, Shape-based logo replica, Creating new symbols, Fill colour, Outline colour, Weight, and opacity 4. Applying effects Power of Blends, Distortion and contour Effects, Envelopes, Lens effects, Transparency, Creating Dropdown Effects and Power Clips	2. Using text frames and paragraph text, Formatting Text, Embedding (Objects into text, Wrapping Text around Objects, and Linking Text to Objects 3. Creating Simple designs Text-based logo replications, Shape-based logo replica, Creating new symbols, Fill colour, Outline colour, Weight, and opacity **Portion not covered as per topics proposed**	
January	4. Applying effects Power of Blends, Distortion and contour Effects, Envelopes, Lens effects, Transparency, Creating Dropdown Effects and Power Clips 5. Exporting in Illustrator Exporting, Types of exports, Exporting for other web usage **3 InDesign: Layout Software** 1. Introduction to Adobe In Design List the menus, List the tools, Primary Benefits of using In Design, Applications of In Design 2. Text Edits in InDesign Format of text, Character, and Paragraph Bars Purpose of text selection, Aligning text in different design formats, Text alignment with embedded images 3. Using patterns for different types of publications made in InDesign, Magazine in InDesign, Paragraph styles Newspaper in InDesign, Paragraphs type patterns, Text wrap pattern 4. Colour correction in InDesign Embedding images in proper formats, Colour correction on the images, Adjusting according to the colour usage of the publication 5. Exporting files Types of files, Exporting for different publications templates, newspapers, magazines, etc **4 Premiere Pro: Audio-visual: Advanced application** 1. Introduction to editing Editing importance, Good editing examples, Editing for different formats (Horizontal/vertical) 2. Exploring Premiere Pro Show premiere helps in editing, Understanding the toolbar, Importing files, Experimenting with the clips and video bumps, Basics of editing in MyAssembleFrame [illegible]	4. Applying effects Power of Blends, Distortion and contour Effects, Envelopes, Lens effects, Transparency, Creating Dropdown Effects and Power Clips 5. Exporting in Illustrator Exporting, Types of exports, Exporting for other web usage **3 InDesign: Layout Software** 1. Introduction to Adobe In Design List the menus, List the tools, Primary Benefits of using In Design, Applications of In Design 2. Text Edits in InDesign Format of text, Character, and Paragraph Bars Purpose of text selection, Aligning text in different design formats, Text alignment with embedded images 3. Using patterns for different types of publications made in InDesign, Magazine in InDesign, Paragraph styles Newspaper in InDesign, Paragraphs type patterns, Text wrap pattern 4. Colour correction in InDesign Embedding images in proper formats, Colour correction on the images, Adjusting according to the colour usage of the publication 5. Exporting files Types of files, Exporting for different publications templates, newspapers, magazines, etc **4 Premiere Pro: Audio-visual: Advanced application** 1. Introduction to editing Editing importance, Good editing examples, Editing for different formats (Horizontal/vertical) 2. Exploring Premiere Pro Show premiere helps in editing, Understanding the toolbar, Importing files, Experimenting with the clips and video bumps, Basics of editing in MyAssembleFrame [illegible]	18 (6+ extra lectures for per T2)

	video and audio layers; Basics of editing (cut layers & Flower windowsers.). 7. Right application of various file formats: Understanding different file formats (AVI/MPEG/MOV/H264, etc.) Importing raw footage for edits. Performing video checks while editing. Using inbuilt transitions. 8. Using colour grading: What is color grading, Examples of color grading, Using filters and presets in color mixing. Applying presets on layers for editing. 9. Exporting and rendering: Exporting in different formats, Choosing the right formats for exporting, Managing quality while exporting, Rendering and monitoring file format, Improving quality and time to render techniques.	1. Right application of various file formats: Understanding different file formats (AVI/MPEG/MOV/H264, etc.) Importing raw footage for edits. Performing video checks while editing. Using inbuilt transitions. 4. Using colour grading: What is color grading, Examples of color grading, Using filters and presets in color mixing. Applying presets on layers for editing. 5. Exporting and rendering: Exporting in different formats, Choosing the right formats for exporting, Managing quality while exporting, Rendering and monitoring file format, Improving quality and time to render techniques.	
February	**5. Adobe Dreamweaver: Web designing software.** 1. Introduction to Dreamweaver: Workspace overview Document toolbar, Document window, Panel groups, Files panel, Property inspector, Tag selector. Defining website in Dreamweaver. 2. Working with DW: Creating Dreamweaver template Page layout in DW: CSS layouts: advantages and disadvantages Creating HTML pages, Insert content and form Creating Forms in DW. 3. Linking pages: Using DW to accomplish basic web page development, Page properties: Title, Background image, Hyperlinks, Text colour, Links. 4. Using Tables: cell padding, cell spacing, Border Table header Colour BG in the cell, Invisible tables, Changing span, Making image into clickable link. 5. Type in DW: Changing Font typefaces, size, style, colours Text as hyperlink.	**5. Adobe Dreamweaver: Web designing software.** 1. Introduction to Dreamweaver: Workspace overview Document toolbar, Document window, Panel groups, Files panel, Property inspector, Tag selector. Defining website in Dreamweaver. 2. Working with DW: Creating Dreamweaver template Page layout in DW: CSS layouts: advantages and disadvantages Creating HTML pages, Insert content and form Creating Forms in DW. 3. Linking pages: Using DW to accomplish basic web page development, Page properties: Title, Background image, Hyperlinks, Text colour, Links. 4. Using Tables: cell padding, cell spacing, Border Table header Colour BG in the cell, Invisible tables, Changing span, Making image into clickable link. 5. Type in DW: Changing Font typefaces, size, style, colours Text as hyperlink.	12+2 (Includes internal assessment) 4 hours for test or pass TT due to prelim exam
March		Remedial lectures / Doubt solving lectures	2 (Includes internal assessment)

Signature of Coordinator: Signature of Subject Teacher:

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SHE N.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI - [illegible]

Teaching Plan and Implementation Record (2023-24)

Department	BAMMC
Name of Teacher	Ms. Chinmy Shah

Class: BAMMC **Semester:** V **Subject:** Social Media Marketing **Subject Code:** [illegible]

No. of lectures Allotted per week: 04 **No. Of lectures Covered per Semester:** 45 **No. Of lectures Allotted per Semester:** 48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	Module I - Digital ERA 1. Introduction to E-Marketing What is E-marketing? The changing marketing landscape. The internet and Business 2. E-Marketing E-Marketing strength and applications, Communication modes, The behavioural interface (B2C, B2B, C2C and C2B) E-marketing and Online advertising, E-marketing and Consumer segmentation, E-marketing and Consumer segmentation. E-marketing and Sales and Trade promotions 3. Types of Digital Marketing Types of E- mail marketing, Types of Internet marketing and Types of Mobile marketing 4. Convergence V Expansion and influence, Implications of Digital change, Emerging consumer segmentation in India Module II - Social Media Marketing 1. Introduction to Social Media Marketing	Module I- Digital ERA 1. Introduction to E-Marketing What is E-marketing? The changing marketing landscape. The internet and Business 2. E-Marketing E-Marketing strength and applications, Communication modes, The behavioural interface (B2C, B2B, C2C and C2B) E-marketing and Online advertising, E-marketing and Consumer segmentation, E-marketing and Consumer segmentation. E-marketing and Sales and Trade promotions 3. Types of Digital Marketing Types of E- mail marketing, Types of Internet marketing and Types of Mobile marketing 4. Convergence V Expansion and influence, Implications of Digital change, Emerging consumer segmentation in India **Portion not covered as per proposed topics**	6 (June 6 commenced from 13.6.2023) All lectures then as per TT, as holidays prevents other activities

	Meaning, Importance, Myths about Social media marketing, Brief History Characteristics of Social Media marketer and Careers in Social media marketing		
July	Module II : Social Media Marketing 1. Introduction to Social Media Marketing Meaning, Importance, Myths about Social media marketing, Brief History Characteristics of Social Media marketer and Careers in Social media marketing 2. Content Strategy for Social Media Marketing 10-step framework for creating successful SMM strategy, Building content for sharing, Generating Ideas, Creating content for Multiple platforms 3. Facebook Marketing Facebook – the origin and Eight different versions of Facebook, What is Facebook marketing? Facebook page best practices, KPI and insights, How does Facebook advertising work- Facebook ad Campaign Objectives and Targeting and Content creation and sharing 4. Instagram Marketing Optimizing Instagram profile, Creating content strategy, Influencer marketing and Instagram Ads 5. Linked In Marketing Linkedin for personal branding, Linkedin for Company pages, Brand marketing for Linkedin, Ads on Linkedin	Module II : Social Media Marketing 1. Introduction to Social Media Marketing Meaning, Importance, Myths about Social media marketing, Brief History Characteristics of Social Media marketer and Careers in Social media marketing 2. Content Strategy for Social Media Marketing 10-step framework for creating successful SMM strategy, Building content for sharing, Generating Ideas, Creating content for Multiple platforms 3. Facebook Marketing Facebook – the origin and Eight different versions of Facebook, What is Facebook marketing? Facebook page best practices, KPI and insights, **Portion not covered as per proposed topics**	11 07 lectures have due to power cut other subjects and Muharram holiday
August	How does Facebook advertising work- Facebook ad Campaign Objectives and Targeting and Content creation and sharing 4. Instagram Marketing Optimizing Instagram profile, Creating content strategy, Influencer marketing and Instagram Ads 5. Linked In Marketing Linkedin for personal branding, Linkedin for Company pages, Brand marketing for Linkedin, Ads on Linkedin 6. Pinterest Marketing Pinterest for business, Marketing on Pinterest, Leveraging Rich Pins 7. Tweeter Marketing	How does Facebook advertising work- Facebook ad Campaign Objectives and Targeting and Content creation and sharing 4. Instagram Marketing Optimizing Instagram profile, Creating content strategy, Influencer marketing and Instagram Ads 5. Linked In Marketing Linkedin for personal branding, Linkedin for Company pages, Brand marketing for Linkedin, Ads on Linkedin 6. Pinterest Marketing Pinterest for business, Marketing on Pinterest, Leveraging Rich Pins 7. Tweeter Marketing	11+2 includes internal exams of seven days each 13

	How to build foundation for your brand's channel. Usage of free resources. Optimize organic traffic by achieving keywords for values. Optimization of advertisements Module IV: Social Media Marketing Plan and Campaign management 1. Social Media Marketing Plan What is the SMM plan? Social Media Marketing cycle. Listen and Measure – 5 stages. Setting Social Media Marketing goals and objectives (Upstream, Engagement, Influence, Impact and Advocacy).	How to build foundation for your brand's channel. Usage of free resources. Optimize organic traffic by achieving keywords for values. Optimization of advertisements Module IV: Social Media Marketing Plan and Campaign management 1. Social Media Marketing Plan What is the SMM plan? Social Media Marketing cycle. Listen and Measure – 5 stages. Setting Social Media Marketing goals and objectives (Upstream, Engagement, Influence, Impact and Advocacy).	
Supervisor	Topic C – Strategy development. Current Engagements, hashtags and others in marketing Handbook post. Evaluating Social media marketing channels 2. Campaign Marketing What is campaign management? Scenarios. How to use campaign management for Facebook, Twitter etc. Sentiment analysis. Using a corporate blog as a CRM tool. How to integrate Live Blogs for Effective Campaign management? Module V: Ethics and Careers 1. Ethics Code of Ethics, 5 Rules of engagement for Social Media Marketing 2. Careers Careers in Social media marketing	Topic C – Strategy development. Current Engagements, hashtags and others in marketing Handbook post. Evaluating Social media marketing channels 2. Campaign Marketing What is campaign management? Scenarios. How to use campaign management for Facebook, Twitter etc. Sentiment analysis. Using a corporate blog as a CRM tool. How to integrate Live Blogs for Effective Campaign management? Module V: Ethics and Careers 1. Ethics Code of Ethics, 5 Rules of engagement for Social Media Marketing 2. Careers Careers in Social media marketing **Remedial Lecture (paper solving & revision)**	No Classes conducted Saturday
Signature of Coordinator:		**Signature of Subject Teacher:**	

[illegible] TRUST'S
[illegible] & SIES SLC COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, SION (E), MUMBAI - [illegible]

Teaching Plan and Implementation Record (2023-24)

Department	BAMMS
Name of Teacher	Ms. Charmi Shah

Class: B.A.(MS) Semester - V Subject: Advertising and Marketing Research Subject Code: [illegible]

No. of lectures Allotted per week: 04 No. Of lectures Conducted per Semester: 48 No. Of lectures Allotted per Semester: 48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	Module I Fundamentals of Research 1. What is Literature Review 2. Statement of the problem 3. Aims and objectives of study 4. Relevant Research questions Module II Research Design 1. Meaning, Definition, Need, and Importance 2. Scope of Research Design 3. Four types - Descriptive, Exploratory, and Causal Module III Preparing Questionnaire 1. Survey instruments 2. Developing the questioning using perspective 3. Techniques for Qualitative research 4. Developing the Questionnaire using attitude 5. Measuring scale for Questionnaire using attitude Module IV Sampling 1. Meaning of Sample and Sampling 2. Process of Sampling 3. Methods of Sampling, Non-probability Sampling (convenient, Judgmental, Quota, Snow Ball)	Module I Fundamentals of Research 1. What is Literature Review 2. Statement of the problem 3. Aims and objectives of study 4. Relevant Research questions Module II Research Design 1. Meaning, Definition, Need, and Importance 2. Scope of Research Design 3. Four types - Descriptive, Exploratory, and Causal Module III Preparing Questionnaire 1. Survey instruments 2. Developing the questioning using perspective 3. Techniques for Qualitative research 4. Developing the Questionnaire using attitude 5. Measuring scale for Questionnaire using attitude **Portion not covered as per topics proposed**	7 (Note: Continuous Week 11 + 2023) [illegible] lectures per TT, [illegible] other subjects and Make Up Lectures

July	Module IV: Sampling 1. Meaning of Sample and Sampling. 2. Process of Sampling 3. Methods of Sampling: Non-probability Sampling: Convenience, Judgment, Quota, Snow Ball Probability Sampling: Simple Random, Systematic, Stratified, Cluster, Multi-Stage. Module V: Preparing data sheet and data processing Preparation of datasheet in excel format and rearranging the data as per the requirement of the Statistical software such as SPSS and the statistical tool Module VI: Data Analysis Data collected are to be processed and analyzed. Students will have to choose the methods that best suit the data collected. Data could be presented using tables, pie charts, bar charts, histograms etc. Data presented should be accompanied with the interpretation of the associations and relationships among the data groups with the appropriate implications to the study in the unit of study. The summary of interpretation should provide answers to the research Questions. Module VII: Methods of Data Analysis The interpretations based on Descriptive statistics should include Mode, Mean, Median, Range, Variance, Standard deviation, Kurtosis, and Skewness Any of the following multivariate analyses may be used such as Regression, Correlation, Test Factor analyses, and Hypothesis analysis.	Module IV: Sampling 1. Meaning of Sample and Sampling. 2. Process of Sampling 3. Methods of Sampling: Non-probability Sampling: Convenience, Judgment, Quota, Snow Ball Probability Sampling: Simple Random, Systematic, Stratified, Cluster, Multi-Stage. Module V: Preparing data sheet and data processing Preparation of datasheet in excel format and rearranging the data as per the requirement of the Statistical software such as SPSS and the statistical tool Module VI: Data Analysis Data collected are to be processed and analyzed. Students will have to choose the methods that best suit the data collected. Data could be presented using tables, pie charts, bar charts, histograms etc. Data presented should be accompanied with the interpretation of the associations and relationships among the data groups with the appropriate implications to the study in the unit of study. The summary of interpretation should provide answers to the research Questions. **Portion and percent as per Higher proposal**	12 Ad hocness Test as per VT —cancelled due to illness event and holiday declared due to heavy rains.
August	Module VII: Methods of Data Analysis The interpretations based on Descriptive statistics should include Mode, Mean, Median, Range, Variance, Standard deviation, Kurtosis, and Skewness.	Module VII: Methods of Data Analysis The interpretations based on Descriptive statistics should include Mode, Mean, Median, Range, Variance, Standard deviation, Kurtosis, and Skewness.	17 + 1 (includes internal exams) IT Summary exams as per VT

Any of the following multivariate analysis may be used such as Regression, Correlation, Test factor analysis, and discriminant analysis

Module VIII: Report Writing
Format of the Research Report
The research report shall have the following Components
1. Title Page
2. Index
3. Introduction and Research objective
4. Industry Overview
5. Literature Review
6. Statement of the Problem
7. Statement of Hypothesis (Alternate Hypothesis)
8. Research Methodology and Research Design
9. Data Analysis and Interpretation
10. Findings
11. Conclusion
12. Suggestions
13. Annexure (questionnaire)
14. Bibliography

Module IX: Advertising Research
1. Introduction to Advertising Research
2. Copy Research: a. Concept testing, b. Name testing
3. c. Slogan testing
4. Copy testing measures and methods: a. Pre-measures.
5. b. Direct questioning, c. Direct Mail tests
6. d. Statement comparison tests
7. e. Qualitative interviews, f. Focus groups
8. Pretesting
   A. Print Pretesting: a. Consumer Jury Test,
   B. Portfolio test,
   C. Paired comparison test
   D. Order-of-merit test

Any of the following multivariate analysis may be used such as Regression, Correlation, Test factor analysis, and discriminant analysis

Module VIII: Report Writing
Format of the Research Report
The research report shall have the following Components
1. Title Page
2. Index
3. Introduction and Research objective
4. Industry Overview
5. Literature Review
6. Statement of the Problem
7. Statement of Hypothesis (Alternate Hypothesis)
8. Research Methodology and Research Design
9. Data Analysis and Interpretation
10. Findings
11. Conclusion
12. Suggestions
13. Annexure (questionnaire)
14. Bibliography

Module IX: Advertising Research
1. Introduction to Advertising Research
2. Copy Research: a. Concept testing, b. Name testing
3. c. Slogan testing
4. Copy testing measures and methods: a. Pre-measures.
5. b. Direct questioning, c. Direct Mail tests
6. d. Statement comparison tests
7. e. Qualitative interviews, f. Focus groups
8. Pretesting
   A. Print Pretesting: a. Consumer Jury Test,
   B. Portfolio test,
   C. Paired comparison test
   D. Order-of-merit test
   E. Match magazine test
   F. Direct mail test

	f. Mock magazine test, g. Direct mail test h. Brand naming Positioning a. Trailer tests, b. Theater tests, c. Live telecast tests, d. Clinics tests iii. Challenges in pre-testing. Examples: The Halo effect 3. Post testing a. Recall tests, b. Recognition tests, c. Triple association tests, d. Sales effect tests, e. Sales results tests, f. Enquiries test	11. Brand naming Positioning a. Trailer tests, b. Theater tests, c. Live telecast tests, d. Clinics tests iii. Challenges in pre-testing. Examples: The Halo effect 3. Post testing a. Recall tests, b. Recognition test, c. Triple association test, d. Sales effect tests, e. Sales results tests, f. Enquiries test	
Implication	Psychological rating scales 1. Pupil metric devices, 2. Eye movement cameras 3. Galvanometers, 4. Voice pitch analyses 5. Brain pattern analyses Module 3: Marketing Research 1. Introduction to Advertising Research & 2. New product research, 3. Branding Research, 4. Pricing research, 5. Packaging research, 6. Product testing	Physiological rating scales 1. Pupil metric devices, 2. Eye movement cameras, 3. Galvanometers, 4. Voice pitch analyses 5. Brain pattern analyses Module 3: Marketing Research 1. Introduction to Advertising Research & 2. New product research, 3. Branding Research, 4. Pricing research, 5. Packaging research, 6. Product testing Remarks/Lecturer (Month Activity & Revision)	Ref 2 (Includes normalized Sections) the lectures here as per TT due to Ganesh Chaturthi and Ganesh Chaturthi holidays
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & DR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department:	BAMMC
Name of Teacher:	Ms. Namrata Singh

Class: BAMMC Semester: V Subject: Copy Writing Subject Code: [illegible]

No. of lectures Allotted per week: 04 No. Of lectures Covered per Semester: [illegible] No. Of lectures Allotted per Semester: 48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	Module I 1. Introduction to Copywriting a. Nature of copywriting b. Responsibility of Copywriter 2. Creative Thinking a. How to inculcate a 'creative thinking attitude' b. The idea incubation process c. What's the Big Idea? How to get to the OMG BIG IDEA that will inspire creative d. Crafting the reason why consumers should believe your brand and act 3. Idea Generation Techniques Idea generation Techniques: eg. Brainstorming, Triggered brain walking, Questioning assumptions, Picture prompts, Scamper, Observation, Reframing, Interactions, Imagination, Dreams, and Creative Activities 4. Transcreativity a. Introduction b. Purpose Module II: Writing for Advertising 1. Briefs a. Marketing Brief b. Creative Brief	Module I 1. Introduction to Copywriting a. Nature of copywriting b. Responsibility of Copywriter 2. Creative Thinking a. How to inculcate a 'creative thinking attitude' b. The idea incubation process c. What's the big idea? How to get to the OMG BIG IDEA that will inspire creative d. Crafting the reason why consumers should believe your brand and act 3. Idea Generation Techniques Idea generation Techniques: eg. Brainstorming, Triggered brain walking, Questioning assumptions, Picture prompts, Scamper, Observation, Reframing, Interactions, Imagination, Dreams, and Creative Activities 4. Transcreativity a. Introduction b. Purpose Module II: Writing for Advertising 1. Briefs Portion not covered as per topics proposed	8 (Since V commenced from 11.8.2023) (12 lectures less as per TT, as lectures given in other subjects)

Bab	a. Marketing Brief b. Creative Brief 2. Writing Persuasive Copy a. Tone of Voice b. What's the Tone? c. Tonality and character matrix d. How to make your Writing, walk, talk and breathe e. Creating Breakthrough Writing f. How to Control the "Consumer Center" in Your g. Prospect's Mind h. How to Change Perception i. Emotionally Storytelling Module III: Current Advertising Campaigns Copy writing style of current advertising campaigns of the best advertising agencies for their clients Two current campaigns for each of the following agencies including TVC, Print, Outdoor, and Digital should be studied and analyzed in the classroom a. JWT b. Ogilvy c. Leo Burnett d. FCB Ulka e. DDB Madre f. Publicis Worldwide At least three international awards winning per-year-year campaigns (one or two years per-year) should be studied and discussed in the classroom Student to be taught the following when discussing the Campaigns a. Copywriting style b. Idea and concept c. How copy is varied for different media d. Copy for children, Youth, women, senior citizens, executives millennials, Baby Boomers, Gen X, Gen Y, Gen Z e. Advertising appeals f. The tone of Voice g. Storytelling	a. Marketing Brief b. Creative Brief 2. Writing Persuasive Copy a. Tone of Voice b. What's the Tone? c. Tonality and character matrix d. How to make your Writing, walk, talk and breathe e. Creating Breakthrough Writing f. How to Control the "Consumer Center" in Your g. Prospect's Mind h. How to Change Perception i. Emotionally Storytelling Module III: Current Advertising Campaigns Copy writing style of current advertising campaigns of the best advertising agencies for their clients Two current campaigns for each of the following agencies including TVC, Print, Outdoor, and Digital should be studied and analyzed in the classroom a. JWT b. Ogilvy c. Leo Burnett d. FCB Ulka e. DDB Madre f. Publicis Worldwide At least three international awards winning per-year-year campaigns (one or two years per-year) should be studied and discussed in the classroom Student to be taught the following when discussing the Campaigns a. Copywriting style b. Idea and concept c. How copy is varied for different media d. Copy for children, Youth, women, senior citizens, executives millennials, Baby Boomers, Gen X, Gen Y, Gen Z e. Advertising appeals f. The tone of Voice g. Storytelling	22 04 Indonesia [illegible]

August	Module IV: Media and Audiences 1. Writing for various Media a. Print: Headlines, sub-headlines, captions, body copy, and slogans b. Television, Storyboard, Storyboarding Techniques, Balance between words and visuals, Power of silence, Structure of TVC c. Outdoor posters d. Radio e. Digital copy for social media like Facebook, Instagram, etc f. Copy for web page 2. Writing copy for various audiences a. Children b. Youth c. Women d. Senior Citizens and e. Executives f. Baby Boomers, Gen X, Gen Y (Millennials), Gen Z	Module IV: Media and Audiences 1. Writing for various Media a. Print: Headlines, sub-headlines, captions, body copy, and slogans b. Television, Storyboard, Storyboarding Techniques, Balance between words and visuals, Power of silence, Structure of TVC c. Outdoor posters d. Radio e. Digital copy for social media like Facebook, Instagram, etc f. Copy for web page 2. Writing copy for various audiences a. Children b. Youth c. Women d. Senior Citizens and e. Executives f. Baby Boomers, Gen X, Gen Y (Millennials), Gen Z Module V: Writing Copies, Appeals, Execution Styles and evaluation 1. How to write copy for a. Direct mailer **Portions not covered as per topics proposed**	15+2 (including internal student) 91 lecture hrs as per TT
September	b. Classified c. Press Release d. B2B e. Email copy f. Advertorial g. Infomercial 2. Various Types of Advertising and Execution styles a. Rational appeals b. Emotional appeals, Humour, Fear, Sex appeal, Music	b. Classified c. Press Release d. B2B e. Email copy f. Advertorial g. Infomercial 2. Various Types of Advertising and Execution styles a. Rational appeals b. Emotional appeals, Humour, Fear, Sex appeal, Music	10+2 (including internal student)

	c. Various advertising executive techniques d. The techniques Evaluation of an Ad Campaign 1. The Techniques for Evaluation of an Ad Campaign a. Evaluate the ad in terms of its efficacy, that is, to what extent the campaign has achieved its set objectives. b. Learn to appreciate the aesthetic aspects of the ad here the ad looks, its layout, color scheme, typography, balance, etc. Common errors found by the examiner were Challenges faced by some citizens and the physically mentally challenged	c. Various advertising executive techniques d. The techniques Evaluation of an Ad campaign. The Techniques for Evaluation of an Ad Campaign a. Evaluate the ad in terms of its efficacy, that is, to what extent the campaign has achieved its set objectives. b. Learn to appreciate the aesthetic aspects of the ad here the ad looks, its layout, color scheme, typography, balance, etc. Common errors found by the examiner were Challenges faced by some citizens and the physically mentally challenged **Remedial Lectures (Reader solving & Revision)**	
Signature of Examiner:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SHRI DR L C J & DR M V COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2025-24)

Department	BAMMC
Name of Teacher	Mrs. Manisha Mahal Sawant

Class: BAMMC Semester: V Subject: Consumer Behaviour Subject Code: BAMMC DSE B 501

No. of lectures Allotted per week: 04 No. Of lectures Covered per Semester: 51 No. Of lectures Allotted per Semester: 48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	Module I 1. Introduction to Consumer Behaviour Need to study Consumer Behaviour Psychological and Sociological dynamics of consumptions Consumer Behaviour in a dynamic and digital world 2. Marketing and Consumer Behaviour Segmentation Strategies- VALS Communication process Persuasion: Needs and Importance E.L.M. Persuasive advertising appeals	Module I 1. Introduction to Consumer Behaviour Need to study Consumer Behaviour Psychological and Sociological dynamics of consumptions Consumer Behaviour in a dynamic and digital world 2. Marketing and Consumer Behaviour Segmentation Strategies- VALS Communication process Persuasion: Needs and Importance E.L.M. Persuasive advertising appeals	21 (Date 9 commenced from 11.6.2025) (01 lecture less as per TT due to Bakri Eid holiday)
July	Module II Psychological Determinants and Consumer Behaviour 1. Motivation: Types and Theories Maslow 2. Attitude- Characteristics- Theories- Development 3. Multi Attribute Model 4. Cognitive Dissonance 5. Personality – Factors of personality 6. Theories- Freud and Jung 6. Personality traits and consumer behaviour 6. Self concept Application of these theories in the marketing and consumer behaviour Module III	Module II Psychological Determinants and Consumer Behaviour 1. Motivation: Types and Theories Maslow 2. Attitude- Characteristics- Theories- Development 3. Multi Attribute Model 4. Cognitive Dissonance 5. Personality – Factors of personality 6. Theories- Freud and Jung 6. Personality traits and consumer behaviour 6. Self concept Application of these theories in the marketing and consumer behaviour Module III	19 (01 lecture less as per TT

	Relevance of Learning in Consumer Behaviour 1. Perceptual: Elements in perception a. Subliminal perception b. Perceptual Interpretation: Stereotyping in advertising 2. Learning: Elements in Consumer Learning 3. Behavioral and Classical Theory 4. Cognitive Learning	Relevance of Learning in Consumer Behaviour 1. Perceptual: Elements in perception a. Subliminal perception b. Perceptual Interpretation: Stereotyping in advertising 2. Learning: Elements in Consumer Learning 3. Behavioral and Classical Theory 4. Cognitive Learning	
August	Module IV Socio Economic and Cultural Determinants of Consumer Behaviour 1. Family: Role of family in Socialization and Consumption-FLC 2. Culture: Role and Dynamics i. Subculture and its influence on consumption a. Changing Indian core values iii. Cross cultural consumer perspective 3. Social Group: Primary and secondary and the role of Reference group and Consumer Behaviour 4. Economic: social class in the economy 5. Determinants of consumer behaviour	Module IV Socio Economic and Cultural Determinants of Consumer Behaviour 1. Family: Role of family in Socialization and Consumption-FLC 2. Culture: Role and Dynamics i. Subculture and its influence on consumption a. Changing Indian core values iii. Cross cultural consumer perspective 3. Social Group: Primary and secondary and the role of Reference group and Consumer Behaviour 4. Economic: social class in the economy 5. Determinants of consumer behaviour	(2+3) (includes internal evaluation) (No lecture here as per TT due to given to other subjects and FYIAMMC orientation and Pune New Year holiday)
September	Module V Consumer Decision Making a. Process of decision making b. Models of decision making c. Opinion Leadership 2. Diffusion and Adoption Process a. Process of decision making b. Models of decision making c. Opinion Leadership d. Diffusion and Adoption Process	Module V Consumer Decision Making a. Process of decision making b. Models of decision making c. Opinion Leadership 2. Diffusion and Adoption Process a. Process of decision making b. Models of decision making c. Opinion Leadership d. Diffusion and Adoption Process **Revisiting lectures and doubt solving**	(1+2) (includes internal lectures)
Signature of Coordinator:		**Signature of Subject Teacher:**	

[illegible] TRUST'S
[illegible] COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – [illegible]

Teaching Plan and Implementation Record (2025-26)

Department:	**[illegible]**
Name of Teacher:	Mrs. Manasi Mohit Sayani

Class: [illegible] **Semester:** [illegible] **Subject:** **Brand Building** **Subject Code:** [illegible]

No. of lectures Allotted per week: [illegible] **No. of lectures Covered per Semester:** [illegible] **No. of lectures Allotted per Semester:** [illegible]

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	Module I: Introduction to Brand Building, Identity, Personality and Positioning 1. Introduction to Brand Building Meaning, Product v/s Brand, Why brand matters, Process of Branding, Types of brand: National, Retail, Product, Distribution, Luxury, Global Brands; Brand Building Blocks; Guidelines for effective branding; Brand Elements - types of brand elements 2. Brand Identity and Brand personality Consumer, Industrial, Retail, Classified, Corporate, Public service, Generic, National, Global, International, Social (CSR) and Advisory 3. Brand Positioning Product class, Consumer segmentation, Perceptual mapping, Brand benefits and attributes, Consciousness of positioning strategy Basis	Module I: Introduction to Brand Building, Identity, Personality and Positioning 1. Introduction to Brand Building Meaning, Product v/s Brand, Why brand matters, Process of Branding, Types of brand: National, Retail, Product, Distribution, Luxury, Global Brands; Brand Building Blocks; Guidelines for effective branding; Brand Elements - types of brand elements 2. Brand Identity and Brand personality Consumer, Industrial, Retail, Classified, Corporate, Public service, Generic, National, Global, International, Social (CSR) and Advisory 3. Brand Positioning Product class, Consumer segmentation, Perceptual mapping, Brand benefits and attributes, Consciousness of positioning strategy Basis	16 (Module V commenced from 13.8.2025) (04 lectures extra as per TT)
July	Module II: Branding Leveraging, Strategies, Equity, Models 1. Brand Leveraging Line, Brand extension, Types of Brand Extensions, their advantages and disadvantages, Moving up/ down, Co-branding 2. Brand Strategies Multi-branding, Mix branding, Hierarchy, Building Equity in different Hierarchy Levels, Brand Product Matrix, Brand Architecture, Benefit of a Branding Strategy, Cost of a Branding Strategy 3. Brand Equity and Models	Module II: Branding Leveraging, Strategies, Equity, Models 1. Brand Leveraging Line, Brand extension, Types of Brand Extensions, their advantages and disadvantages, Moving up/ down, Co-branding 2. Brand Strategies Multi-branding, Mix branding, Hierarchy, Building Equity in different Hierarchy Levels, Brand Product	26 (4 lectures extra as per TT)

	Economic Sources, Measurement, Brand awareness, Brand loyalty (Models), Yaad B. Greenyard model Brand Asset Valuation, Brand Equity Ten, Aaker brand Equity brand Module IV. Brand Building Through Improvers, Global and Corporate Image 1. Brand Improvers Coordination across organizations, Coordination across geography, Re-branding, co-branding, Rural Advertising and brands 2. Global Brands Emergence of global brands, Advantages and Disadvantages, Global leadership brands and positions, Globalization 3. Corporate image Building through brands Corporate Image in Contemporary Management, Advertising and Corporate Image	Matrix, Brand Architecture, Breadth of a Branding Strategy, Depth of a Branding Strategy 3. Brand Equity and Models Economic Sources, Measurement, Brand awareness, Brand loyalty (Models), Yaad B. Greenyard model Brand Asset Valuation, Brand Equity Ten, Aaker brand Equity brand Module III. Brand Building Through Improvers, Global and Corporate Image 1. Brand Improvers Coordination across organizations, Coordination across geography, Re-branding, co-branding, Rural Advertising and brands 2. Global Brands Emergence of global brands, Advantages and Disadvantages, Global leadership brands and positions, Globalization 3. Corporate image Building through brands Corporate Image in Contemporary Management, Advertising and Corporate Image	
August	Module V. Brand Building Through CSR, Brands in Different Sectors, Brand Life Cycle 1. Brand Building through Corporate Social Responsibility CSR as part of business environment management, How CSR activities can be used for Brand Building, Social activities other than CSR to enhance the brand	Module IV. Brand Building Through CSR, Brands in Different Sectors, Brand Life Cycle 1. Brand Building through Corporate Social Responsibility CSR as part of business environment management, How CSR activities can be used for Brand Building, Social activities other than CSR to enhance the brand	13+1 (including internal exam)
September	2. Consumption and Growth Important factors in consumption and various stages of growth and maturity of brands with various case studies 3. Branding in Different Sectors Consumer, Industrial, Retail and Service Brands	2. Consumption and Growth Important factors in consumption and various stages of growth and maturity of brands with various case studies 3. Branding in Different Sectors Consumer, Industrial, Retail and Service Brands Brand Audit Lectures (Guest advisory & Revision)	4+1 (including essential business) 4 lectures lost as per 11 Jan in Canada Calendar holidays and given to other subjects

Signature of Coordinator: Signature of Subject Teacher:

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SHRI N.Y. COLLEGE OF ARTS, BUSINESS & COMMERCE
DR. T. RAMMAGHONAN MARG, CHEMBUR (E), MUMBAI – 400 071

Teaching Plan and Implementation Record (2023-24)

Department:	BAFM
Name of Teacher	Dr. Namita Vishal Tripathi
Class: BAFM/SEM – Semester – V	Subject: Sports Management — Subject Code: [illegible]
No. of lectures Allotted per week: 04	No. Of lectures Conducted per Semester: 45 — No. Of lectures Allotted per Semester: 60

Month of Teaching	Topic Proposed	Topic Covered	No. of lectures per topic

Bose	Module I 1. Advertising Agencies a. Agencies role, Functions, Organization and Importance b. Different types of ad agencies 2. Account Planning a. Role of account planning in advertising b. Role of Account Planner c. Account Planning Process 3. Client Servicing a. The Client- Agency Relationship b. 3 P's of Service: Physical evidence, Process and People c. The Gaps Model of service quality d. Stages in the client - agency relationship e. How Agencies Get Clients f. Why Agencies Lose Clients g. The roles of Advertising Account executives 4. Advertising campaign Management a. Money, Find, planning and the b. Method of Laddering as guides to Creative Advertising Formulations Module II Study and Analyze remote Advertising campaigns of the best advertising agencies for their clients. 1. Two current campaigns (Previous two years) for each of the following agencies including TVC, Print, Outdoor and digital should be studied in the classroom. a. JWT b. Ogilvy c. Lowe Lintas d. FCB Ulka e. DDB mudra f. Particular Worldwide 2. At least three international awards winning previous year campaigns (one or two year previous) should be analyzed and discussed in the classroom. The applications questions are Expected on the latest campaigns.	Module I 1. Advertising Agencies a. Agencies role, Functions, Organization and Importance b. Different types of ad agencies 2. Account Planning a. Role of account planning in advertising b. Role of Account Planner c. Account Planning Process 3. Client Servicing a. The Client- Agency Relationship b. 3 P's of Service: Physical evidence, Process and People c. The Gaps Model of service quality d. Stages in the client - agency relationship e. How Agencies Get Clients f. Why Agencies Lose Clients g. The roles of Advertising Account executives 4. Advertising campaign Management a. Money, Find, planning and the b. Method of Laddering as guides to Creative Advertising Formulations Module II Study and Analyze remote Advertising campaigns of the best advertising agencies for their clients. 1. Two current campaigns (Previous two years) for each of the following agencies including TVC, Print, Outdoor and digital should be studied in the classroom. a. JWT b. Ogilvy c. Lowe Lintas d. FCB Ulka e. DDB mudra f. Particular Worldwide 2. At least three international awards winning previous year campaigns (one or two year previous) should be analyzed and discussed in the classroom. The applications questions are Expected on the latest campaigns.	14 Class V commence d from (14.8.2023) (04 hours extra as per TT)

Jul's	Module III 1. Entrepreneurship a. Entrepreneurship Definitions, Meaning Concept, Functions, Need and Importance b. Entrepreneurship- As Innovation, risk taking and problem solving. c. Social Entrepreneurship 2. Sources of capital for starting company a. Personal investment b. Family c. Venture capital d. Angel's Finance e. Business incubators f. Government grants and subsidies g. Bank loan 3. Creating and Starting the Venture a. Sources of new ideas b. Methods of generating ideas, creating problem solving. c. product planning and development process Module IV 1. Business Plan for Setting up an Agency a. Business plan introduction b. Various Stages in setting up a new agency 2. Marketing plan of the venture a. The Marketing Mix b. Marketing Audit c. Marketing Objectives d. Marketing Problems e. STP f. Executing the plan g. Evaluating the plan	Module III 1. Entrepreneurship a. Entrepreneurship Definitions, Meaning Concept, Functions, Need and Importance b. Entrepreneurship- As Innovation, risk taking and problem solving. c. Social Entrepreneurship 2. Sources of capital for starting company a. Personal investment b. Family c. Venture capital d. Angel's Finance e. Business incubators f. Government grants and subsidies g. Bank loan 3. Creating and Starting the Venture a. Sources of new ideas b. Methods of generating ideas, creating problem solving. c. product planning and development process Module IV 1. Business Plan for Setting up an Agency a. Business plan introduction b. Various Stages in setting up a new agency 2. Marketing plan of the venture a. The Marketing Mix b. Marketing Audit **Further are revised as per topics proposed**	03 Lectures hour as per TT due to sick leave and given to other subjects

August	c. Marketing Objectives d. Marketing Problems e. STP f. Executing the plan g. Evaluating the plan Module 6 1. The Response Process a. Traditional Response Hierarchy Models b. Communication objectives c. DAGMAR: An Approach to Setting Objectives 2. Agency Compensation a. Various methods of Agency Remuneration 3. Choosing the Agency a. The Pitch: request for proposal, speculative pitches, Pitch Process b. References, Images and reputation, PR 4. Sales Promotion Management a. The Scope and Role of Sales Promotion b. Reasons for the Increase in Sales Promotion	c. Marketing Objectives d. Marketing Problems e. STP f. Executing the plan g. Evaluating the plan Module 7 1. The Response Process a. Traditional Response Hierarchy Models b. Communication objectives c. DAGMAR: An Approach to Setting Objectives 2. Agency Compensation a. Various methods of Agency Remuneration 3. Choosing the Agency a. The Pitch: request for proposal, speculative pitches, Pitch Process b. References, Images and reputation, PR 4. Sales Promotion Management a. The Scope and Role of Sales Promotion b. Reasons for the Increase in Sales Promotion	CT-2 (includes internal exams) 02 lectures (as per TT
September	c. Objectives of Trade Oriented Sales Promotion d. Techniques of Trade Oriented Sales Promotion e. Objectives of Consumer Oriented Sales Promotion f. Techniques of Consumer Oriented Sales Promotion	c. Objectives of Trade Oriented Sales Promotion d. Techniques of Trade Oriented Sales Promotion e. Objectives of Consumer Oriented Sales Promotion f. Techniques of Consumer Oriented Sales Promotion **Remedial Lectures (Doubt Solving & Revision)**	CT-2 (includes remedial lectures) 06 lectures (as per TT due to positive work and giving in other subjects)

Signature of Coordinator: Signature of Subject Teacher:

LOOMS CHARITABLE TRUST'S
MARTIN L.U.T. & SR M.T. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Report (2023-24)

Department:	BAMMC
Name of Teacher:	Ms. Chinny Shah
Class: BAMMC Semester: VI Subject: Digital Media	Subject Code: [illegible]
No. of lectures allotted per week: 24 No. Of Series to Covered per Semester: 48	No. Of lectures allotted per Semester: 48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
October		Week 1-2 : Conducting internal examination	12 (TYBAMMC examination of Semester Exam 28.10.2023)
January	Module 1: Above Features 1. Introduction to Digital Marketing a. Understanding Digital Media b. Advantages of Digital Media c. Principles of Digital Media Marketing d. Key Concepts in Digital media e. Traditional Vs Digital Media Module II 1. Search Engine Optimization (SEO) a. How search Engine works b. Introduction to SEO c. On Page Optimization d. Off Page Optimization e. SEO Audit, Tools and Measurement f. SEO mistakes, Caution in SEO Module III 1. Search Engine Marketing (SEM) a. What is SEM? b. Why SEM c. What is Google Adwords? Why Google Adwords d. Google adwords	Module 1: Above features 1. Introduction to Digital Marketing a. Understanding Digital Media b. Advantages of Digital Media c. Principles of Digital Media Marketing d. Key Concepts in Digital media e. Traditional Vs Digital Media Module II 1. Search Engine Optimization (SEO) a. How search Engine works b. Introduction to SEO c. On Page Optimization d. Off Page Optimization e. SEO Audit, Tools and Measurement f. SEO mistakes, Caution in SEO Module III 1. Search Engine Marketing (SEM) a. What is SEM? b. Why SEM c. What is Google Adwords? Why Google Adwords d. Google adwords	36 (Two and Half Day per lecture due to Diwali vacations, VI sem V Prg Exams, Christmas and New year vacation) (1 lecture less as per TT)

	a. Adwords remarketing c. Campaign types d. Creation of Google Display NETWORK (GDN) e. Display Ads format f. Conversion tracking g. GDN Campaign creation (DEMO) h. Remarketing i. What are Google shopping Ads Module IV 1. Social Media Marketing (SMM) a. Introduction to Social Media b. Facebook Marketing c. Instagram Marketing d. LinkedIn Marketing e. Twitter Marketing f. SMM Tools g. Creating a successful social media strategy Module V 1. Email Marketing a. Key terms and concepts	a. Adwords remarketing c. Campaign types d. Creation of Google Display NETWORK (GDN) e. Display Ads format f. Conversion tracking g. GDN Campaign creation (DEMO) h. Remarketing i. What are Google shopping Ads Module IV 1. Social Media Marketing (SMM) a. Introduction to Social Media b. Facebook Marketing c. Instagram Marketing d. LinkedIn Marketing e. Twitter Marketing f. SMM Tools g. Creating a successful social media strategy **Further detail will be given on your regular programme**	
Subsequently	Module V 1. Email Marketing a. Key terms and concepts b. Customer segmentation strategies c. Best Practices CRAM d. Tools to evaluate Email marketing e. Enhance Inbox reach Module VI 1. Web Analytics a. Introduction to analytics b. Social CRM and analytics c. Google Analytics d. Digital Analytics e. Content performance analytics f. Visitor analysis g. Social media analytics Module VII 1. Affiliate Marketing and Programmatic Marketing a. Affiliate Marketing	Module V 1. Email Marketing a. Key terms and concepts b. Customer segmentation strategies c. Best Practices CRAM d. Tools to evaluate Email marketing e. Enhance Inbox reach Module VI 1. Web Analytics a. Introduction to analytics b. Social CRM and analytics c. Google Analytics d. Digital Analytics e. Content performance analytics f. Visitor analysis g. Social media analytics Module VII 1. Affiliate Marketing and Programmatic Marketing a. Affiliate Marketing	[illegible] [illegible] [illegible] [illegible]

	h. Definition, Purpose, Resources required, Top Players in Affiliate marketing, Segregation of Affiliate marketing i. Programmatic Marketing j. Evolution and growth of programmatic Marketing k. Real Time bidding l. Types of Programmatic Advertising, Advantages and Challenges, Models of Programmatic Marketing Module VIII a. Content writing b. Seo in content writing c. Core Principles of Content writing d. Why blogs matter e. Principles of writing blogs f. How to write content for Twitter and Mobile	h. Definition, Purpose, Resources required, Top Players in Affiliate marketing, Segregation of Affiliate marketing i. Programmatic Marketing j. Evolution and growth of programmatic Marketing k. Real Time bidding l. Types of Programmatic Advertising, Advantages and Challenges, Models of Programmatic Marketing Module VIII a. Content writing b. Seo in content writing c. Core Principles of Content writing d. Why blogs matter e. Principles of writing blogs f. How to write content for Twitter and Mobile	
March	Module IX a. Cyber laws b. Information Technology Act c. Copyright Act d. Cyber ethics e. Digital Security	Module IX a. Cyber laws b. Information Technology Act c. Copyright Act d. Cyber ethics e. Digital Security Remedial/Academic Weak/ advising lecture	2 (include remedial lecture)
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETTY LLT & DR M V COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI - 400 069

Teaching Plan and Implementation Record (2024-24)

Department:	Name:
Name of Teacher:	Ms. Namrata Singh
Class: BAMS Semester: VI	Subject: Media Planning & Buying — Subject Code: [illegible]
No. of lectures allotted per week: 04	No. Of lectures Conducted per Semester: 45 — No. Of lectures allotted per Semester: 48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per week
January	Module I: Introduction to Media Planning 1. Introduction to Media Planning a. Basic Terms and Concepts b. The function of Media c. Objectives of MP d. Role of Media Planner e. Challenges in Media planning f. RARC and SCCS grid g. Factors influencing media h. The criterion for selection of media vehicles Module II: Negotiation skills in Media Buying a. Negotiation Strategies b. Laws of Persuasion Module III: Media planning process a. Situation analysis and Marketing strategy plan b. Media Briefing c. Media objectives and target audience analysis d. Media selection and strategy e. Media budgeting f. Media Buying g. Evaluation Module IV: Media Mix	Module I: Introduction to Media Planning 1. Introduction to Media Planning a. Basic Terms and Concepts b. The function of Media c. Objectives of MP d. Role of Media Planner e. Challenges in Media planning f. RARC and SCCS grid g. Factors influencing media h. The criterion for selection of media vehicles Module II: Negotiation skills in Media Buying a. Negotiation Strategies b. Laws of Persuasion Module III: Media planning process a. Situation analysis and Marketing strategy plan b. Media Briefing c. Media objectives and target audience analysis d. Media selection and strategy e. Media budgeting f. Media Buying g. Evaluation Module IV: Media Mix	11 TYBMM(C) commenced Academic Year 08.09.2023 Tue and Thu are holidays due to Diwali vacations. TY was T Reg Practice Chandrayan and Vijay plan vacations. 07 lectures live as per TT due to New Year holiday, Sports day, Maharashtra Nalha and Video Fest

	Factors influencing Media Mix Decision Module V – Media Measurement a. Reach b. Frequency c. Gross GRP Average d. TRP/ TVT rating e. Impressions f. Cost efficiency g. Cost per thousand h. Cost per rating i. Circulation/ Readership/ A/R j. Subscription Sales k. Share of Voice	Factors influencing Media Mix Decision **Functions and covered in your regular prospectus.**	
Evaluation	Module V – Media Measurement a. Reach b. Frequency c. Gross GRP Average d. TRP/ TVT rating e. Impressions f. Cost efficiency g. Cost per thousand h. Cost per rating i. Circulation/ Readership/ A/R j. Subscription Sales k. Share of Voice Module VI – Sources of media research a. Nielsen (Ind. Audience DG/ D Ser Prod) b. Broadcast Audience Research Council c. Audit Bureau of Circulation d. RAM e. Consensus Digest f. Aline Module VII – Selecting suitable Media option (Advantages & disadvantages) a. Newspaper b. Magazine c. Television (National, Regional and Local) d. Radio	Module V – Media Measurement a. Reach b. Frequency c. Gross GRP Average d. TRP/ TVT rating e. Impressions f. Cost efficiency g. Cost per thousand h. Cost per rating i. Circulation/ Readership/ A/R j. Subscription Sales k. Share of Voice Module VI – Sources of media research a. Nielsen (Ind. Audience DG/ D Ser Prod) b. Broadcast Audience Research Council c. Audit Bureau of Circulation d. RAM e. Consensus Digest f. Aline Module VII – Selecting suitable Media option (Advantages & disadvantages) a. Newspaper b. Magazine c. Television (National, Regional and Local) d. Radio	Guidelines [illegible] [illegible] as per TT

	f. Outdoor and Out of Home f. Transit g. Cinema Advertising Module VIII - Media Buying a. Newspapers b. Magazines c. Television d. Radio Module IX - Communication [illegible]	f. Outdoor and Out of Home f. Transit g. Cinema Advertising Module VIII - Media Buying a. Newspapers b. Magazines c. Television d. Radio Module IX - Communication [illegible]	
Hours	Module X - Digital Media Buying 1. Buying Digital Advertising, Ad Overview Paid media, Owned media and Earned media 2. Digital Sales Funnel 3. Direct buys from the authority / Impact buy 4. Programmatic Buying DSP (Demand side Platform) or RTB (Real Time bidding) 5. Advertising via Premium Publishers 6. Advertising via Networks and exchanges 7. Affiliate Network (Click bank, Commission junction, affiliately, Search cows) 8. The Local Performing Market 9. OTT platform 10. Influencer Marketing or social media influencers 11. Content advertising 12. Native advertising 13. App-installed campaign 14. Paid media plans 15. Google ads 16. Bing ads 17. Lead Programmes a. Cost per impression b. Cost per click (PC) c. Cost per lead (CPL) / Cost per action (CPA) or pay per action (PPA) d. cost per conversion or Revenue sharing or cost per sale	Module X - Digital Media Buying 1. Buying Digital Advertising, Ad Overview Paid media, Owned media and Earned media 2. Digital Sales Funnel 3. Direct buys from the authority / Impact buy 4. Programmatic Buying DSP (Demand side Platform) or RTB (Real Time bidding) 5. Advertising via Premium Publishers 6. Advertising via Networks and exchanges 7. Affiliate Network (Click bank, Commission junction, affiliately, Search cows) 8. The Local Performing Market 9. OTT platform 10. Influencer Marketing or social media influencers 11. Content advertising 12. Native advertising 13. App-installed campaign 14. Paid media plans 15. Google ads 16. Bing ads 17. Lead Programmes a. Cost per impression b. Cost per click (PC) c. Cost per lead (CPL) / Cost per action (CPA) or pay per action (PPA) d. cost per conversion or Revenue sharing or cost per sale	[illegible]
Signature of Coordinator		Signature of Subject Teacher	

[illegible] CHARITABLE TRUST'S
[illegible] & [illegible] COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Report (2023-24)

Supervisor:	[illegible]
Name of Teacher:	Prof. Manisha Tapase
Class: BAMS Semester: [illegible] Subject: Retailing and Merchandising	Subject Code: [illegible]
No. of lectures allotted per week: 04 No. Of lectures Covered per Semester: 45	No. Of lectures Allotted per Semester: 45

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
January	Module 1: Micro Formats 1. Introduction to the World of Retailing Introduction to the World of Retailing 2. Types of Retailers Multichannel Retailing, Customer Buying Behaviour, Retail Market Strategy, Overview of Merchandising 3. Identifying and Understanding Retail Consumers Factors affecting retail strategies, Consumer Demographics and lifestyles 4. Social Factors Social factors, Consumer needs and desires, Shopping attitudes and behaviour, Consumer decision-making process, Retailers' actions 5. Customer-based on Pricing Pricing as a competitive advantage, Discount retailing, Super Store retailing, Off Price retailing Module II: Retail Communication And It 1. Managing Communication for a Retail Store Offering Introduction, Objectives, Marketing Communication, Promotion Communication 2. Methods of Communication Methods of Communication, Graphics, Signage 3. IT for Retailing Information Systems, Barcoding, Retail ERP 4. Trends & Innovations Analytics & Tools	Module 1: Micro Formats 1. Introduction to the World of Retailing Introduction to the World of Retailing 2. Types of Retailers Multichannel Retailing, Customer Buying Behaviour, Retail Market Strategy, Overview of Merchandising 3. Identifying and Understanding Retail Consumers Factors affecting retail strategies, Consumer Demographics and lifestyles 4. Social Factors Social factors, Consumer needs and desires, Shopping attitudes and behaviour, Consumer decision-making process, Retailers' actions 5. Customer-based on Pricing Pricing as a competitive advantage, Discount retailing, Super Store retailing, Off Price retailing Module II: Retail Communication And It 1. Managing Communication for a Retail Store Offering Introduction, Objectives, Marketing Communication, Promotion Communication 2. Methods of Communication Methods of Communication, Graphics, Signage 3. IT for Retailing Information Systems, Barcoding, Retail ERP Portions not covered as per topics proposed	11 TUTORIAL Session commenced from 18/10/2023 Mon and Tues are holidays due to Diwali vacations, 13 and 14 Reg Exam, Christmas and New year vacations 43 lectures as per TT due to Sports day and [illegible] other [illegible]

[illegible]

February	4. Trends & Innovation Analytics & Tools Module III: Introduction to Merchandising 1. Concept of Retail Merchandising Meaning of Merchandising, Major Areas of Merchandise Management, Role and Responsibilities of Merchandisers 2. Merchandise Mix Merchandise Mix, Concept of Assortment Management, Merchandise Mix of Show off 3. Merchandise Displays Concept of Merchandise Displays, Importance of Merchandise Displays 4. Space Management Concept of Space Management, Role of IT in Space Management, Concept of Planogram 5. Formats based on Merchandise selection Merchandise selection as a competitive advantage, Specialty store retailing, Department store retailing, Super specialist, Niche specialist Module IV: Visual and On-line Merchandising 1. Visual Merchandising Merchandising Meaning of Visual Merchandising, Objectives of Visual Merchandising, Growth of Visual Merchandising	4. Trends & Innovation Analytics & Tools Module III: Introduction to Merchandising 1. Concept of Retail Merchandising Meaning of Merchandising, Major Areas of Merchandise Management, Role and Responsibilities of Merchandisers 2. Merchandise Mix Merchandise Mix, Concept of Assortment Management, Merchandise Mix of Show off 3. Merchandise Displays Concept of Merchandise Displays, Importance of Merchandise Displays 4. Space Management Concept of Space Management, Role of IT in Space Management, Concept of Planogram 5. Formats based on Merchandise selection Merchandise selection as a competitive advantage, Specialty store retailing, Department store retailing, Super specialist, Niche specialist Portions not covered as per regular programme	10-12 (Includes internal assessment) (If less lectures as per TT as given in other subjects)
March	Module IV: Visual and On-line Merchandising 1. Visual Merchandising Merchandising Meaning of Visual Merchandising, Objectives of Visual Merchandising, Growth of Visual Merchandising 2. Visual Merchandising in India Visual Merchandising in India, Product Positioning and Visual Merchandising 3. Non Store Merchandising Introduction, Objectives, Role, Store Retail Merchandising, Television retailing, home shopping, Product presentation at Non Store Retail Merchandising 4. Online Merchandising Internet retailing, online shopping, Catalogue Management 5. Trends & Innovation Analytics and Tools	Module IV: Visual and On-line Merchandising 1. Visual Merchandising Merchandising Meaning of Visual Merchandising, Objectives of Visual Merchandising, Growth of Visual Merchandising 2. Visual Merchandising in India Visual Merchandising in India, Product Positioning and Visual Merchandising 3. Non Store Merchandising Introduction, Objectives, Role, Store Retail Merchandising, Television retailing, home shopping, Product presentation at Non Store Retail Merchandising 4. Online Merchandising Internet retailing, online shopping, Catalogue Management 5. Trends & Innovation Analytics and Tools Remedial lectures; Doubt solving Sessions	10-12 (Includes internal assessment) (If less lectures as per TT

Signature of Coordinator: Signature of Subject Teacher:

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SHRI M.Y. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	BMMC
Name of Teacher	Prof. Mandip Jagtap

Class: BMMC Semester: VI Subject: Brand Management Subject Code: BMMC [illegible]

No. of lectures allotted per week: 04 No. Of lectures Conducted per Semester: 44 No. Of lectures Allotted per Semester: 48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
November		Sem VI (normal) Refreshing / Revisiting brand -Discussion	02 TYBMMC commenced revision from [illegible]
January	Module I: Introduction to Brand Management 1. Introduction to Brand Management Meaning of Brand, Branding Management, Importance of Branding to Consumers, Firms, Brands v/s Products, Scope of Branding, Branding Challenges and Opportunities. 2. Models Strategic Brand Management Process, Customer Based Brand Equity model (CBBE) 3. Brand Positioning Meaning, Importance, Objectives, Scope Basis of Brand Positioning, Brand Matrices, Brand repositioning and its characteristics, Point of Parity and Point of Difference Module II: Planning and Implementing Brand Marketing Programs 1. Brand Elements Meaning, Criteria for choosing Brand Elements, Types of Brand Elements, Integrating Marketing Programs and Activities	Module I: Introduction to Brand Management 1. Introduction to Brand Management: Meaning of Brand, Branding Management, Importance of Branding to Customers, Firms, Brands v/s Products, Scope of Branding, Branding Challenges and Opportunities. 2. Models Strategic Brand Management Process, Customer Based Brand Equity model (CBBE) 3. Brand Positioning Meaning, Importance, Objectives, Scope Basis of Brand Positioning, Brand Matrices, Brand repositioning and its characteristics, Point of Parity and Point of Difference Portion was covered as per topics proposed.	02 Nov and Dec no lectures due to Diwali vacations, TY now V Reg Exams, Christmas and New year vacations & Reg students at part TY

	2. Personalizing Marketing Experiential Marketing, One to One Marketing, Permission Marketing Product Strategy: Perceived Quality and Relationship Marketing, Pricing Strategy: Setting Prices to Build Brand equity Channel Strategy: Direct, Indirect Channels, Web Strategy		
February	Module II: Planning and Implementing Brand Marketing Programs 1. Brand Elements Meaning, Criteria for choosing Brand Elements, Types of Brand Elements, Integrating Marketing Programs and Activities 2. Personalizing Marketing Experiential Marketing, One to One Marketing, Permission Marketing Product Strategy: Perceived Quality and Relationship Marketing, Pricing Strategy: Setting Prices to Build Brand equity Channel Strategy: Direct, Indirect Channels, Web Strategy 3. Cause Marketing to Build Brand Equity Meaning of cause Marketing, Advantages, Green Marketing Building Global Customer Based Brand Equity Module III: Growing and Sustaining Brand Equity 1. The Brand Value Chain Model Value stages and implications, What to track, designing brand tracking studies 2. Brand Equity Meaning, Importance, Objectives, Sources of Brand Equity, Steps of Brand Building including Brand Building Blocks, Leveraging Secondary Brand Associations to Build Brand Equity 3. Measuring Sources of Brand Equity Qualitative Research Techniques: Projective Techniques : Completion, Comparison, Brand Personality and Values: The Big Five, Free Association	Module II: Planning and Implementing Brand Marketing Programs 1. Brand Elements Meaning, Criteria for choosing Brand Elements, Types of Brand Elements, Integrating Marketing Programs and Activities 2. Personalizing Marketing Experiential Marketing, One to One Marketing, Permission Marketing Product Strategy: Perceived Quality and Relationship Marketing, Pricing Strategy: Setting Prices to Build Brand equity Channel Strategy: Direct, Indirect Channels, Web Strategy 3. Cause Marketing to Build Brand Equity Meaning of cause Marketing, Advantages, Green Marketing Building Global Customer Based Brand Equity Module III: Growing and Sustaining Brand Equity 1. The Brand Value Chain Model Value stages and implications, What to track, designing brand tracking studies 2. Brand Equity Meaning, Importance, Objectives, Sources of Brand Equity, Steps of Brand Building including Brand Building Blocks, Leveraging Secondary Brand Associations to Build Brand Equity **Portion not covered as per topics proposed**	[illegible] (includes tutorial classes) [illegible] lectures less as per TT

	Quantitative Research Techniques: Brand Awareness: Recognition, Recall, Brand Image, Brand Responses.		
Week 8	3. Measuring Sources of Brand Equity Qualitative Research Techniques: Projective Techniques: Completion, Comparison, Brand Personality and Values: The Big Five, Free Association Quantitative Research Techniques: Brand Awareness: Recognition, Recall, Brand Image, Brand Responses Module IV: Measuring and Interpreting Brand Performance 1. Brand Performance and Management Global Branding Strategies, Brand Audit, Role of Brand Manager(s), Brand Communication Online Brand Promotions, Role of Brand Ambassadors, Celebrities, Loyalty Programs 2. Managing Brands over Geographic Boundaries Global Marketing Programs: advantages and disadvantages, Cultivate Brand Partnership	3. Measuring Sources of Brand Equity Qualitative Research Techniques: Projective Techniques: Completion, Comparison, Brand Personality and Values: The Big Five, Free Association Quantitative Research Techniques: Brand Awareness: Recognition, Recall, Brand Image, Brand Responses Module IV: Measuring and Interpreting Brand Performance 1. Brand Performance and Management Global Branding Strategies, Brand Audit, Role of Brand Manager(s), Brand Communication Online Brand Promotions, Role of Brand Ambassadors, Celebrities, Loyalty Programs 2. Managing Brands over Geographic Boundaries Global Marketing Programs: advantages and disadvantages, Cultivate Brand Partnership **Remedial lectures/ Doubt solving lectures**	14/1/ (Including remedial lectures) 02 lectures less as per TT as problem stmt.
Signature of Coordinator:		Signature of Subject Teacher:	

LADIES CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, KHERWADI [E], MUMBAI – 400 060

Teaching Plan and Implementation Record (2023-24)

Department:	BAMMC
Name of Teacher:	Mrs. Shamita Mohit Tapase

Class: BAMMC Semester: VI Subject: Advertising Design Subject Code: [illegible]

No. of lectures delivered per week: 04 No. Of lectures Covered per Semester: 47 No. Of lectures delivered per Semester: 48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
October		Unit VI drawing & completion. Internal project discussions	02 T.Y.BAMMC Internal assessment Tests [illegible]
January	Module 1 Introduction Advertising Design - Communication Design 1. Project Paper Introduction to Project papers & Campaign Campaign outlines, Elements in the presentation, Prep-work 2. Role of Agency Departments 1. Accounts dept. Client handling, Strategy planning 2. Media dept. Media research, Media planning, Buying & selling 3. Creative dept. Prime-creatives, All of the visualization, Creative thinking, Execution 4. Production dept. Outsourcing Photography, TVC, Print ad production material 3. Process of Design Research of: 1. Product (features & benefits) 2. Market (TG, Psycho & Demographic) 3. Message Strategy: What to say & How 4. Competitors & Facts 5. Visualization & Copy 6. Illustration, Charting (on screen) 7. Composition, Graphics [illegible]	Module 1 Introduction Advertising Design - Communication Design 1. Project Paper Introduction to Project papers & Campaign Campaign outlines, Elements in the presentation, Prep-work 2. Role of Agency Departments 1. Accounts dept. Client handling, Strategy planning 2. Media dept. Media research, Media planning, Buying & selling 3. Creative dept. Prime-creatives, All of the visualization, Creative thinking, Execution 4. Production dept. Outsourcing Photography, TVC, Print ad production material 3. Process of Design Research of: 1. Product (features & benefits) 2. Market (TG, Psycho & Demographic) 3. Message Strategy: What to say & How 4. Competitors & Facts 5. Visualization & Copy 6. Illustration, Charting (on screen)	28 (Exam Prep and Mid sem tests lost due to Flood conditions, TY was 3 Day Exams, Charusat and Mini-project vacations) [illegible] lectures of pre-TY

	6. Art Director Role of art director in various media Detailing in illustration Detailing in TVC: Location, Models, Costumes, Working on storyboard 7. Analysing Ads & Logos Elements of existing ads Print ads: Pre layout, Colours, Message TVCs: AV, Pace, Text, etc Innovative, Academic, Trends for relevance Poll: Pre test, Place, Consumer psychology Module II: Design Basics: Language of Visuals 1. Elements of Design: Vocabulary Point, Line, Shape, Size, Tone, Colours, Texture, Space 2. Principles of Design: Grammar Proportions, Contrast, Harmony, Balance, Rhythm, Unity 3. Rules of Design: Rules Guides Emphasis, Proximity, Alignment, Visual path, Typeface Consult Completeness, Consistency, Simplicity, Multi-stability, Figure & ground etc 4. Optical Illusions: Visual Influence Shapes & proportions, Tones & contrast, Lines & length 5. Typography: Type as a Design element Classification: Serif, Sans serif, Decorative, Trends etc Measurement: size, weight, Roman, Track, Leading, Baseline etc Word Expressions, Meaning expressed by appearance Module III: Layout: The Blueprint 1. Types of Layouts Mondrian, Picture window, Split, Big type, All text, All art, Comic etc 2. Stages of Layouts Thumbnail sketches, Rough layouts, Finished layouts, Comprehensive 3. Choosing Picture Strong visual capable of attracting Target Group, Suitable with headline, Task-oriented	6. Art Director Role of art director in various media Detailing in illustration Detailing in TVC: Location, Models, Costumes, Working on storyboard 7. Analysing Ads & Logos Elements of existing ads Print ads: Pre layout, Colours, Message TVCs: AV, Pace, Text, etc Innovative, Academic, Trends for relevance Poll: Pre test, Place, Consumer psychology Module II: Design Basics: Language of Visuals 1. Elements of Design: Vocabulary Point, Line, Shape, Size, Tone, Colours, Texture, Space 2. Principles of Design: Grammar Proportions, Contrast, Harmony, Balance, Rhythm, Unity 3. Rules of Design: Rules Guides Emphasis, Proximity, Alignment, Visual path, Typeface Consult Completeness, Consistency, Simplicity, Multi-stability, Figure & ground etc 4. Optical Illusions: Visual Influence Shapes & proportions, Tones & contrast, Lines & length 5. Typography: Type as a Design element Classification: Serif, Sans serif, Decorative, Trends etc Measurement: size, weight, Roman, Track, Leading, Baseline etc Word Expressions, Meaning expressed by appearance Module III: Layout: The Blueprint 1. Types of Layouts Mondrian, Picture window, Split, Big type, All text, All art, Comic etc 2. Stages of Layouts Thumbnail sketches, Rough layouts, Finished layouts, Comprehensive 3. Choosing Picture Strong visual capable of attracting Target Group, Suitable with headline, Task-oriented	
Evaluation	4. Choosing Topic	4. Choosing Topic

	Setting over one pair of crop Choosing appropriate typeface for headlines, Subheads Dropcap, Body text 4. Putting all Together Choosing colour sets, Trying harmony, contrastness, Various proportions of radial & Visual Module IV: Planning a Campaign: Working on Final Project 1. Choosing a product Finalizing what to sell Designing a Logo: Type based, Shape based, Combo, Symbolic etc. 2. Research Product Service (Subject & Issue Fix) Market: Needs & Wants, Psycho & Demographics, What words may catch their minds Tone & Voice 3. Idea generation Coming up big idea, Trying various idea generation techniques 4. Visualizing Layout Choosing appropriate mesaur s & working on rough layouts Finalizing layouts for higher effectiveness Module V: Evaluation and revision work ANALYSIS: FUNCTION & AESTHETIC 1. Logo Design: Working on system, Grid Have Dimension Designing Logo, Deciding colour scheme Logo is Letter based Modifying Type, Using glyphs Considering letter as identity 2. Logo Mark: Creating a Logo design Philosophy Exploring the logo mark and choice of Type, Choice of colour, Reason for shape, Tagline or brand promise Making all concepts Creating 4 diff tones & also reverse	Setting over one pair of crop Choosing appropriate typeface for headlines, Subheads Dropcap, Body text 4. Putting all Together Choosing colour sets, Trying harmony, contrastness, Various proportions of radial & Visual Module IV: Planning a Campaign: Working on Final Project 1. Choosing a product Finalizing what to sell Designing a Logo: Type based, Shape based, Combo, Symbolic etc. 2. Research Product Service (Subject & Issue Fix) Market: Needs & Wants, Psycho & Demographics, What words may catch their minds Tone & Voice 3. Idea generation Coming up big idea, Trying various idea generation techniques 4. Visualizing Layout Choosing appropriate mesaur s & working on rough layouts Finalizing layouts for higher effectiveness Module V: Evaluation and revision work ANALYSIS: FUNCTION & AESTHETIC 1. Logo Design: Working on system, Grid Have Dimension Designing Logo, Deciding colour scheme Logo is Letter based Modifying Type, Using glyphs Considering letter as identity 2. Logo Mark: Creating a Logo design Philosophy Exploring the logo mark and choice of Type, Choice of colour, Reason for shape, Tagline or brand promise Making all concepts Creating 4 diff tones & also reverse	[illegible] [illegible]
Module	1. Break-walk: Name game Game: Group Combined figures (to revealing pieces of game-idea (Synergy management) Diff games game, party game	1. Break-walk: Name game Game: Group Final and become the connecting pieces of the [illegible] (Synergy management) Diff games game, Party game	[illegible]

	[illegible] Choosing headlines suitable to image (camera) 4. Conduct all interviews: Consult Audition Point of purchase Handout, Shooting location, Format, Shooting Frequency, Advantage of location, Advantage of local surroundings, Speakability Appropriate headlines 5. TVC as Web Ads TVC: Story line, Script, Floor plan, Camera plan Storyboard with, VFX, OSD, SFX, VO Role of: Pick up, Scroll, Banner etc Planning, Rehearsing & Preparing for crew	[illegible] Choosing headlines suitable to image (camera) 4. Conduct all interviews: Consult Audition Point of purchase Handout, Shooting location, Format, Shooting Frequency, Advantage of location, Advantage of local surroundings, Speakability Appropriate headlines 5. TVC as Web Ads TVC: Story line, Script, Floor plan, Camera plan Storyboard with, VFX, OSD, SFX, VO Role of: Pick up, Scroll, Banner etc Planning, Rehearsing & Preparing for crew Remedial lecture: Doubt solving lecture	12 students both as per TT slot to participate
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHRI [illegible] & SHRI M.U. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI - [illegible]

Teaching Plan and Implementation Record (2023-24)

Department	BAMMC
Name of Teacher	Prof. Manisha Sawant

Class: BAMMC Semester: [illegible] Subject: Advertising and Sales Promotion Subject Code: [illegible]

No. of lectures Allotted per week: 04 No. Of lectures Covered per Semester: 45 No. Of lectures Allotted per Semester: 48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
January	Module 1 Introduction 1. Introduction a. Nature and importance of sales promotion b. Role of Promotion in the Marketing Mix c. The Scope and Role of Sales Promotion d. Reasons for the Increase in Sales Promotion e. Consumer Franchise building versus non franchise building promotions f. Theories in Sales Promotion a. Push promotion b. Pull Promotion c. Combination theory d. The psychological theories behind sales promotion e. Recognition b. Social Proof c. Foot-in-the Door Technique d. Door-in-the Face Technique e. Loss Aversion f. Social Norms Marketing g. High, Medium, low Module II 1. Methods of consumer oriented sales promotion a. Sampling b. Coupons	Module 1 Introduction 1. Introduction a. Nature and importance of sales promotion b. Role of Promotion in the Marketing Mix c. The Scope and Role of Sales Promotion d. Reasons for the Increase in Sales Promotion e. Consumer Franchise building versus non franchise building promotions f. Theories in Sales Promotion a. Push promotion b. Pull Promotion c. Combination theory d. The psychological theories behind sales promotion e. Recognition b. Social Proof c. Foot-in-the Door Technique d. Door-in-the Face Technique e. Loss Aversion f. Social Norms Marketing g. High, Medium, low Portion and over as per topics proposed.	10 TYBMMC Students commenced from [illegible] Non and Tut as lectures due to Zonal cricket, TY and Y Reg Exams, Christmas and New year vacation 4 lectures lost as per TT due to Fest and holiday, Republic day holiday and given to other subjects

Principal

	a. Premiums b. Refund, rebates, cash backs c. Contests and Sweepstakes d. Bonus pack e. Price off f. Exchange offer g. EMI h. Demonstration of product i. After Sale Service		
February	Module 2 1. Methods of consumer oriented sales promotion a. Sampling b. Coupons c. Premiums d. Refund, rebates, cash backs e. Contests and Sweepstakes f. Bonus pack g. Price off h. Exchange offer i. EMI j. Demonstration of product k. After Sale Service 2. Methods of Trade oriented sales promotion a. Contest & Incentives for dealers b. Trade allowances (Buying allowances, stocking allowances, promotional allowances) c. Point of purchase displays d. Sales training programs e. Trade shows and dealer conferences f. Trade stamps g. Credit terms h. Dealer surplus 3. Methods of sales force oriented sales promotion a. Bonus and incentives to Sales Force b. Sales Promotion Contest c. Sales Meetings and Conferences d. Free travel e. Sales literature f. Demonstrating jobs	Module 2 1. Methods of consumer oriented sales promotion a. Sampling b. Coupons c. Premiums d. Refund, rebates, cash backs e. Contests and Sweepstakes f. Bonus pack g. Price off h. Exchange offer i. EMI j. Demonstration of product k. After Sale Service 2. Methods of Trade oriented sales promotion a. Contest & Incentives for dealers b. Trade allowances (Buying allowances, stocking allowances, promotional allowances) c. Point of purchase displays d. Sales training programs e. Trade shows and dealer conferences f. Trade stamps g. Credit terms h. Dealer surplus 3. Methods of sales force oriented sales promotion a. Bonus and incentives to Sales Force b. Sales Promotion Contest c. Sales Meetings and Conferences d. Free travel e. Sales literature f. Demonstrating jobs	[illegible] (including internal [illegible]) [illegible]

	g. Honor or recognition Module III Study and analyze sales promotion campaign on the major brands. a. Three loyalty programs (One each of FMCG, Consumer durable and service) b. Three Consumer oriented sales promotion programs (One each of FMCG, Consumer durable and service)	g. Honor or recognition Module III Study and analyze sales promotion campaign on the major brands a. Three loyalty programs (One each of FMCG, Consumer durable and service) Portion not covered as per topics proposed	
Month	b. Three Consumer oriented sales promotion programs (One each of FMCG, Consumer durable and service) c. Three trade oriented sales promotion programs (One each of FMCG, Consumer durable and service) d. Three sales force oriented sales promotion programs (One each of FMCG, Consumer durable and service) e. Two sales promotions of any luxury brands Module IV 1. Predicting Sales Promotion Effects a. Evaluation Methods of sales promotion b. Short term and long term effects of sales promotions c. Long term impact of sales promotions on brand image d. Influence of Sales Promotions on Customer Purchasing Behaviour 2. Steps in Designing of sales promotion campaign a. Designing Loyalty, continuity and frequency programs b. Big Data and Loyalty c. Gamification and Loyalty 3. Coordination sales promotion & Advertising a. Budget allocation b. Coordination of Ad and Promotion Themes c. Media Support and Timing 4. Sales promotion Abuse a. Dont use b. Sales promotion trap	c. Three trade oriented sales promotion programs (One each of FMCG, Consumer durable and service) d. Three sales force oriented sales promotion programs (One each of FMCG, Consumer durable and service) e. Two sales promotions of any luxury brands Module IV 1. Predicting Sales Promotion Effects a. Evaluation Methods of sales promotion b. Short term and long term effects of sales promotions c. Long term impact of sales promotions on brand image d. Influence of Sales Promotions on Customer Purchasing Behaviour 2. Steps in Designing of sales promotion campaign a. Designing Loyalty, continuity and frequency programs b. Big Data and Loyalty c. Gamification and Loyalty 3. Coordination sales promotion & Advertising a. Budget allocation b. Coordination of Ad and Promotion Themes c. Media Support and Timing 4. Sales promotion Abuse a. Dont use b. Sales promotion trap Remarks/ Instructor Weekly activity Journal	[illegible]
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
BHUTHI L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI - 400 069

Teaching Plan and Implementation Record (2023-24)

Department	**Biotechnology**
Name of teacher	**Dr. Priyanka Varma**

Class: FYBSc. Semester-I Subject: Fundamentals of biotechnology-I Subject Code: USBT101

No of lectures Allotted per week: 03 No of lectures Covered per Semester:32
No of lectures Allotted per Semester: 45

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
July	**Unit 1 -Scope and introduction to Biotechnology** **Biotechnology** - an interdisciplinary biological science; Biotechnology - definition; History & Introduction to Biotechnology; Traditional and Modern Biotechnology; Scope and importance of biotechnology; World of Biotechnology- Pharmaceutical Biotechnology (2), Plant Biotechnology, Industrial Biotechnology, Marine Biotechnology, Animal Biotechnology, Medical biotechnology, Environmental Biotechnology (2)	Biotechnology - definition; History & Introduction to Biotechnology; Traditional and Modern Biotechnology; Scope and importance of biotechnology; World of Biotechnology- Pharmaceutical Biotechnology, (7) World of Biotechnology- Pharmaceutical Biotechnology, Plant Biotechnology, Industrial Biotechnology, Marine Biotechnology, Animal Biotechnology, Medical biotechnology, Environmental Biotechnology (3)	04
August	Biotechnology in India – bio-business in India, booming biotech market, current story of biotech market, policy initiatives; and global trends; (2)Biotechnology research in	Biotechnology in India Bio-business in India, booming	01

	India; Potential of modern biotechnology; (2) Achievement of biotechnology; Prevention of misuse of biotechnology (2); Biotechnology Institutions in India (Public and Private Sector); Public Perception of Biotechnology. Case study: Serum Institute of India and its products(2)	biotech market, success story of biotech market, policy initiatives; and global trends; (2)Achievement of biotechnology (2) Prevention of misuse of biotechnology (2) Biotechnology Institutions in India (Public and Private Sector); Public Perception of Biotechnology. Case study: Serum Institute of India and its products (2)	
August	**Unit II-Applications** Applications of biotechnology in 1. Agriculture – GM fruits- GM papaya, GM tomato, Insect resistant transgenic plants – Bt cotton, Bt brinjal. (03) (Modifications in nutrient quality – starch, oil, seed, protein, golden rice. (02) 2. Livestock – growth, disease resistance, product quality, pharmaceuticals and nutritional supplements, industrial applications (02) 3.Human welfare Cloned genes for production of insulin, recombinant vaccine for Hepatitis B virus. (02) Molecular farming. Edible vaccines and their advantages.	**Unit II-Applications** Applications of biotechnology in 1. Agriculture – GM fruits- GM papaya, GM tomato, Insect resistant transgenic plants – Bt cotton, Bt brinjal. (02) (Modifications in nutrient quality – starch, oil, seed, protein, golden rice. (01) Edible vaccines and their advantages. 4.Environment- pollution abatement through GMOs. (2)	03

	4.Environment- pollution abatement through GMOs, (02) Discussion, Case study: Genetically modified microbes for bioremediation of oil spills in marine environment (03)		
August	**Unit III-Fermentation technology** Introduction Introduction to fermentation processes, Microbial biomass, Microbial enzymes, Microbial metabolites, recombinant products, transformation processes, Development of fermentation industry Component Parts of fermentation process, Screening: Definition, Primary screening and its methods. Secondary screening and its methods, Fermenter design: Definition of a fermenter, Aerated stirred tank batch fermenter-Typical design, (2) Construction materials used, aeration and agitation, Temperature control, Foam production and control, pH measurement and control, CO2 and O2 control (2) Fermentation medium: Basic requirements of industrial media, (1) Criteria for use of raw materials in media, Examples of raw materials used, Growth factors, Water, Carbohydrate sources, Protein sources (2) Product- a typical process of Ethanol production and Antibiotic production (2)	Introduction, Introduction to fermentation processes Microbial biomass, Microbial enzymes, Microbial metabolites, recombinant products, transformation processes, Development of fermentation industry (2) Screening: Definition, Primary screening and its methods. Secondary screening and its methods.(2) Fermenter design: Definition of a fermenter, Aerated stirred tank batch fermenter-Typical design, Construction materials used, aeration and agitation, Temperature control, Foam production and control, pH measurement and control, CO2 and O2 control (3) Fermentation medium: Basic requirements of industrial media, Criteria for use of raw materials in media, Examples of raw materials used, Growth factors, Water, Carbohydrate sources, Protein sources.	18

		Product- a typical process of Ethanol production and Antibiotic production (3)	
August	**Unit II-Applications** 2. Livestock – growth, disease resistance, product quality, pharmaceuticals and nutritional supplements, industrial applications (02) 3.Human welfare Closed genes for production of -lactin; (02) recombinant vaccine for Hepatitis B virus. (01) Molecular farming, Edible vaccines and their advantages. 4.Environment- pollution abatement through GMOs, (03) Bioethics, Case study: Genetically modified microbes for bioremediation of oil spills in marine environment (02)	**Unit II-Applications** 2. Livestock – growth, disease resistance, product quality, pharmaceuticals and nutritional supplements, industrial applications 3.Human welfare Closed genes for production of -lactin; recombinant vaccine for Hepatitis B virus. (02) Molecular farming, Edible vaccines and their advantages. 4.Environment- pollution abatement through GMOs, (02) Bioethics, Case study: Genetically modified microbes for bioremediation of oil spills in marine environment (01)	05
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069	
Teaching Plan and Implementation Record (2023-24)	
Department	**Biotechnology**

Name of teacher		**Mrs. Shweta Khopde**	
Class: FYB.Sc. Semester-Subject: Microbiology-I Subject Code:USBT102			
No of lectures Allotted per week: 03 No of lectures Covered per Semester:31 No of lectures Allotted per Semester:45			
Month of teaching	**Topic Proposed**	**Topic Covered**	**No. of lectures per topic**

July August	**Unit-I-Introduction to microbiology** **Fundamentals, History and Evolution of Microbiology.** Discovery of Microorganisms, Conflict over spontaneous generation, Role of microorganisms in disease The place of Microorganisms in the living world(4) **Classification:** Classification whittaker's five kingdom classification Introduction to Bergey's Manual, Groups of Microorganisms Applications of microbiology in various fields **Cultivation and Maintenance of microorganisms** Nutritional categories of microorganisms, methods of isolation.	**Unit-1-Introduction to microbiology** **Fundamentals, History and Evolution of Microbiology.** **Unit 1 -** Discovery of Microorganisms, Conflict over spontaneous generation. Role of microorganisms in disease The place of Microorganisms in the living world. (3) Classification whittaker's five kingdom classification Introduction to Bergey's Manual, Groups of Microorganisms Applications of microbiology in various fields (4) Nutritional categories of microorganisms (3) methods of isolation (1)	03 08
September-	**Unit 2- II-Sterilization techniques** Definition : Sterilization and Disinfection. Types and Applications Dry Heat, Steam under pressure Gases. (5) Radiation and Filtration(4) Chemical Agents and their Mode of Action -	**Unit 2-** Definition : Sterilization and Disinfection. Types and Applications (1) Dry Heat, Steam under pressure Gases, Radiation and Filtration (4) Chemical Agents and their Mode of Action -	10

	Aldehydes, Halogens, Quaternary Ammonium Compounds, Phenol and Phenolic Compounds, Heavy Metals, Alcohol, Dyes, and Detergents (4) Ideal Disinfectant, Examples of Disinfectants and Evaluation of Disinfectant (3)	Aldehydes, Halogens, Quaternary Ammonium Compounds, Phenol and Phenolic Compounds, Heavy Metals, Alcohol, Dyes, and Detergents (3) Ideal Disinfectant, Examples of Disinfectants and Evaluation of Disinfectant (2)	
September October	**Unit 3- III-Microscopy and stains** Microscope- Simple and Compound; General principles of optics; various parts and their functions- objectives – numerical aperture, resolving power, depth of focus, working distance, aberrations; oculars; condensers. Dark Field Microscope, Phase Contrast Microscope and Fluorescent Microscope, TEM, SEM. Applications of microscopes. Stains and Staining Solutions-Definition of Dye and Chromogen; acidic and basic dyes; functions and types of chromophore and auxochrome groups. Theories to explain staining, Definition and function of stain; mordant, intensifiers and fixative. Natural and Synthetic Dyes. Simple Staining, Differential Staining – Gram staining and Acid Fast Staining with specific examples.	**Unit 3** Microscope- Simple and Compound; General principles of optics; various parts and their functions- objectives - numerical aperture, resolving power, depth of focus, working distance, aberrations; oculars; condensers (2) Dark Field Microscope, Phase Contrast Microscope and Fluorescent Microscope, TEM, SEM. (1) Applications of microscopes. Stains and Staining Solutions-Definition of Dye and Chromogen; acidic and basic dyes; functions and types of chromophore and auxochrome groups. (1) Theories to explain staining, Definition and function of stain; mordant, intensifiers and fixative.(1) Natural and Synthetic Dyes. Simple Staining, Differential Staining – Gram staining and Acid Fast Staining with specific examples.(1)	03 07

Signature of Coordinator:	Signature of Subject Teacher:

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	**Biotechnology**
Name of teacher	**Ms. Dhwani Kapadia**

Class: FYB.Sc. Semester: I Subject: Basic Chemistry Subject Code: USBT103

No of lectures Allotted per week: 03 **No of lectures Covered per Semester: 31**
No of lectures Allotted per Semester: 45

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
July	**Unit 1** - Classification and Systematic Nomenclature of Organic Compounds, Chemical Bonding: Types and Transition between More Types of Bonding, (03) Ionic Bond: Nature of Ionic Bond, factors influencing formation of ionic bond, Covalent bond: Nature and Types (04)	**Unit 1** – Classification and Systematic Nomenclature of Organic Compounds, , Chemical Bonding: Types and Transition between More Types of Bonding (03), Ionic Bond: Nature of Ionic Bond, factors influencing formation of ionic bond , Covalent bond: Nature and Types (02).	09

August	Hydrogen Bonding: Theory and Types of Hydrogen Bonding Unit 2 - Titrimetric Analysis: Titration, Titrand, End Point, Equivalence Point, Titration Error, Indicator, Primary and Secondary Standards,	Hydrogen Bonding: Theory and Types of Hydrogen Bonding (H2). Unit 2 - Titrimetric Analysis: Titration, Titrand, End Point, Equivalence Point, titration Error, Indicator, Primary and Secondary Standards, Characteristics and examples (IM).	11

	Characteristics and examples (02). Types of Titration : Acid-Base, Redox, Precipitation, Complexometric titration. Theoretical aspects of Titration Curve and End Point Evaluation (05). Theory of Acid Base Indicators (02). Gravimetric Analysis (02) Co-Precipitation and Post precipitation (02)	Types of Titration : Acid-Base, Redox, Precipitation, Complexometric titration. Theoretical aspects of Titration Curve and End Point Evaluation (02). Theory of Acid Base Indicators (01). Gravimetric Analysis (01) Co-Precipitation and Post precipitation (01)	
Septem ber	Unit 3 – Stereochemistry Geometric Isomerism and Optical Isomerism: Enantiomers, Diastereomers, and Racemic Mixtures. Cis-Trans, Threo, Erythro and Meso Isomers. Dia-stereomerism (Cis-Trans Isomerism) and cycloalkanes Conformations: Conformations of Ethane, Difference between Confirmation and Configuration Configuration: Asymmetric Carbon Atom, Stereogenic/Chiral Centres, Chirality, Flying Wedge Formula Projection Formula – Flying Wedge, Fischer, Newman and Newman	Unit 3 – Stereochemistry Geometric Isomerism and Optical Isomerism: Enantiomers, Diastereomers, and Racemic Mixtures. Cis-Trans, Threo, Erythro and Meso Isomers. (03) Dia-stereomerism (Cis-Trans Isomerism) and cycloalkanes (03) Conformations: Conformations of Ethane, Difference between Confirmation and Configuration (02) Configuration: Asymmetric Carbon Atom, Stereogenic/Chiral Centres, Chirality, Flying Wedge Formula (04) Projection Formula – Flying Wedge, Fischer, Newman and Newman (03)	15
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.H.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Biotechnology
Name of teacher	Ms. Dayanada Ghadi
Class: FYB.Sc. Semester-I I	Subject: Biochemistry; Concept of Biomolecules- Subject Code: USBT104
No of lectures Allotted per week:03 Semester:36	No of lectures Covered per No of lectures Allotted per Semester: 45

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
July	Unit I - Water, Standard solutions and Buffers Structure, Properties and functions of water (01) Acids and Bases: Lowry- Bronsted and Lewis Concepts. Strong and Weak Acids and Bases - Ionic Product of Water pH,pKa, pKb Hydrolysis of Salts. Do-one revision lec on Concept of pH (02)	Unit I - Water, Standard solutions and Buffers Structure, Properties and functions of water (01) Acids and Bases: Lowry-Bronsted and Lewis Concepts. Strong and Weak Acids and Bases - Ionic Product of Water pH,pKa, pKb Hydrolysis of Salts. Do-one revision lec on Concept of pH (02)	06

	Buffer solutions - Concept of Buffers. Derivation of Henderson Hasselbalch equation for Acidic and Basic buffers, Buffering capacity (02) Biological buffers/Significance of biological buffers. pH of body fluids like blood and saliva. (01)	Buffer solutions - Concept of Buffers. Derivation of Henderson Hasselbalch equation for Acidic and Basic buffers, Buffering capacity (02) Biological buffers/Significance of biological buffers pH of body fluids like blood and saliva. (01)	

August	Blood buffer systems; Eg : Carbonate, Acetate and Phosphate buffers. (components, eg of buffers at various pH of cellular significance ; explain using Numericals) (02) Protein buffers-Introduction, Significance of TRIS buffers - Introduction (02) Preparation of standard Solutions: Concept and significance of Chemical and Biological solutions. Normality, Molarity, Molality, Mole fraction, Mole concept, Solubility, Weight ratio, Volume ratio, Weight to Volume ratio, ppb, ppm, millimoles, milliequivalents (Numericals expected). (03) Primary and Secondary Standards: Preparation of Standard Solutions Principle of Volumetric Analysis (02)	Blood buffer systems: Eg : Carbonate, Acetate and Phosphate buffers. (components, eg of buffers at various pH of cellular significance ; explain using Numericals) (02) Protein buffers-Introduction, Significance of TRIS buffers - Introduction (02) Preparation of standard Solutions: Concept and significance of Chemical and Biological solutions. Normality, Molarity, Molality, Mole fraction, Mole concept, Solubility, Weight ratio, Volume ratio, Weight to Volume ratio, ppb, ppm, millimoles, milliequivalents (Numericals expected). (02) Primary and Secondary Standards: Preparation of Standard Solutions, Principle of Volumetric Analysis (01)	07
August	**Unit 2 - Basics of Carbohydrate Chemistry** Carbohydrates: Introduction definition and general formula. Classification of carbohydrates - (01) Monosaccharides - Two Families of Monosaccharides. Aldo series and keto series; (Triose - Glyceraldehyde and Dihydroxyacetone, Tetrose- Erythrose and Erythulose, Pentose- Xylose, Xylulose, Ribose, Ribulose, Hexose- Glucose, Galactose,Mannose, Heptose- sedoheptose and	**Unit 2 - Basics of Carbohydrate Chemistry** Carbohydrates: Introduction definition and general formula.Classification of carbohydrates - (01) Monosaccharides - Two Families of Monosaccharides. Aldo series and keto series; (Triose - Glyceraldehyde and Dihydroxyacetone, Tetrose- Erythrose and Erythulose, Pentose- Xylose, Xylulose, Ribose, Ribulose, Hexose- Glucose, Galactose,Mannose, Heptose- sedoheptose and Sedoheptulose structures to be taught) (02)	12

August	Epimerization structures to be taught) (04) Concept of Enantiomers, Mutarotation, Anomeric carbon and Epimers of glucose.(01) Biologically important Derivatives of Hexoses : Glucosamine, Gluconic acid, uronic acid, NAGA, NAMA (structures not to be expected in exams) (01) Chemical reactions of monosaccharides, Concept of glycosidic bond. (01) Disaccharides- Maltose, Lactose, Sucrose, Cellobiose (structures to be taught, Biological significance, structure and bond type) (02) Polysaccharides- Homopolysaccharides and Heteropolysaccharides; Structural and Storage Polysaccharides . Eg of polysaccharides :- starch (amylose and amylopectin), Glycogen, Peptidoglycan, Cellulose, chitin, (structure and bond type) (02) Egs of Reducing and nonreducing carbohydrates. Industrial applications of carbohydrates: Fermentation, Pharmaceutical and Food industry. (01)	Concept of Enantiomers, Mutarotation, Anomeric carbon and Epimers of glucose.(01) Biologically important Derivatives of Hexoses : Glucosamine, Gluconic acid, uronic acid, NAGA, NAMA (structures not to be expected in exams) (01) Chemical reactions of monosaccharides, Concept of glycosidic bond. (01) Disaccharides- Maltose, Lactose, Sucrose, Cellobiose (structures to be taught, Biological significance, structure and bond type) (01) Polysaccharides- Homopolysaccharides and Heteropolysaccharides; Structural and Storage Polysaccharides .(01) Eg of polysaccharides :- starch (amylose and amylopectin), Glycogen, Peptidoglycan, Cellulose, chitin, (structure and bond type) Egs of Reducing and nonreducing carbohydrates. Industrial applications of carbohydrates: Fermentation, Pharmaceutical and Food industry. (02)	
September-October	**Unit 3 – Basics of Lipid Chemistry** Introduction to Lipid Chemistry.	**Unit 3 – Basics of Lipid Chemistry** Introduction to Lipid Chemistry.	11

	Definition and Biological functions of fats and Lipids Definition of Fatty acids (01) Classification of Fatty acids: Saturated Fatty Acids : C2- C20 (Examples with trivial name, Biochemical names and Structures) (02) Unsaturated Fatty Acids : Definition of MUFA and PUFA. C16- C20. Palmitoleic, Oleic, Linoleic, Lanolenic, Arachidonic acid (Structures expected) (04) Storage Lipids: Acyl(Glycerols (Simple and Mixed) Mono, Di and Triacylglycerols. (Structures expected) (01) Properties of Triacylglycerols: Hydrolysis, Saponification, Antioxidant, Rancidity, Acid number, IOM number, Action of lipase. (01) Structural lipids: Phosphatidic acid and Membrane Phospholipids Eg: Phosphatidylethanolamine, Phosphatidylserine, PhosphatidylCholine, Cardiolipin, Action of Phospholipase (02). Steroid: Definition and functions Eg: Cholesterol (01)	Definition and Biological functions of fats and Lipids Definition of Fatty acids (01) Classification of Fatty acids: Saturated Fatty Acids : C2- C20 (Examples with trivial name, Biochemical names and Structures) (02) Unsaturated Fatty Acids : Definition of MUFA and PUFA. C16- C20. Palmitoleic, Oleic, Linoleic, Lanolenic, Arachidonic acid (Structures expected) (03) Storage Lipids: Acyl(Glycerols (Simple and Mixed) Mono, Di and Triacylglycerols. (Structures expected) (01) Properties of Triacylglycerols: Hydrolysis, Saponification, Antioxidant, Rancidity, Acid number, IOM number, Action of lipase. (01) Structural lipids: Phosphatidic acid and Membrane Phospholipids Eg: Phosphatidylethanolamine, Phosphatidylserine, PhosphatidylCholine, Cardiolipin, Action of Phospholipase (01). Steroid: Definition and functions Eg: Cholesterol (01)	
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SMT M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Biotechnology
Name of teacher	Dr. Priyanka Varlak

Class: FYB.Sc. Semester-I Subject: Genetics
Code: USBT108 Subject

No of lectures Allotted per week:03 No of lectures Covered per Semester:36 No of lectures Allotted per Semester: 45

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
	Unit 1-Genetics fundamentals	Unit 1 -Genetics fundamentals	

July	Introduction to genetic and sub-disciplines of genetics: Transmission genetics, Molecular genetics, Population genetics (02) and Quantitative genetics. Basic Terminologies in genetics (02) Mendelian Genetics: Monohybrid Crosses and	Introduction to genetic and sub-disciplines of genetics: Transmission genetics, Molecular genetics (02) Population genetics and Quantitative genetics. Basic Terminologies in genetics (02) Mendelian Genetics: Monohybrid Crosses and	04
August	Mendel's Principle of Segregation. Representing crosses with a Branch Diagram. (02) Confirming the principle of Segregation: The use of Test crosses. (01) Dihybrid crosses and Mendel's Principle of Independent Assortment. (01) Extensions of and Deviations from Mendelian Genetic Principles: Multiple Alleles – ABO Blood groups (01) Modifications of Dominance Relationships: Incomplete	Mendel's Principle of Segregation. Representing crosses with a Branch Diagram. (02) Confirming the principle of Segregation: The use of Test crosses. (01) Dihybrid crosses and Mendel's Principle of Independent Assortment. (01) Extensions of and Deviations from Mendelian Genetic Principles: Multiple Alleles – ABO Blood groups (01) Modifications of Dominance Relationships: Incomplete	08

	Dominance and Codominance. (01) Essential Genes and Lethal Alleles. Effects of the environment on Gene expression. (01) Gene Interactions and Modified Mendelian Ratios: Epistatic and non-epistatic interactions. (01) Mendelian Genetics in Humans: Pedigree Analysis. Examples of Human Genetic Traits (02)	Dominance and Codominance. Essential Genes and Lethal Alleles. Effects of the environment on Gene expression. (01) Gene Interactions and Modified Mendelian Ratios: Epistatic and non-epistatic interactions. (01) Mendelian Genetics in Humans: Pedigree Analysis. Examples of Human Genetic Traits (01)	
August	**Unit II- Microbial genetics** Genetic analysis in Bacteria:Prototrophs, Auxotrophs. (01) Genetic Mapping in Bacteria by Conjugation: Discovery of Conjugation in E.coli. The sex factor F, High-Frequency Recombination Strains of E.coli. F^+ Factors. Using conjugation to map bacterial genes-Interrupted-mating (04) Genetic mapping in bacteria by Transformation. (01) Genetic mapping in Bacteria by Transduction: (01) Bacteriophages - Lytic and Lysogenic pathway. (02) Transduction Mapping of Bacterial Chromosomes - Generalized Transduction and Specialized Transduction. (02)	**Unit II- Microbial genetics** Genetic analysis in Bacteria:Prototrophs, Auxotrophs. (01) Genetic Mapping in Bacteria by Conjugation: Discovery of Conjugation in E.coli. The sex factor F, High-Frequency Recombination Strains of E.coli. F^+ Factors. Using conjugation to map bacterial genes-Interrupted-mating (01) Genetic mapping in bacteria by Transformation. (01) Genetic mapping in Bacteria by Transduction: (01) Bacteriophages - Lytic and Lysogenic pathway. (02) Transduction Mapping of Bacterial Chromosomes - Generalized Transduction and Specialized Transduction. (02)	10
September	**Unit III- Population genetics** Genetic Structure of Populations - Genetic structure of populations-Genotypic Frequencies	**Unit 3- Population genetics** Genetic Structure of Populations - Genetic structure of populations-Genotypic Frequencies (02)	09

October	and Allele Frequencies. (02) Hardy- Weinberg Law and its Assumptions (01) Genetic Variations in Populations, Forces responsible for change in gene frequencies in population- Natural Selection. (03) Genetic Drift, migration, Speciation (04) Role of Population Genetics in Conservation Biology (01)	and Allele Frequencies. (02) Hardy- Weinberg Law and its Assumptions (02) Genetic Variations in Populations, Forces responsible for change in gene frequencies in population- Natural Selection. (04) Genetic Drift, migration, Speciation(03) Role of Population Genetics in Conservation Biology (01)	22
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SHETTI L.U.L & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI - 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Biotechnology
Name of teacher	Dr. Priyanka Vartak
Class: FYBSc. Semester-I	Subject: Molecular Biology-I Subject Code: USBT106
No of lectures Allotted per week:03 Semester: 31	No of lectures Covered per Allotted per Semester: 45

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
August	Unit I- DNA COMPOSITION, Chromosome, DNA structure and packing The Composition and structure of DNA and RNA:	Unit I - DNA COMPOSITION, Chromosome, DNA structure and packing The Composition and structure of DNA and RNA:	11
	Nucleotide and Nucleoside, Structure of nucleotides, Structure of DNA, DNA double helix – Watson and Crick's Model. Structure of RNA. Types of RNA. (04)	Nucleotide and Nucleoside, Structure of nucleotides, Structure of DNA, DNA double helix – Watson and Crick's Model. Structure of RNA. Types of RNA. (04)	

	Organization of DNA in chromosome: (06) Viral and Prokaryotic Chromosomes. Eukaryotic Chromosomes. Histone and Non-histone proteins. Nucleosome Structure. Packaging of DNA into chromosomes. Euchromatin and Heterochromatin. Centromeres and Telomeres Chromosome Banding Techniqeys. **Karyotype and Idiogram** Parameters used in Karyotype preparation- Human Karyotype (Normal) - Male and Female.	**Organization of DNA in chromosome:(06)** Viral and Prokaryotic Chromosomes. Eukaryotic Chromosomes. Histone and Non-histone proteins. Nucleosome Structure. Packaging of DNA into chromosomes. Euchromatin and Heterochromatin. Centromeres and Telomeres Chromosome Banding Techniqeys. **Karyotype and Idiogram (01)** Parameters used in Karyotype preparation- Human Karyotype (Normal) - Male and Female.	
September	**Unit II- II-DNA replication** Models of DNA Replication (01) DNA Replication in Prokaryotes (02) Evidence of Semi-conservative DNA replication- Meselsons and stahl's experiment (01) DNA Polymerases and its role, (01)	**Unit II- II-DNA replication** Models of DNA Replication (01) DNA Replication in Prokaryotes (02) Evidence of Semi-conservative DNA replication- Meselsons and stahl's experiment (01) DNA Polymerases and its role, (01)	10

	E.coli Chromosome Replication(01) semi discontinuous replication (01) Bidirectional Replication of Circular DNA molecules. (01) Rolling Circle Replication, (01) DNA Replication in Eukaryotes (02) Enzymes and proteins involved in DNA replication (01)	E.coli Chromosome Replication, (01) semi discontinuous replication (01) Bidirectional Replication of Circular DNA molecules. Rolling Circle Replication, (01) DNA Replication in Eukaryotes Enzymes and proteins involved in DNA replication (02)	
October	**Unit III- Mutation and repair** Definition of Mutations- Classification of mutations (01) Types of Point Mutations, (01) Types of Spontaneous and induced mutations (01) Mutagenesis and types of Mutagens. (Examples of Physical, Chemical and Biological Mutagens), (01) DNA REPAIR, Photoreversal, Base Excision Repair, Nucleotide Excision Repair, Mismatch Repair, SOS Repair (06)	**Unit 3 Mutation and repair** Definition of Mutations- Classification of mutations (01) Types of Point Mutations, (01) Types of Spontaneous and induced mutations (01) Mutagenesis and types of Mutagens. (Examples of Physical, Chemical and Biological Mutagens), (01) DNA REPAIR, Photoreversal, Base Excision Repair, Nucleotide Excision Repair, Mismatch Repair, SOS Repair (06)	10
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SEETHI L.U.U. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	**Biotechnology**
Name of teacher	**Ms. Dhwani Kapadia**

Class: FYB.Sc. Semester-I **Subject: Ability Enhancement Course-Communication skills Lecture and Presentation**
Subject Code: USBT107

No of lectures Allotted per week: 03 **No of lectures Covered per Semester: 32**
No of lectures Allotted per Semester: 45

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
August	**Unit I: - Academic Skills** **Essentials of Grammar:** Parts of speech, Articles, Models, Sentences and their types., Punctuation marks **Employment Communication:** Introduction, Resume, Curriculum Vitae, Scannable Resume, Developing an Impressive Resume, Formats of Resume, Job Application or Cover Letter, Email Writing **Professional Presentation:** Nature of Oral Presentation, planning a Presentation, Preparing the Presentation, Delivering the Presentation **Job Interviews:** Introduction, Importance of Resume, Definition of Interview, Background Information, Types of Interviews, Preparatory Steps for Job Interviews, Interview Skill Tips, Changes in the Interview Process, FAQ During Interviews **Group Discussion:** Introduction, Ambience/Setting	**Unit I – Academic Skills** **Essentials of Grammar:** Parts of speech, Articles, Models, Sentences and their types., Punctuation marks **Employment Communication:** Introduction, Resume, Curriculum Vitae, Scannable Resume, Developing an Impressive Resume, Formats of Resume, Job Application or Cover Letter, Email Writing **Professional Presentation:** Nature of Oral Presentation, planning a Presentation, Preparing the Presentation, Delivering the Presentation **Job Interviews:** Introduction, Importance of Resume, Definition of Interview, Background Information, Types of Interviews, Preparatory Steps for Job Interviews, Interview Skill Tips, Changes in the Interview Process, FAQ During Interviews **Group Discussion:** Introduction, Ambience/Setting	10

	Arrangement for Group Discussion, Importance of Group Discussion, Difference between Group Discussion, Panel Discussion and Debate, Traits, Types of Group Discussions, topic based and Case based Group Discussion, Individual Traits	Arrangement for Group Discussion, Importance of Group Discussion, Difference between Group Discussion, Panel Discussion and Debate, Traits, Types of Group Discussions, topic based and Case based Group Discussion, Individual Traits	
September	**Unit II- Soft skills** Introduction to Soft Skills and Hard Skills **Personality Development:** Knowing Yourself, Positive Thinking, Johari's Window, Communication Skills, Non-verbal Communication, Physical Fitness	**Unit II- Soft skills** Introduction to Soft Skills and Hard Skills **Personality Development:** Knowing Yourself, Positive Thinking, Johari's Window, Communication Skills, Non-verbal Communication, Physical Fitness	04
October	**Emotional Intelligence:** Meaning and Definition, Need for Emotional Intelligence, Intelligence Quotient versus Emotional Intelligence Quotient, Components of Emotional	**Emotional Intelligence:** Meaning and Definition, Need for Emotional Intelligence, Intelligence Quotient versus Emotional Intelligence Quotient, Components of Emotional	02

October	Intelligence, Competencies of Emotional Intelligence, Skills to Develop Emotional Intelligence **Etiquette and Manners:** Introduction, Professional Etiquette, Technology Etiquette **Communication Today:** Significance of Communication, GSC's 3M Model of Communication, Vitality of the Communication Process, Virtues of Listening, Fundamentals of Good Listening, Nature of Non-Verbal Communication, Need for Intercultural Communication, Communicating Digital World	Intelligence, Competencies of Emotional Intelligence, Skills to Develop Emotional Intelligence **Etiquette and Manners:** Introduction, Professional Etiquette, Technology Etiquette **Communication Today:** Significance of Communication, GSC's 3M Model of Communication, Vitality of the Communication Process, Virtues of Listening, Fundamentals of Good Listening, Nature of Non-Verbal Communication, Need for Intercultural Communication, Communicating Digital World	06
October	**Unit III- Professional skills** **Creativity at Workplace:** Introduction, Career Workplaces, Creativity, Motivation, Nurturing Hobbies at Work, The Six Thinking Hat Method **Ethical Values:** Ethics and Society, Theories of Ethics, Correlation between Values and Behavior, Nurturing Ethics, Importance of Work Ethics, Problems in the Absence of Work Ethics **Capacity Building:** Need and Importance of Capacity Building Elements of Capacity Building Zones of Learning Ideas for Learning Strategies for Capacity Building **Leadership and Team Building:** Leader and Leadership, Leadership Traits, Culture and Leadership, Leadership	**Unit III- Professional skills** **Creativity at Workplace:** Introduction, Career Workplaces, Creativity, Motivation, Nurturing Hobbies at Work, The Six Thinking Hat Method **Ethical Values:** Ethics and Society, Theories of Ethics, Correlation between Values and Behavior, Nurturing Ethics, Importance of Work Ethics, Problems in the Absence of Work Ethics **Capacity Building:** Need and Importance of Capacity Building Elements of Capacity Building Zones of Learning Ideas for Learning Strategies for Capacity Building **Leadership and Team Building:** Leader and Leadership, Leadership Traits, Culture and Leadership, Leadership Styles and Trends, Team Building, Types of Teams	10

	Styles and Trends, Team Building, Types of Teams **Decision Making and Negotiation:** Introduction to Decision Making, Steps for Decision Making, Decision Making Techniques, Negotiation Fundamentals, Negotiation Styles, Major Negotiation Concepts Stress and Time Management: Stress, Sources of Stress, Ways to Cope with Stress	**Decision Making and Negotiation:** Introduction to Decision Making, Steps for Decision Making, Decision Making Techniques, Negotiation Fundamentals, Negotiation Styles, Major Negotiation Concepts Stress and Time Management: Stress, Sources of Stress, Ways to Cope with Stress	
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SHUTTI LALL & SHI M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Biotechnology
Name of teacher	Dr. Priyanka Vartak
Class: FYB.Sc. Semester-II Biotechnology-2	Subject: Fundamentals of Subject Code: USBT201
No of lectures Allotted per week: 03 Semester: 48	No of lectures Covered per No of lectures Allotted per Semester: 48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
December	Unit I-Food Biotechnology Introduction to food biotechnology, History of	Unit I-Food Biotechnology	07

January	microorganisms in food science and key developments (02) Applications of biotechnology in fermented food products : Introduction to Unit Operations and Processes, Food processing & packaging (canning & bottling), Production of cultures Fermented food products – Bread, Vinegar, Sauerkraut, Single Cell Protein (SCP), Probiotics (06) Food spoilage, food deterioration and contamination (01), Methods of food preservation Indicators of Food Microbial Quality & Safety, HACCP, FSSAI & FDA (02)	Introduction to food biotechnology, History of microorganisms in food science and key developments(02) Applications of biotechnology in fermented food products - Introduction to Unit Operations and Processes, (02) Food processing & packaging (canning & bottling), Production of cultures (02) Fermented food products – Bread, Vinegar, Sauerkraut, Single Cell Protein (SCP), (01) Probiotics (01) Food spoilage, food deterioration and contamination (01) Methods of food preservation (01) Indicators of Food Microbial Quality & Safety, HACCP, FSSAI & FDA (02)	05
January-	**Unit II Medical biotechnology** Introduction to Medical Biotechnology (01) Vaccines Types of vaccines General vaccine production(01) Large scale production of vaccine (03) Trends in Vaccines Research Issues related to vaccine research (01)	**Unit II Medical biotechnology** Introduction to Medical Biotechnology (01) Vaccines Types of vaccines General vaccine production (01) Large scale production of vaccine Trends in Vaccines Research(02)	04

February	Synthetic peptides as vaccine Antibody Production (01) Gene therapy (01) Organ transplant cloning (01) Stem cells -Sources and applications (01)	Issues related to vaccine research Synthetic peptides as vaccine Antibody Production (04) Gene therapy (02) Organ transplant cloning (02) Stem cells -Sources and applications (02)	18
February-March	**Unit III-Genetic engineering** rDNA technology – definition and developments What is genetic engineering? What is gene cloning? Strategy for cloning – How to clone a gene? How to construct rDNA? Source DNA [insert] Isolation of DNA from bacterial cell (04) Enzymes in rDNA – 1. restriction endonuclease; 2. DNA ligase; . Enzymes to modify ends of DNA molecules – exonuclease;endonuclease; S1 nuclease; alkaline phosphatase; polynucleotide kinase; DNA polymerase and klenow fragment; reverse transcriptase; terminal deoxynucleotidyl transferase (02) Vectors – Role as agents of transfer Features of plasmid vectors Plasmid vectors - pBR322 pUC BAC(02)	**Unit III-Genetic engineering** rDNA technology – definition and developments What is genetic engineering? What is gene cloning? Strategy for cloning – How to clone a gene? How to construct rDNA? Source DNA [insert] Isolation of DNA from bacterial cell (04) Enzymes in rDNA – 1. restriction endonuclease; 2. DNA ligase; . Enzymes to modify ends of DNA molecules – exonuclease; endonuclease; S1 nuclease; alkaline phosphatase; polynucleotide kinase; DNA polymerase and klenow fragment; reverse transcriptase; terminal deoxynucleotidyl transferase (02)	14

	Plant virus vectors and Animal virus vectors (02) Shuttle vector; Expression vector (02) Host cells – E. coli; Bacillus subtilis; Saccharomyces cerevisiae; Xenopus oocytes; Mammalian fertilized egg cell (01) Introducing vector into host – Prokaryote, Eukaryote Identification of recombinant clones (01)	Vectors – Role as agents of transfer Features of plasmid vectors Plasmid vectors – pBR322 pUC BAC (02) Plant virus vectors and Animal virus vectors (01) Shuttle vector; Expression vector Host cells – E. coli; Bacillus subtilis; Saccharomyces cerevisiae; Xenopus oocytes; Mammalian fertilized egg cell. (01) Introducing vector into host – Prokaryote, Eukaryote Identification of recombinant clones (02)	
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. E. BADHAJOSHINAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)	
Department	**Biotechnology**
Name of teacher	**Mrs. Sheeta Khopde, Ms. Priya Vishwakarma**
Class: FYB.Sc. Semester-II Subject: Cell Biology and Microbiology-2 **Subject Code: USBT202**	

No of lectures Allotted per week: 03 No of lectures Covered per Semester:34 No of lectures Allotted per Semester: 45

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic

February	**Unit I-Ultrastructure of prokaryotic and eukaryotic cell.** Ultrastructure of Prokaryotic Cell: Concept of Cell shape, size and arrangement (01) Bacterial structures external to cell wall - Flagella, Pili, Fimbriae, Capsule, Slime Layer, Sheath (02) Cell Wall(Gram Positive and Negative): Structures internal to cell wall - Cell Membrane, nucleoid, Cytoplasm and cytoplasmic inclusion bodies and vacuoles, Genetic Material spores and cysts (03) Ultrastructure of Eukaryotic Cell: Cell wall, Plasma membrane, Cytoplasmic Matrix, Nucleus -Nuclear Structure, nuclear envelope, nucleoplasm, Nucleolus, cytoplasmic structures - cytoplasmic inclusions, cytoplasmic organelles - Endoplasmic Reticulum, Golgi Apparatus; (03) Mitochondria; Chloroplasts; Ribosomes; Lysosome - Endocytosis, Phagocytosis, Autophagy; Peroxisomes, Microfilaments, Intermediate Filaments, and Microtubules (02)	**Unit I - Ultrastructure of prokaryotic and eukaryotic cell.** Ultrastructure of Prokaryotic Cell: Concept of Cell shape, size and arrangement (01) Bacterial structures external to cell wall - Flagella, Pili, Fimbriae, Capsule, Slime Layer, Sheath (01) Cell Wall(Gram Positive and Negative): Structures internal to cell wall - Cell Membrane, nucleoid, Cytoplasm and cytoplasmic inclusion bodies and vacuoles, Genetic Material spores and cysts (02) Ultrastructure of Eukaryotic Cell: Cell wall, Plasma membrane, Cytoplasmic Matrix, Nucleus - Nuclear Structure, nuclear envelope, nucleoplasm, Nucleolus, cytoplasmic structures - cytoplasmic inclusions, cytoplasmic organelles - Endoplasmic Reticulum, Golgi Apparatus; (03) Mitochondria; Chloroplasts; Ribosomes; Lysosome -	10

	External Cell Coverings: Cilia And Flagella Comparison of Prokaryotic And Eukaryotic Cells (IQ)	Endocytosis, Phagocytosis, Autophagy; Peroxisomes, Microfilaments, Intermediate Filaments, and Microtubules (IQ) External Cell Coverings: Cilia And Flagella Comparison of Prokaryotic And Eukaryotic Cells (IQ)	
December-January	**Unit II Microbiology** Definition of Growth Mathematical and expression of growth Growth curve Measurement of growth Efficiency of growth yield Synchronous growth Effect of nutrient on growth rate Continuous Culture of microorganisms Chemostat and Turbidostat Enumeration of Microorganisms- Direct and Indirect Methods Preservation and Maintenance of cultures	**Unit 2- Microbiology** Definition of Growth Mathematical and expression of growth Growth curve (2) Measurement of growth Efficiency of growth yield Synchronous growth Effect of nutrient on growth rate (3) Continuous Culture of microorganisms Chemostat and Turbidostat Enumeration of Microorganisms- Direct and Indirect Methods (3) Preservation and Maintenance of cultures (2)	11
February	**Unit III Virology** Historical perspective Special cases- TMV and Influenza	**Unit III Virology** Historical perspective Special cases- TMV and Influenza(2)	02

March	General Characteristics of Viruses Host Range Viral Structure- Nucleic Acid, Capsid and Envelope General Morphology- Helical, Polyhedral, Enveloped, Complex. Taxonomy of Viruses Viral Multiplication - Multiplication of Bacteriophages and Animal Viruses Isolation, Cultivation, and Identification of Viruses - Growing Bacteriophages and animal viruses in the Laboratory Viral Identification	General Characteristics of Viruses Host Range (2) Viral Structure- Nucleic Acid, Capsid and Envelope General Morphology- Helical, Polyhedral, Enveloped, Complex. Taxonomy of Viruses (3) Viral Multiplication - Multiplication of Bacteriophages and Animal Viruses Isolation, Cultivation, and Identification of Viruses - Growing Bacteriophages and animal viruses in the Laboratory (3) Viral Identification (3)	11
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	**Biotechnology**
Name of teacher	**Ms. Divyani Kapadia**

Class: FYB.Sc. Semester-II Subject: Basic Chemistry-2
Subject Code: USBT203

No of lectures Allotted per week: 03 No of lectures Covered per Semester: 38 No of lectures Allotted per Semester: 45

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic

December	**Unit I-Thermodynamics** Thermodynamics: System, Surrounding, Boundaries Sign Conventions, State Functions, Internal Energy and Enthalpy: Significance, examples, (Numerticals expected.) Laws of Thermodynamics and its Limitations Mathematical expression, Qualitative discussion of Carnot Cycle for ideal Gas and Mechanical Efficiency.	**Unit I-Thermodynamics** Thermodynamics: System, Surrounding, Boundaries Sign Conventions, State Functions, Internal Energy and Enthalpy: Significance, examples, (Numerticals expected.) Laws of Thermodynamics and its Limitations Mathematical expression, Qualitative discussion of Carnot Cycle for ideal Gas and Mechanical Efficiency.	07
January	Laws of Thermodynamics as applied to Biochemical Systems. Concept of Entropy, Entropy for Isobaric, Isochoric and Isothermal Processes.	Laws of Thermodynamics as applied to Biochemical Systems. Concept of Entropy, Entropy for Isobaric, Isochoric and Isothermal Processes.	03
January	**Unit II-Chemical Kinetics** Reaction Kinetics: Rate of Reaction, Rate Constant, Measurement of Reaction Rates Order & Molecularity of Reaction, Integrated Rate Equation of First and Second order reactions (with equal initial concentration of reactants) (Numericals expected) Determination of Order of Reaction a) Integration Method b) Graphical Method c) Ostwald's Isolation Method	**Unit II-Chemical Kinetics** Reaction Kinetics: Rate of Reaction, Rate Constant, Measurement of Reaction Rates Order & Molecularity of Reaction, Integrated Rate Equation of First and Second order reactions (with equal initial concentration of reactants) (Numericals expected) Determination of Order of Reaction	08

February	d) Half Time Method. (Numericals expected).	a) Integration Method b) Graphical Method c) Ostwald's Isolation Method d) Half Time Method. (Numericals expected).	02
February - March	**Unit III Oxidation Reduction reactions** Principles of Oxidation & Reduction Reactions Oxidizing and Reducing Agents Oxidation Number, Rules to assign Oxidation Numbers with examples from like Oxalate, Permanganate and Dichromate. Balancing Redox Reactions by Ion Electron Method Oxidation, Reduction, Addition and Substitution & Elimination Reactions.	**Unit III Oxidation Reduction reactions** Principles of Oxidation & Reduction Reactions Oxidizing and Reducing Agents Oxidation Number, Rules to assign Oxidation Numbers with examples from like Oxalate, Permanganate and Dichromate. Balancing Redox Reactions by Ion Electron Method Oxidation, Reduction, Addition and Substitution & Elimination Reactions.	10
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
BHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	**Biotechnology**
Name of teacher	**Deyyanshi Ghadi**
Class: FYB.Sc. Semester-II	**Subject: Biochemistry: Concept of Biomolecules-2 and analytical techniques.**
	Subject Code: UNIT204

No of lectures Allotted per week: 03 per Semester:37	No of lectures Covered No of lectures Allotted per Semester: 45		
Month of teaching	**Topic Proposed**	**Topic Covered**	**No.of lectures per topic**
December-	**Unit 1-Proteins and amino acids** Amino acids: General introduction, Classification and structures, properties (physical & chemical) (01) Amino Acids as drugs. Titration Curve of Amino Acids. Concept of Isoelectric pH, Zwitterion (02) Reactions of Amino Acids: Sorensen's Titration, Ninhydrin Test (3) Proteins: Introduction, definition and functional classification. Classification of Proteins: Simple- Fibrous and Globular Conjugated- Nucleoprotein, Lipoprotein, Glycoprotein, Phosphoprotein, Chromoprotein, Metalloprotein (03) Derived- Primary and Secondary Peptide bond: Features Example of Dipeptide, tripeptide ..... Nonapeptide EG: Oxytocin, Vasopressin (03) Amino acid composition of Bovine Cytochrome C and Bovine Chymotrypsinogen (01) Three dimensional Structure of	**Unit 1-Proteins and amino acids** Amino acids: General introduction, Classification and structures, properties (physical & chemical) (01) Amino Acids as drugs. Titration Curve of Amino Acids. Concept of Isoelectric pH, Zwitterion (02) Reactions of Amino Acids: Sorensen's Titration, Ninhydrin Introduction, definition and functional classification. Classification of Proteins: Simple- Fibrous and Globular Conjugated- Nucleoprotein, Lipoprotein, Glycoprotein, Phosphoprotein, Chromoprotein, Metalloprotein (01) Derived- Primary and Secondary Peptide bond- Features Example of Dipeptide, tripeptide ..... Nonapeptide EG: Oxytocin, Vasopressin (02) Amino acid composition of Bovine Cytochrome C and Bovine Chymotrypsinogen (01) Three dimensional Structure of proteins: Concept of Monomeric, fibrous and multimeric proteins Primary structure - Peptide linkage, Native Secondary structure - Alpha Plane and Beta fold, Spatial	08
January			03

	proteins.	monoprotein of adjacent amino acid residues Tertiary structure - Three Dimensional arrangement	

	Concept of Monomeric, dimeric and multimeric proteins Primary structure - Peptide linkage, Native Secondary structure - Alpha Pleat and Beta fold, Spatial arrangements of adjacent amino acid residues Tertiary structure - Three Dimensional arrangement Quaternary structure Di and Multimeric proteins (03) EG: structure of human Insulin Properties of proteins: Solubility, Molecular weight, Shape, Iso electric pH, Salting out of proteins for purification (01) Protein Denaturation and folding- Denaturing agents and properties of denatured proteins (02)	Quaternary structure Di and Multimeric proteins (02) EG: structure of human Insulin Properties of proteins: Solubility, Molecular weight, Shape, Iso electric pH, Salting out of proteins for purification (01) Protein Denaturation and folding- Denaturing agents and properties of denatured proteins (01)	

January February	**Unit II-Enzymes** Introduction to biocatalysis Properties of Enzymes Substrate, Optimum conditions, Coenzyme, Cofactors Classification and Nomenclature (one reaction per class) Mechanism of Enzyme Action, Active Sites, Enzyme Specificity, Factors affecting enzyme activity (Effect of pH, Temperature, Substrate Concentration, Enzyme concentration) Enzyme Kinetics: Derivation of Michaelis-Menten Equation, Lineweaver-Burk plot, Concept of km Types of Enzyme Inhibitions – Irreversible & Reversible (Competitive, Uncompetitive, Non-Competitive) Isoenzymes (LDH, Alkaline Phosphatase, Creatine Phosphokinase) Allosteric Modulators, Co-Factors, Zymogens, Enzyme units Enzymes as Biomarkers and diagnostic tools.(SGPT, SGOT, LDH, CPK) Industrial Applications of Enzymes	**Unit II-Enzymes** Introduction to biocatalysis Properties of Enzymes Substrate, Optimum conditions, Coenzyme, Cofactors (2) Classification and Nomenclature (one reaction per class) Mechanism of Enzyme Action, Active Sites, Enzyme Specificity, (1) Factors affecting enzyme activity (Effect of pH, Temperature, Substrate Concentration, Enzyme concentration (2) Enzyme Kinetics: Derivation of Michaelis-Menten Equation, (2) Lineweaver-Burk plot, Concept of km Types of Enzyme Inhibitions – Irreversible & Reversible (Competitive, Uncompetitive, Non-Competitive) (3) Isoenzymes (LDH, Alkaline Phosphatase, Creatine Phosphokinase) Allosteric Modulators, Co-Factors, Zymogens, Enzyme units (3) Enzymes as Biomarkers and diagnostic tools.(SGPT, SGOT, LDH, CPK) Industrial Applications of Enzymes (3)	03 13
February	**Unit III- Basics of Analytical Techniques** Methods of Separation: Precipitation, Filtration, Distillation and Solvent Extraction (02)	**Unit III- Basics of Analytical Techniques** Methods of Separation, Precipitation, Filtration, Distillation and Solvent Extraction (02)	06

March	Analytical Techniques Chromatography: Definition, Principles, Chromatographic performance parameters, Types/Paper Chromatography, Thin Layer Chromatography, Column Chromatography (Principle and Applications) (03) Spectroscopy - Colorimetry: (02) Properties of electromagnetic radiation, interaction with matter, lasers (02) Colorimetric assays - Principle, Beer-Lambert's Law, Measurement of Extinction, Derivation of E = kcl, Limitations of Beer-Lambert's Law, Filter Selection Examples of colorimetric and UV absorption assays (03) Electrophoresis: General principles, Factors affecting electrophoresis, Types of support media used, Types of electrophoresis (Agarose gel electrophoresis, PAGE) (03)	Analytical Techniques Chromatography: Definition, Principles, Chromatographic performance parameters, Types/Paper Chromatography, Thin Layer Chromatography, Column Chromatography (Principle and Applications) (02) Spectroscopy - Colorimetry: Properties of electromagnetic radiation, interaction with matter, lasers (02) Colorimetric assays - Principle, Beer-Lambert's Law, Measurement of Extinction, Derivation of E = kcl, Limitations of Beer-Lambert's Law, Filter Selection Examples of colorimetric and UV absorption assays (02) Electrophoresis: General principles, Factors affecting electrophoresis, Types of support media used, Types of electrophoresis (Agarose gel electrophoresis, PAGE) (02)	04

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)	
Department	Biotechnology
Name of teacher	Dayanada Ghadi, Shweta Khapde, Dr. Priyanka Vartak

Class: FYBSc. Semester-II Subject: Physiology and Immunology Subject Code: USBT285			
No of lectures Allotted per week: 03 Semester: 36 48		No of lectures Covered per No of lectures Allotted per Semester:	
Month of teaching	**Topic Proposed**	**Topic Covered**	**No. of lectures per topic**
January	**Unit I-Plant Physiology** Photosynthesis (01) Hill's Reaction and its Significance, (01) Light Reactions, Cyclic and Non-Cyclic Photo induced Electron Flow, Energetics of Photosynthesis, (03)	**Unit I-Plant Physiology** Photosynthesis (01) Hill's Reaction and its Significance, (01) Light Reactions, Cyclic and Non-Cyclic Photo induced Electron Flow, Energetics of Photosynthesis, (03)	11

February	**Unit I-Plant Physiology** Dark Phase of Photosynthesis, Calvin Cycle, C-3 (02) C-4, CAM pathways , Rubisco oxygenase activity (01) Plant hormones : Auxin ,Gibberellin, (01) Cytokinin, Ethylene, Abscisic acid (01) Introduction to Secondary Metabolites (01) **Unit II-Animal Physiology** Introduction to physiology. Concept of homeostasis. (01) Body fluids- Major types of Body fluid. Blood – Functions of blood, general properties of blood, Composition of blood. Thrombocytes or Platelets. Coagulation of blood. Theories of Coagulation. Haemolysis.(3) Respiratory system: Phases of Respiration, Principle of gases exchange, Mechanism of breathing. (01) Digestion and absorption – Mode of nutrition, Digestion: Digestion of foodstuffs, Digestion in humans. Absorption. (02) Excretion – Organs of excretion. Types of excretory products.	**Unit I-Plant Physiology** Dark Phase of Photosynthesis, Calvin Cycle, C-3 (02) C-4, CAM pathways , Rubisco oxygenase activity (01) Plant hormones : Auxin ,Gibberellin, (01) Cytokinin, Ethylene, Abscisic acid (01) Introduction to Secondary Metabolites (01) **Unit II-Animal Physiology** Introduction to physiology. Concept of homeostasis. Body fluids- Major types of Body fluid. Blood – Functions of blood, general properties of blood, Composition of blood. Thrombocytes or Platelets. Coagulation of blood. Theories of Coagulation. Haemolysis. Respiratory system: Phases of Respiration, Principle of gases exchange, Mechanism of breathing. Digestion and absorption – Mode of nutrition, Digestion. Digestion of foodstuffs, Digestion in humans. Absorption. Excretion – Organs of excretion. Types of excretory	13

	Excretion device in vertebrates (Theorem) (02) Kidney - Structure of kidney, Structure of nephron. Function of kidney. Urine formation. Dialysis (01)	products. Excretion device in vertebrates (Theorem) Kidney - Structure of kidney, Structure of nephron. Function of kidney. Urine formation. Dialysis.	
February-March	**Unit III-Immunology** Introduction to Immunology: Overview of Immune Systems, (2) Innate Immunity, Mechanisms of innate immunity, Acquired Immunity, Local and Herd Immunity, (3) Humoral and Cellular Immunity - Factors Influencing and Mechanisms of each. (4) Antigens: Immunogenicity Versus Antigenicity, Factors That Influence Immunogenicity, Epitopes, Haptens, Superantigens (3) Antibodies: Basic Structure of Antibodies, Antibody-Mediated Effector Functions, Antibody Classes and Biological Activities, (5) Antigenic Determinants on Immunoglobulins. (1)	**Unit III - Immunology** Introduction to Immunology: Overview of Immune Systems Innate Immunity, Mechanisms of innate immunity, Acquired Immunity, Local and Herd Immunity, Humoral and Cellular Immunity - Factors Influencing and Mechanisms of each Immunogenicity Versus Antigenicity, Factors That Influence Immunogenicity, Epitopes, Haptens, Superantigens Antibodies Basic Structure of Antibodies, Antibody-Mediated Effector Functions, Antibody Classes and Biological Activities, Antigenic Determinants on Immunoglobulins	10

Signature of Coordinator:	Signature of Subject Teacher:

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SON M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Biotechnology
Name of teacher	Shweta Khopde, Dnyananda Ghadi, Dhwani Kapadia

Class: FYB.Sc. Semester-II Subject: Basic Computers and Biostatistics
Subject Code: USBT206

No of lectures Allotted per week: 03 No of lectures Covered per Semester:30
No of lectures Allotted per Semester:45

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic

January-	**Unit 1-Introduction to computers** Introduction to computers: Overview and functions of a computer system, Input and output devices, Storage devices.(02) Modern computers: The workstation, The Minicomputer, Mainframe Computers, Parallel processing Computer & The Super Computer (01) Introduction to operating systems: Operating System concept, Windows, Unix/Linux & servers (1) Word Processing – Basic Operations, Creating and Editing documents, Formatting documents. (02) Spreadsheet – Creating and editing workbook, Organizing and formatting worksheets; Data analysis and management, Using formulas and functions (02) Presentation Graphics – Creating and Editing Presentations, Designing and Enhancing Presentation, Delivering Presentation, Advanced Presentation Graphics. (02)	**Unit 1-Introduction to computers** Introduction to computers: Overview and functions of a computer system, Input and output devices, Storage devices.(02) Modern computers: The workstation, The Minicomputer, Mainframe Computers, Parallel processing Computer & The Super Computer (01) Introduction to operating systems: Operating System concept, Windows, Unix/Linux & servers (01) Word Processing – Basic Operations, Creating and Editing documents, Formatting documents. (02) Spreadsheet – Creating and editing workbook, Organizing and formatting worksheets, Data analysis and management, Using formulas and functions (02) Presentation Graphics – Creating and Editing Presentations, Designing and Enhancing Presentation, Delivering Presentation, Advanced Presentation Graphics. (02)	10

March	**Unit II-Computer networking** Introduction to networking: various networkingies Associated hardware devices, gadgets (Router, Switch) tools, services, and resources (02) Network Topologies and Protocols, LAN, WAN and MAN World Wide Web (WWW)(01) Network security: fire walls (01) Computer viruses: An overview of Computer viruses: What is a virus? Virus signs, how do they get transmitted? What are the dangers? General Precautions (01) The Internet and Internet Services-Introduction, History of Internet, Internetworking Protocol(01) The Internet Architecture, Managing the Internet, Connecting to Internet, Internet Connections: Dial-up Access, Leased Line, Integrated Services Digital Network (ISDN), Digital Subscriber Line (DSL), Cable, Modem(02) Internet Address Internet Services: World Wide Web (WWW), Web Browser, Uniform Resource Locator (URL) Internet Search Engines WWW Development Languages	**Unit II-Computer networking** Introduction to networking: various networkingies Associated hardware devices, gadgets (Router, Switch) tools, services, and resources (02) Network Topologies and Protocols, LAN, WAN and MAN World Wide Web (WWW) (01) Network security: fire walls (01) Computer viruses: An overview of Computer viruses: What is a virus? Virus signs, how do they get transmitted? What are the dangers? General Precautions (01) The Internet and Internet Services-Introduction, History of Internet, Internetworking Protocol,(01) The Internet Architecture, Managing the Internet, Connecting to Internet, Internet Connections: Dial-up Access, Leased Line, Integrated Services Digital Network (ISDN), Digital Subscriber Line (DSL), Cable, Modem (02) Internet Address Internet Services: World Wide Web (WWW), Web Browser, Uniform Resource Locator (URL) Internet Search Engines WWW Development Languages Electronic Mail: E-mail Address, E-mail Message Format, E-mail Services, How E-mail Works (01) File Transfer Protocol (FTP), How FTP Works, Terminal Network (Telnet), News, Internet Relay Chat (IRC) Uses of Internet (01)	10

	Electronic Mail; E-mail Address, E-mail Message Format. E-mail Services, How E-mail Works (01) File Transfer Protocol (FTP). How FTP Works, Terminal Network (Telnet), News, Internet Relay Chat (IRC) Uses of Internet (01)		
February	**Unit III Biostatistics** Definition & Importance of Statistics in Biology Variables, Types of variables (Quantitative & Qualitative) Data, Sources of data, Types of data (Quantitative & Qualitative), Representation of Data and Graphs (Bar Diagrams, Pie Charts and Frequency distribution, Histogram, Polygon and Curve) Population and Sample, Significance of using samples Sample size, Random variation, Sampling techniques (Simple random sampling, Systematic sampling, Stratified sampling, Cluster sampling, Multiphase sampling) and Nonprobability sampling Types of Statistics (Descriptive & Inferential) - only introduction Descriptive statistics Measures of central tendency - Mean, Mode, Median (Ungrouped & Grouped data) Measures of dispersion - Range, Variance, Standard	**Unit III Biostatistics** Definition & Importance of Statistics in Biology Variables, Types of variables (Quantitative & Qualitative) Data, Sources of data, Types of data (Quantitative & Qualitative), Representation of Data and Graphs (Bar Diagrams, Pie Charts and Frequency distribution, Histogram, Polygon and Curve) Population and Sample, Significance of using samples Sample size, Random variation, Sampling techniques (Simple random sampling, Systematic sampling, Stratified sampling, Cluster sampling, Multiphase sampling) and Nonprobability sampling Types of Statistics (Descriptive & Inferential) - only introduction Descriptive statistics Measures of central tendency - Mean, Mode, Median (Ungrouped & Grouped data) Measures of dispersion - Range, Variance, Standard	10

	deviation (Ungrouped & Grouped data), Coefficient of variation Measures of location – Percentiles, Interquartile range (Box-Whisker plot) Normal/Gaussian distribution, Standard normal deviate, Sampling variation, Standard error of mean	deviation (Ungrouped & Grouped data), Coefficient of variation Measures of location – Percentiles, Interquartile range (Box-Whisker plot) Normal/Gaussian distribution, Standard normal deviate, Sampling variation, Standard error of mean	
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S SMT. I.L.U. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069			
Teaching Plan and Implementation Record (2023-24)			
Department		**Biotechnology**	
Name of teacher		**Bhwani Kapadia**	
Class: FYB.Sc. Semester-II Subject: Ability Enhancement Course- Sustainable development and Environmental Biotechnology Lectures and Presentations **Subject Code: USBT207**			
No of lectures Allotted per week: 03 **No of lectures Covered per Semester:30** **No of lectures Allotted per Semester:45**			
Month of teaching	**Topic Proposed**	**Topic Covered**	**No. of lectures per topic**

January	**Unit I-Ecology & interactions** Concept of Ecosystems, Definition and Components- Structure and function of ecosystem aspects of ecosystems Food Chain and Food Web, Ecological Pyramids (Energy,Biomass and Number) Aquatic and Terrestrial Ecosystems , Nutrient Cycle and Biogeochemical Cycles: Water, Carbon, Oxygen, Nitrogen and Sulphur. different Abiotic Factors of ecosystem and adaptations to different abiotic factors Interactions- Commensalism, Mutualism, Predation and Antibiosis, Parasitism, competition Biodiversity and its conservation: Introduction – definition: genetic, species, ecosystem diversity, biogeographic classification of India, value of biodiversity, biodiversity at global, national and local levels, India as a mega diversity nation, Hotspots of biodiversity, threats to biodiversity, conservation of biodiversity	**Unit I-Ecology & Interactions** Concept of Ecosystems, Definition and Components- Structure and function of ecosystem aspects of ecosystems Food Chain and Food Web, Ecological Pyramids (Energy,Biomass and Number) Aquatic and Terrestrial Ecosystems , Nutrient Cycle and Biogeochemical Cycles: Water, Carbon, Oxygen, Nitrogen and Sulphur. different Abiotic Factors of ecosystem and adaptations to different abiotic factors Interactions- Commensalism, Mutualism, Predation and Antibiosis, Parasitism, competition Biodiversity and its conservation: Introduction – definition: genetic, species, ecosystem diversity, biogeographic classification of India, value of biodiversity, biodiversity at global, national and local levels, India as a mega diversity nation, Hotspots of biodiversity, threats to biodiversity, conservation of biodiversity	10

February	**Unit II-Pollution and climate change** Environmental Pollution Definition, Cause, effects and control measures of :- Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, Nuclear hazards. Role of an individual in prevention of pollution. Pollution case studies. Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and Industrial. Case Studies. Sustainable development-Concept, basic principles of sustainable development, post-broadband world, roots of sustainability. Indicators,paradigm towards new discipline-sustainability science.	**Unit II-Pollution and climate change** Environmental Pollution Definition, Cause, effects and control measures of :- Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, Nuclear hazards. Role of an individual in prevention of pollution. Pollution case studies. Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and Industrial. Case Studies. Sustainable development-Concept, basic principles of sustainable development, post-broadband world, roots of sustainability, Indicators,paradigm towards new discipline-sustainability science.	10
March	**Unit III-Renewable sources of energy** Introduction- Renewable and Non-renewable resources . The need for a sustainable lifestyle. Energy resources: Types of energy Non renewable energy - Oil, coal and its environmental impacts. Renewable energy - Hydroelectric power, Solar energy.	**Unit III-Renewable sources of energy** Introduction- Renewable and Non-renewable resources . The need for a sustainable lifestyle. Energy resources: Types of energy Non renewable energy - Oil, coal and its environmental impacts.	10

	Biomass energy, Biogas, Wind power and Geothermal energy. Biogas technology: biogas plant & types, biodigester. Biogas- composition, production and factors affecting production and uses. Biofuels – ethanol production. Microbial hydrogen production Biodiesel, Petromaps.	Renewable energy – Hydroelectric power, Solar energy. Biomass energy, Biogas, Wind power and Geothermal energy. Biogas technology- biogas plant & types, biodigester. Biogas- composition, production and factors affecting production and uses. Biofuels – ethanol production. Microbial hydrogen production. Biodiesel, Petromaps.	
Signature of Coordinator:		**Signature of Subject Teacher:**	

SY Biotech

LAXMI CHARITABLE TRUST'S SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069
Teaching Plan and Implementation Record (2023-24)

Department		**Biotechnology**	
Name of teacher		**Mrs. Shweta Khepde**	
Class: SY B.Sc. Semester: III		**Subject Code: USBT301** **Subject: Bioprocess Technology**	
No of lectures Allotted per week: 03		**No of lectures Covered per Semester: 38** **No of lectures Allotted per Semester: 45**	
Month of teaching	**Topic Proposed**	**Topic Covered**	**No. of lectures per topic**

June	Unit I: Fermentor design , media and sterilization Air lift fermentor, Tower fermentor,Aeratator and cavitator, deep jet, packed Tower Fermentation Media: Media components : Carbon source-factors affecting choice of Carbon source with examples,Nitrogen source factors affecting choice of Carbon source with examples, Growth factors, Minerals, buffers, minerals, Inducers, precursors Antifoam agents- Types , Properties of Antifoam agent Medium properties: Fast metabolism,Rheology Concept of Inoculum and Production Media Sterilization : Sterilization of Fermentor and Fermentation Media. Sterilization of Media -Batch and Continuous Concept of Del factor Sterilization of Fermentor, feeds, liquid wastes Sterilization of Air Supply, Exhaust gases Filter sterilization	Unit I: Fermentor design , media and sterilization Air lift fermentor, Tower fermentor,Aeratator and cavitator, deep jet, packed Tower (4) Fermentation Media: Media components : Carbon source-factors affecting choice of Carbon source with examples, Nitrogen source factors affecting choice of Carbon source with examples,(1) Growth factors, Minerals, buffers, minerals, Inducers, precursors Antifoam agents- Types , Properties of Antifoam agent (2) Medium properties: Fast metabolism,Rheology Concept of Inoculum and Production Media Sterilization : Sterilization of Fermentor and Fermentation Media Sterilization of Media -Batch and Continuous Concept of Del factor Sterilization of Fermentor, feeds, liquid wastes Sterilization of Air Supply, Exhaust gases Filter sterilization (3)	10

July	**UNIT II** Inoculum development and process parameters Introduction to Inoculum development, Bacterial and fungal inoculum development with two examples each, scale up, scale down. Detailed steps in Monitoring and Control of process variables	**UNIT II** Inoculum development and process parameters (2) Introduction to Inoculum development. (2) Bacterial and fungal inoculum development with two examples each, scale up, scale down. (3) Detailed steps in Monitoring and Control of process variables (3)	10
August	**UNIT III Fermentation processes-1** Types of fermentations and fermentation process Significance and applications of Batch and continuous, surface and submerged, aerobic and anaerobic, Solid state fermentation. • Industrial products from Microorganisms- Penicillin,semisynthetic penicillin, Streptomycin,Vaccines, hormone	**UNIT III Fermentation processes-1** Types of fermentations and fermentation process Significance and applications of Batch and continuous, surface and submerged, aerobic and anaerobic, Solid state fermentation. (7) • Industrial products from Microorganisms- Penicillin,semisynthetic penicillin, Streptomycin,Vaccines, hormone (6)	13
September	• Enzymes and Organic acids from Microorganisms: Ethanol,Citric acid, acetic acid, Lysine, Glutamic acid, Amylases, proteases	Enzymes and Organic acids from Microorganisms. (2) Ethanol,Citric acid, acetic acid, Lysine, Glutamic acid, Amylases, proteases (3)	07
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S SMT. H.L.U.J. & SHRI M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069			
Teaching Plan and Implementation Record (2023-24)			
Department		**Biotechnology**	
Name of teacher		**Mrs. Shweta Khopde**	
Class: SY B.Sc. Semester- III Subject: Medical Microbiology Subject Code: UBIT301			
No.of lectures Allotted per week: 03 38 45		**No. of lectures Covered per Semester: No. of lectures Allotted per Semester:**	
Month of teaching	**Topic Proposed**	**Topic Covered**	**No. of lectures per topic**

July	**UNIT I General Bacteriology and Bacteria as Human pathogens, Host parasite interactions** Host Parasite Relationship: General Bacteriology and Bacteria as Human pathogens, Host parasite interactions Normal Flora, Factors Affecting the Course of Infection and Disease; Mechanisms of Infection and Virulence Factors. Infection: Patterns of Infection; Types of Infections; Signs and Symptoms; Epidemiology and Epidemiological Markers. Diseases: Origin of Pathogens, Vectors; Acquisition of Infections; Koch's Postulates.	**UNIT I General Bacteriology and Bacteria as Human pathogens, Host parasite interactions** Host Parasite Relationship: General Bacteriology and Bacteria as Human pathogens, Host parasite interactions (4) Normal Flora, Factors Affecting the Course of Infection and Disease; Mechanisms of Infection and Virulence Factors. Infection: (1) Patterns of Infection; Types of Infections; Signs and Symptoms; Epidemiology and Epidemiological Markers. Diseases: Origin of Pathogens, Vectors; Acquisition of Infection; Koch's Postulates.(5)	10

August	**UNIT II** Causative organisms-1 Skin: S. aureus, S. pyogenes. Respiratory Tract Infections: M. tuberculosis, S. pneumoniae (Characteristics Transmission, Course of Infection, Lab Diagnosis, Management of TB, Prevention and Control, Immuno and Chemoprophylaxis, DOTS and MDR). Urinary Tract Infections: E.coli : Characteristics, Virulence, Clinical disease, and E.coli Infections.	**UNIT II** Causative organisms-1 Skin: S. aureus, S. pyogenes. Respiratory Tract Infections: M. tuberculosis, S. pneumoniae (Characteristics Transmission, Course of Infection, Lab Diagnosis, Management of TB, Prevention and Control, Immuno and Chemoprophylaxis, DOTS and MDR). (7) Urinary Tract Infections: E.coli : Characteristics, Virulence, Clinical disease, and E.coli Infections. (6)	13
August	**UNIT III** Causative organisms-2 GI Tract Infections: Salmonella and Shigella spps. (Characteristics, Virulence- Pathogenesis and Immunity, Clinical Disease, Carriers Lab Diagnosis, Phage Typing Prophylaxis and Treatment). Sexually Transmitted Diseases:Syphilis and Gonorrhoea. Nosocomial Infections :Ps. aeruginosa	**UNIT III** Causative organisms-2 GI Tract Infections: Salmonella and Shigella spps. (Characteristics, Virulence- Pathogenesis and Immunity, Clinical Disease, Carriers Lab Diagnosis, Phage Typing Prophylaxis and Treatment). (10) Sexually Transmitted Diseases:Syphilis and Gonorrhoea. Nosocomial Infections :Ps. aeruginosa (5)	18
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S SHETTI L.J.U. & SHE M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069			
Teaching Plan and Implementation Record (2023-24)			
Department		Biotechnology	
Name of teacher		Ms. Dhwani Kapadia, Ms. Dnyanada Ghadi	
Class:SY B.Sc. Semester-III Subject: Applied Chemistry-I Subject Code: USBT303			
No of lectures Allotted per week: 03 No of lectures Covered per Semester: 40 No of lectures Allotted per Semester: 45			
Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic

June	UNIT I Organic chemistry Introduction to Types of Organic Reactions : Addition, Elimination and Substitution Reactions. Essential and Non-essential Elements in Biological Systems. Role of Metal Ions in Biological Systems. Metal Coordination in Biological Systems : Enzymes, Apoenzymes and Coenzymes. Biological Role of Metalloenzymes wrt Myoglobins, Haemoglobin. Biological Role of Carboxypeptidases, Catalases and Peroxidases.	UNIT I Organic chemistry Introduction to Types of Organic Reactions : Addition, Elimination and Substitution Reactions. Essential and Non-essential Elements in Biological Systems. Role of Metal Ions in Biological Systems. (7) Metal Coordination in Biological Systems : Enzymes, Apoenzymes and Coenzymes. Biological Role of Metalloenzymes wrt Myoglobins, Haemoglobin. Biological Role of Carboxypeptidases, Catalases and Peroxidases. (6)	13

July	UNIT II Chromatography and centrifugation Chromatography- Principle, working and applications of: Affinity chromatography, Ion-exchange chromatography, Molecular (size) exclusion chromatography. Centrifugation: Basic Principle of sedimentation, Types of Centrifugal Separation- Differential Centrifugation, Density Gradient Centrifugation, Rotor Categories, Applications of Centrifugation.	UNIT II Chromatography and centrifugation Chromatography- Principle, working and applications of: Affinity chromatography, (2) Ion-exchange chromatography, Molecular (size) exclusion chromatography. (4) Centrifugation- Basic Principle of sedimentation, Types of Centrifugal Separation- Differential Centrifugation, Density Gradient Centrifugation, (4) Rotor Categories, Applications of Centrifugation. (1)	11
August	UNIT III **Electrophoretic Techniques** Electrophoresis:Migration of Ions in an applied electric field; Factors affecting Electrophoretic Mobility; Moving Boundary Electrophoresis; Principle of Electrophoresis; Supporting Matrix; Paper Electrophoresis; AGE; Native and SDS PAGE (reducing and non-reducing, continuous and discontinuous); IEF and 2D PAGE.	UNIT III **Electrophoretic Techniques** Electrophoresis:Migration of Ions in an applied electric field; Factors affecting Electrophoretic Mobility; (3) Moving Boundary Electrophoresis; Principle of Electrophoresis; Supporting Matrix; (3) Paper Electrophoresis; AGE; Native and SDS PAGE (reducing and non-reducing, continuous and discontinuous); IEF and 2D PAGE. (5)	13
Septemb er	Staining and Detection Methods; Gel-Documentation. Applications in Biology.	Staining and Detection Methods; Gel-Documentation. (02) Applications in Biology. (01)	03
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	**Biotechnology**
Name of teacher	**Ms. Dhwani Kapadia**
Class: SY B.Sc. Semester-III	**Subject: Fundamentals in Biophysics**
Subject Code: USBT304	
No.of lectures Allotted per week: 03 No. of lectures Covered per Semester:32	
No. of lectures Allotted per Semester: 45	

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
July	UNIT I Optics and Microscopy Introduction to Optics and Lasers: Optics : Properties of Light - Reflection, Refraction, Dispersion, Interference. Lasers : Properties of Lasers, Stimulated Emissions, Laser Action; Applications of Laser. Microscopy: Types of Microscopy, Electron Optics; Electron Microscopy- Preparation of Specimens, Construction, Principles and Working: SEM, TEM and Immuno-Electron Microscopy, Fluorescence Microscopy.	UNIT I Optics and Microscopy Introduction to Optics and Lasers: Optics : Properties of Light - Reflection, Refraction, Dispersion, Interference. Lasers : Properties of Lasers, Stimulated Emissions, Laser Action; Applications of Laser. Microscopy: Types of Microscopy, Electron Optics; Electron Microscopy- Preparation of Specimens, Construction, Principles and Working: SEM, TEM and Immuno-Electron Microscopy, Fluorescence Microscopy.	10

August	**Unit II: Heat, Sound, Magnetism and Fluid Dynamics** Heat: Concept of Temperature; Modes of Heat Transfer; Measuring Temperature; Platinum Resistance Thermometer; Thermocouple and Thermistors. Sound: Types of Sound Waves - Audible, Ultrasonic and Infrasonic Waves; Doppler Effect; Applications of Ultrasonic Waves. Magnetism: Magnetic Field; Magnetism of Earth; Para magnetism, Diamagnetism, Ferromagnetism. Nuclear Magnetism and Biomagnetism. Fluid Dynamics : Viscosity; Definition Flow of Liquids through Capillaries; Stokes' Law; Terminal Velocity. Determination of 'η' by Falling Sphere Method; Viscosity Estimation by Ostwald's Viscometer. Surface Tension: Definition- Surface Tension and Surface Energy; Capillary Action; Angle of Contact; Wettability; Temperature Dependence of Surface Tension. Applications in Biology.	**Unit II: Heat, Sound, Magnetism and Fluid Dynamics** Heat: Concept of Temperature; Modes of Heat Transfer; Measuring Temperature; Platinum Resistance Thermometer; Thermocouple and Thermistors. Sound: Types of Sound Waves - Audible, Ultrasonic and Infrasonic Waves; Doppler Effect; Applications of Ultrasonic Waves. Magnetism: Magnetic Field; Magnetism of Earth; Para magnetism, Diamagnetism, Ferromagnetism. Nuclear Magnetism and Biomagnetism. Fluid Dynamics : Viscosity; Definition Flow of Liquids through Capillaries; Stokes' Law; Terminal Velocity. Determination of 'η' by Falling Sphere Method; Viscosity Estimation by Ostwald's Viscometer. Surface Tension: Definition- Surface Tension and Surface Energy; Capillary Action; Angle of Contact; Wettability; Temperature Dependence of Surface Tension. Applications in Biology.	10

	UNIT III Spectroscopy Spectroscopy Types and Properties of Spectra; Basic Laws of Light Absorption; Principle, instrumentation, working and applications of: UV Spectroscopy Fluorescence Spectroscopy Luminometry Light scattering spectroscopy Infrared Spectroscopy	UNIT III Spectroscopy Spectroscopy Types and Properties of Spectra; Basic Laws of Light Absorption; Principle, instrumentation, working and applications of: UV Spectroscopy Fluorescence Spectroscopy Luminometry Light scattering spectroscopy Infrared Spectroscopy	13
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Biotechnology
Name of teacher	Ms. Dayanada Ghadi

Class: SY B.Sc. Semester-III Subject: Immunology
Subject Code: USBT305

No.of lectures Allotted per week: 03 No. of lectures Covered per Semester:44
No. of lectures Allotted per Semester: 45

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic

June	UNIT I Cell and organs of immune system, Complement system Haematopoiesis; Cells of the Immune System; Primary and Secondary Lymphoid Organs. Complement System- Classical, Alternate and Lectin; Regulation and Biological Effects of Complement System; Deficiencies of Complement System	UNIT I Cell and organs of immune system, Complement system Haematopoiesis; Cells of the Immune System; Primary and Secondary Lymphoid Organs. Complement System- Classical, Alternate and Lectin; Regulation and Biological Effects of Complement System; Deficiencies of Complement System	15
July	UNIT II MHC andAntigen presentation pathways, TCR/BCR, Tcell and B cell Activation T-cell Receptor Complex : Structure and Activation. MHC Classes - General Organization and Inheritance; Structures and Peptide Interactions; Class I and II Diversity and Polymorphism; Antigen Presentation - Endocytic and Exocytic Pathways; MHC Restriction. B-cell Receptor : Structure, Maturation and Activation B-T Cell Interaction (B-T cell Cooperation)	UNIT II MHC andAntigen presentation pathways, TCR/BCR, Tcell and B cell Activation T-cell Receptor Complex : Structure and Activation. MHC Classes - General Organization and Inheritance; Structures and Peptide Interactions; Class I and II Diversity and Polymorphism; Antigen Presentation - Endocytic and Exocytic Pathways; MHC Restriction. B-cell Receptor : Structure, Maturation and Activation B-T Cell Interaction (B-T cell Cooperation)	12

July	UNIT III Immunotechniques Precipitation Reactions : Immunoprecipitation, Immunoelectrophoresis, CIEP, Rocket Electrophoresis and 2-D Immunoelectrophoresis Agglutination Reactions : Passive, Reverse Passive, Agglutination Inhibition, Coomb's Test, Complement Fixation Tests, RIA,	UNIT III Immunotechniques Precipitation Reactions : Immunoprecipitation, Immunoelectrophoresis, CIEP, Rocket Electrophoresis and 2-D Immunoelectrophoresis. Agglutination Reactions : Passive, Reverse Passive, Agglutination Inhibition, Coomb's Test, Complement Fixation Tests, RIA,	11
August	ELISA, ELISPOT, Chemiluminescence, Western Blot, Immunofluorescence, Flow Cytometry, Alternatives to Antigen-Antibody Reactions		06

Signature of Coordinator:	Signature of Subject Teacher:

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2022-23)

Department	Biotechnology
Name of teacher	Dr. Priyanka Vartak
Class:SY B.Sc. Semester-III	Subject: Molecular Biology III Subject Code: USBT306
No .of lectures Allotted per week: 03	No. Of lectures Covered per Semester: 40 No. Of lectures Allotted per Semester: 45

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	UNIT I Transcription: Transcription Process in Prokaryotes : RNA Synthesis; Promoters and Enhancers; Initiation of Transcription at Promoters; Elongation and Termination of an RNA Chain. Transcription in Eukaryotes : Eukaryotic RNA Polymerases; Eukaryotic Promoters; Transcription of Protein Coding Genes by RNA Polymerase; Eukaryotic mRNA's; Transcription of other genes; Spliceosomes; RNA editing.	UNIT I Transcription Transcription Process in Prokaryotes : RNA Synthesis; Promoters and Enhancers; Initiation of Transcription at Promoters; Elongation and Termination of an RNA Chain. Transcription in Eukaryotes : Eukaryotic RNA Polymerases; Eukaryotic Promoters; Transcription of Protein Coding Genes by RNA Polymerase; Eukaryotic mRNA's; Transcription of other genes; Spliceosomes; RNA editing.	15

July	**UNIT II** Translation Nature of Genetic Code. Wobble Hypothesis. Translation in Prokaryotes and Eukaryotes: Process of Protein Synthesis (Initiation, Elongation, Translocation, Termination). Post Translational Modifications. Protein sorting.	**UNIT II** Translation Nature of Genetic Code. Wobble Hypothesis. Translation in Prokaryotes and Eukaryotes: Process of Protein Synthesis (Initiation, Elongation, Translocation, Termination). Post Translational Modifications. Protein sorting.	11
July	**UNIT III** Regulation of gene expression in Prokaryotes and Viruses In Prokaryotes: lac Operon of E.coli	**UNIT III** Regulation of gene expression in Prokaryotes and Viruses In Prokaryotes: lac Operon of E.coli	07
August	trp Operon of E.coli, Arabinose operon. In Viruses : Lytic and Lysogenic Regulation.	trp Operon of E.coli, Arabinose operon In Viruses : Lytic and Lysogenic Regulation.	07
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SHR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	**Biotechnology**
Name of teacher	**Dhwani Kapadia**
Class:SY B.Sc. Semester-III and Presentation	**Subject:Biosafety Lectures Subject Code: USBT307**

No of lectures Allotted per week: 03 No of lectures Covered per Semester: 38
No of lectures Allotted per Semester: 48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	**UNIT I** Introduction to biosafety, GLP Introduction Biological Risk Assessment, Hazardous Characteristics of an Agent; Genetically modified agent hazards; Cell cultures; Hazardous Characteristics of Laboratory Procedures; Potential Hazards Associated with Work Practice; Concept of GLP; Practicing GLP;	**UNIT I** Introduction to biosafety, GLP Introduction; Biological Risk Assessment, Hazardous Characteristics of an Agent; Genetically modified agent hazards; Cell cultures; Hazardous Characteristics of Laboratory Procedures; Potential Hazards Associated with Work Practice; Concept of GLP; Practicing GLP;	06
July	Guidelines to GLP; Documentation of Laboratory work; Preparation of SOPs; Calibration records;Validation of methods; Documentation of results; Audits & Audit reports.	Guidelines to GLP; Documentation of Laboratory work; Preparation of SOPs; Calibration records;Validation of methods; Documentation of results; Audits & Audit reports.	04

September	**UNIT II** Biosafety in diagnostics labs Biosafety Good diagnostic lab practice and procedures Personnel competence and training Facility design Specimen and material receipt and storage Decontamination and waste management Personal protective equipment Laboratory equipment Safe techniques Emergency/accident response Occupational health Transport Maintenance of records Reporting of accidents Training	**UNIT II** Biosafety in diagnostics labs Biosafety Good diagnostic lab practice and procedures Personnel competence and training Facility design Specimen and material receipt and storage Decontamination and waste management Personal protective equipment Laboratory equipment Safe techniques Emergency/accident response Occupational health Transport Maintenance of records Reporting of accidents Training	10
September	**UNIT III** Detection and testing of contaminants. Microbial Contamination in food and pharma products; Some common microbial contaminants; Microbiological Assays for pharmaceutical products; Regulatory Microbiological testing in pharmaceuticals.	**UNIT III** Detection and testing of contaminants. Microbial Contamination in food and pharma products; Some common microbial contaminants; Microbiological Assays for pharmaceutical products; Regulatory Microbiological testing in pharmaceuticals.	10
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SMT. I.D.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	**Biotechnology**
Name of teacher	**Mrs. Shweta Khapde**
Class: SY B.Sc. **Subject: Medical Biotechnology**	**Semester-IV** **Subject Code: SBBT-401**
No.of lectures Allotted per week:03 **Semester:48** **45**	**No. of lectures Covered per** **No. of lectures Allotted per Semester:**

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
October	**UNIT I Viral and fungal** diseases Pathogenesis, clinical symptoms, laboratory diagnosis, epidemiology, prophylaxis and treatment of Viral diseases Air borne viral diseases: Influenza ,measles, COVID	**UNIT I Viral and fungal** diseases Pathogenesis, clinical symptoms, laboratory diagnosis, epidemiology, prophylaxis and treatment of Viral diseases Air borne viral diseases: Influenza ,measles, COVID	10
November	Vector Borne viral diseases: (Dengue, AIDS, Rabies). Fungal diseases- transmission, symptoms and prevention of cutaneous mycoses (Athlete's foot), systemic mycoses (Histoplasmosis) and opportunistic mycoses (Candidiasis)	Vector Borne viral diseases: (Dengue, AIDS, Rabies). Fungal diseases- transmission, symptoms and prevention of cutaneous mycoses (Athlete's foot), systemic mycoses (Histoplasmosis) and opportunistic mycoses (Candidiasis)	08

December	**UNIT II** Chemotherapeutic agents I Discovery and Design of antimicrobial agents; Classification of Antibacterial agents, Selective toxicity, MIC, MLC Inhibition of cell wall synthesis (Mode of action (i-v): Beta lactam antibiotics: Penicillin, Cephalosporins; Glycopeptides: Vancomycin; Polypeptides: Bacitracin Injury to Plasma membrane: Polymyxin, Inhibition of protein synthesis Aminoglycosides, Tetracyclines Chloramphenicol, Macrolides Erythromycin; Inhibition of Nucleic acid synthesis: Quinolones, Rifampicin, Metronidazole ; Antimetabolites: Sulphonamides, Trimethoprim;	**UNIT II** Chemotherapeutic agents I Discovery and Design of antimicrobial agents; Classification of Antibacterial agents, Selective toxicity, MIC, MLC Inhibition of cell wall synthesis (Mode of action (i-v): Beta lactam antibiotics: Penicillin, Cephalosporins; Glycopeptides: Vancomycin; Polypeptides: Bacitracin Injury to Plasma membrane: Polymyxin, Inhibition of protein synthesis Aminoglycosides, Tetracyclines Chloramphenicol, Macrolides Erythromycin; Inhibition of Nucleic acid synthesis: Quinolones, Rifampicin, Metronidazole ; Antimetabolites: Sulphonamides, Trimethoprim;	12

January	UNIT III Antimicrobial susceptibility tests Drug Resistance: Mechanism, Origin and transmission of drug resistance; Use and misuse of antimicrobial agents; Antifungal drugs, Azoles,Polyenes, Echinocandins, Silylamines, Pyrimidine Analogues Antiviral drugs : Drugs that target the viral DNA polymerase (Acyclovir,Gancyclovir)	UNIT III Antimicrobial susceptibility tests Drug Resistance: Mechanism, Origin and transmission of drug resistance; Use and misuse of antimicrobial agents; Antifungal drugs, Azoles,Polyenes, Echinocandins, Silylamines, Pyrimidine Analogues Antiviral drugs : Drugs that target the viral DNA polymerase (Acyclovir,Gancyclovir)	18
February	Nucleoside and nucleotide reverse transcriptase inhibitors (Zidovudine) Non -nucleoside reverse transcriptase inhibitors (Nevirapine) Protease inhibitors Fusion inhibitors(Enfuvirtide)	Nucleoside and nucleotide reverse transcriptase inhibitors (Zidovudine) Non -nucleoside reverse transcriptase inhibitors (Nevirapine) Protease inhibitors Fusion inhibitors(Enfuvirtide)	10
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Biotechnology
Name of teacher	Ms. Bayanada Ghosh
Class: SY B.Sc. Semester-IV Subject Code: BSBT-402	Subject: Cell Biology and Cytogenetics
No.of lectures Allotted per week:03 Semester: 30 45	No.of lectures Covered per No.of lectures Allotted per Semester:

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic

December	**UNIT I Cytoskeleton** Cytoskeleton : Overview of the Major Functions of Cytoskeleton. Microtubules: Structure and Composition. MAPs. Functions: Role in Mitosis, Structural Support and Cytoskeleton Intracellular Motility. Motor Proteins: Kinesins, Dynein, MTOCs. Dynamic Properties of Microtubules.	**UNIT I Cytoskeleton** Cytoskeleton : Overview of the Major Functions of Cytoskeleton. Microtubules: Structure and Composition. MAPs. Functions: Role in Mitosis, Structural Support and Cytoskeleton Intracellular Motility. Motor Proteins: Kinesins, Dynein, MTOCs. Dynamic Properties of Microtubules.	07
January	Microtubules in Cilia and Flagella. Microfilaments: Structure, Composition, Assembly and Disassembly. Motor Protein: Myosin. Muscle Contractility: Sliding Filament Model. Actin Binding Proteins : Examples of Non Muscle Motility. Intermediate Filaments :Structure and Composition; Assembly and Disassembly; Types and Functions.	Microtubules in Cilia and Flagella. Microfilaments: Structure, Composition, Assembly and Disassembly. Motor Protein: Myosin. Muscle Contractility: Sliding Filament Model. Actin Binding Proteins : Examples of Non Muscle Motility. Intermediate Filaments :Structure and Composition; Assembly and Disassembly; Types and Functions.	07

January	UNIT II Cell membrane Cell Membrane : Uptake of Nutrients by Prokaryotic Cells; Cell Permeability. Principles of Membrane Transport Transporters and Channels; Active Transport, Passive Transport; Types of Transporters, Types of ATP Driven Pumps - Na+ K+ Pump	UNIT II Cell membrane Cell Membrane : Uptake of Nutrients by ProKaryotic Cells; Cell Permeability. Principles of Membrane Transport Transporters and Channels; Active Transport, Passive Transport; Types of Transporters; Types of ATP Driven Pumps - Na+ K+ Pump	07
February	Cell Junctions; Cell Adhesion and Extracellular Material Microvilli, Tight Junctions, Gap Junctions; Cell Coat and Cell Recognition. Cellular Interactions.	Cell Junctions; Cell Adhesion and Extracellular Material Microvilli, Tight Junctions, Gap Junctions; Cell Coat and Cell Recognition. Cellular Interactions.	04

February	**UNIT III Cytogenetics** Structure of Chromosome - Heterochromatin, Euchromatin, Polytene Chromosomes, Variation in Chromosomal Structure and Number : Deletion, Duplication, Inversion, Translocation, Aneuploidy, Euploidy and Polyploidy and Syndromes- Klinefelter, Turner, Cri-du-Chat, Trisomy -21, Trisomy 18 and Trisomy 13. Sex Determination and Sex Linkage : Mechanisms of Sex Determination (XX-XY, ZZ-ZW, XX-XO) Dosage Compensation and Barr Body. Genetic Linkage, Crossing Over and	**UNIT III Cytogenetics** Structure of Chromosome - Heterochromatin, Euchromatin, Polytene Chromosomes, Variation in Chromosomal Structure and Number : Deletion, Duplication, Inversion, Translocation, Aneuploidy, Euploidy and Polyploidy and Syndromes- Klinefelter, Turner, Cri-du-Chat, Trisomy -21, Trisomy 18 and Trisomy 13. Sex Determination and Sex Linkage : Mechanisms of Sex Determination (XX-XY, ZZ-ZW, XX-XO) Dosage Compensation and Barr Body. Genetic Linkage, Crossing Over and	10
March	Chromosomal Mapping : Tetrad Analysis; Two-point Cross; Three point Cross; Pedigree Analysis.	Chromosomal Mapping : Tetrad Analysis; Two-point Cross; Three point Cross; Pedigree Analysis.	04
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAKSHYAHARTA ABHA TRUST'S
SHETH L.U.J. & SHR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	**Biotechnology**
Name of teacher	**Ms. Dhwani Kapadia**

Class: S.Y B.Sc. Semester-IV **Subject: Applied Chemistry-2**
Subject Code: USBT403

No.of lectures Allotted per week: 03 **No. of lectures Covered per Semester:38** **No.of lectures Allotted per Semester: 45**

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
November	**UNIT I** Synthesis of organic compounds Synthesis of Organic Compounds : Criteria for Ideal Synthesis; Selectivity and Yield. Linear and Convergent Synthesis and Multicomponent Reactions.	**UNIT I** Synthesis of organic compounds Synthesis of Organic Compounds : Criteria for Ideal Synthesis; Selectivity and Yield. Linear and Convergent Synthesis and Multicomponent Reactions.	07
December	Microwave Assisted Organic Synthesis,Ultrasound in Synthesis and Polymer supported Synthesis. Retrosynthesis.	Microwave Assisted Organic Synthesis,Ultrasound in Synthesis and Polymer supported Synthesis. Retrosynthesis.	04

December	UNIT II Natural Product Chemistry and green chemistry Primary and Secondary Metabolites. Classification of Natural Products based on Bio Synthesis.	UNIT II Natural Product Chemistry and green chemistry Primary and Secondary Metabolites. Classification of Natural Products based on Bio Synthesis.	04
January	Classification of Natural Products based on Structure- Alkaloids, Phenolics, Essential Oils and Steroids. Structure Determination of Natural Product,	Classification of Natural Products based on Structure- Alkaloids, Phenolics, Essential Oils and Steroids. Structure Determination of Natural ProCommercial	02
January	Commercial Synthesis of Natural Products. Green Chemistry and Synthesis Introduction to Green Chemistry, Need and Relevance of Green Chemistry; Principles of Green Chemistry. Green Synthesis in Industry: Green Materials, Green Reagents, Green Solvents and Green Catalysts.	Synthesis of Natural Products. Green Chemistry and Synthesis Introduction to Green Chemistry, Need and Relevance of Green Chemistry; Principles of Green Chemistry. Green Synthesis in Industry: Green Materials, Green Reagents, Green Solvents and Green Catalysts. dues.	03
January	UNIT III Nanotechnology Nanomaterials : Introduction to Nanomaterials. Forms of Nanomaterials : Nanoparticles,Nanoflows and Nanotubes	UNIT III Nanotechnology Nanomaterials : Introduction to Nanomaterials. Forms of Nanomaterials : Nanoparticles,Nanoflows and Nanotubes	06
February	Synthesis and Characterization of Nanomaterials. Applications of Nanomaterials.	Synthesis and Characterization of Nanomaterials. Applications of Nanomaterials.	02
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S SHETH L.U.J. & SHI M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069			
Teaching Plan and Implementation Record (2023-24)			
Department		**Biotechnology**	
Name of teacher		**Devanada Ghadi**	
Class: SY B.Sc. Semester-IV		**Subject: Biochemistry** **Subject Code: USBT404**	
No.of lectures Allotted per week: 03		**No.of lectures Covered per Semester: 48**	
No.of lectures Allotted per Semester: 48			
Month of teaching	**Topic Proposed**	**Topic Covered**	**No. of lectures per topic**

October	UNIT I Carbohydrate Metabolism, ETS and Energy Rich Compounds Glycolytic Pathway and its Regulation,	UNIT I Carbohydrate Metabolism, ETS and Energy Rich Compounds Glycolytic Pathway and its Regulation,	03
November	Homofactic Fermentation; Alcoholic Fermentation; Energetics of Fermentation; Citric Acid Cycle and its Regulation; Gluconeogenesis; Pentose Phosphate Pathway; Glyoxalate Pathway; Reductive TCA , Sequence of Reactions, Regulation,	Homofactic Fermentation; Alcoholic Fermentation; Energetics of Fermentation; Citric Acid Cycle and its Regulation; Gluconeogenesis; Pentose Phosphate Pathway; Glyoxalate Pathway; Reductive TCA , Sequence of Reactions, Regulation,	05
December	Energy Yield and Metabolic Disorders of the above Pathways) Electron Transport System : Electron Transport and Oxidative Phosphorylation, Inhibitors of ETS. Energy Rich Compounds : ATP as Energy Currency, Structure of ATP, Hydrolysis, Other Energy Rich Compounds other than ATP like PEP, Creatine Phosphate, etc.	Energy Yield and Metabolic Disorders of the above Pathways) Electron Transport System : Electron Transport and Oxidative Phosphorylation, Inhibitors of ETS. Energy Rich Compounds : ATP as Energy Currency, Structure of ATP, Hydrolysis, Other Energy Rich Compounds other than ATP like PEP, Creatine Phosphate, etc.	07

January	**UNIT II Amino acid metabolism** Amino Acid Breakdown : Deamination, Transamination, Urea Cycle. Breakdown of Glucogenic and Ketogenic Amino Acids. Amino Acids as Biosynthetic Precursors : Biosynthesis of Epinephrine, Dopamine, Serotonin, GABA, Histamine, Glutathione. (Sequence of Reactions, Regulation and Metabolic Disorders of the above Pathways)	**UNIT II Amino acid metabolism** Amino Acid Breakdown : Deamination, Transamination, Urea Cycle. Breakdown of Glucogenic and Ketogenic Amino Acids. Amino Acids as Biosynthetic Precursors : Biosynthesis of Epinephrine, Dopamine, Serotonin, GABA, Histamine, Glutathione. (Sequence of Reactions, Regulation and Metabolic Disorders of the above Pathways)	13
February	**UNIT III Lipid metabolism** Lipid Metabolism : Mobilization, Transport of Fatty Acids. Beta, Alpha and Omega Oxidation of Saturated Fatty Acids, Oxidation of Unsaturated Fatty Acids, Oxidation of Odd Chain Fatty Acids. Energy Yield. Ketone Body Breakdown to Yield Energy. (Sequence of Reactions, Regulation, Energy Yield and Metabolic Disorders of the above Pathways)	**UNIT III Lipid metabolism** Lipid Metabolism : Mobilization, Transport of Fatty Acids. Beta, Alpha and Omega Oxidation of Saturated Fatty Acids, Oxidation of Unsaturated Fatty Acids, Oxidation of Odd Chain Fatty Acids. Energy Yield. Ketone Body Breakdown to Yield Energy. (Sequence of Reactions, Regulation, Energy Yield and Metabolic Disorders of the above Pathways)	10
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S SHETTI L.U.J. & SIR S.V. COLLEGE OF ARTS, SCIENCE & COMMERCE DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI - 400 069	
Teaching Plan and Implementation Record (2023-24)	
Department	Biotechnology
Name of teacher	Dr. Priyanka Varish
Class:SY B.Sc. Semester-IV	Subject: Molecular Diagnostics Subject Code: USBT405
No.of lectures Allotted per week: 03	No.of lectures Covered per Semester:51 No.of lectures Allotted per Semester: 45

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
October	UNIT I Basics of molecular diagnostics Introduction to Molecular Diagnostics : Overview of Molecular Diagnostics; History of Molecular Diagnostics; Molecular Diagnostics in Post Genomic Era; Areas used in Molecular Diagnostics; Future Prospects - Commercialising Molecular Diagnostics, Personalized Medicine, Theranostics Characterization and analysis of Nucleic – Acids and Proteins :	UNIT I Basics of molecular diagnostics Introduction to Molecular Diagnostics : Overview of Molecular Diagnostics; History of Molecular Diagnostics; Molecular Diagnostics in Post Genomic Era; Areas used in Molecular Diagnostics; Future Prospects - Commercialising Molecular Diagnostics, Personalized Medicine, Theranostics. Characterization and analysis of Nucleic – Acids and Proteins :	06
November	Extraction, Isolation and Detection of DNA, RNA and Proteins; Restriction Endonucleases and Restriction Enzyme Mapping.Hybridization Techniques : Southern, Northern, Western and FISH.	Extraction, Isolation and Detection of DNA, RNA and Proteins; Restriction Endonucleases and Restriction Enzyme Mapping.Hybridization Techniques : Southern, Northern, Western and FISH.	05
December	Markers, Probes and its Clinical Applications.	Markers, Probes and its Clinical Applications.	04

December	UNIT II Nucleic acid amplification methods Target amplification : PCR - General Principle; Components of a Typical PCR Reaction; Experimental Design; Primer Designing; Control of PCR Contamination and Misprinting; PCR Product Clean-up and Detection. PCR Types : Reverse Transcriptase and Real Time PCR. Probe amplification : Ligase Chain Reaction	UNIT II Nucleic acid amplification methods Target amplification : PCR - General Principle; Components of a Typical PCR Reaction; Experimental Design; Primer Designing; Control of PCR Contamination and Misprinting; PCR Product Clean-up and Detection. PCR Types : Reverse Transcriptase and Real Time PCR. Probe amplification : Ligase Chain Reaction	10
Jan-February	UNIT III Molecular biology based diagnostics DNA Polymorphism and Identification: RFLP and Paternage Testing; RFLP and Sickle -Cell Anaemia. Genetic Counseling and Molecular Diagnosis Genetic Testing - Need and Uses; genetic Counseling. Case Studies - Diagnostic Testing for Cystic Fibrosis, Fragile X Diagnostic and Carrier Testing. Ethical, Social and Legal Issues in Molecular-Genetic Testing	UNIT III Molecular biology based diagnostics DNA Polymorphism and Identification: RFLP and Paternage Testing; RFLP and Sickle -Cell Anaemia. Genetic Counseling and Molecular Diagnosis Genetic Testing - Need and Uses; genetic Counseling. Case Studies - Diagnostic Testing for Cystic Fibrosis, Fragile X Diagnostic and Carrier Testing. Ethical, Social and Legal Issues in Molecular-Genetic Testing	11
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SHETH LALL A SHE M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Biotechnology
Name of teacher	Dr. Priyanka Varsak, Ms. Dhwani Kapadia

Class: SY B.Sc. Semester-IV Subject: Bioinformatics and Biostatistics
Subject Code: USBT406

No.of lectures Allotted per week: 03 No.of lectures Covered per Semester:36 No.of lectures Allotted per Semester: 45

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic

January	UNIT I Introduction to Computers and Biological Databases Computer Basics : Basic Computer Operations: I/O Units, Computer Memory, Processor, Binary Arithmetic, Logic Circuit, Architecture, Operating Systems and application softwares. Biological Databases : Classification of Databases - Raw and Processed Databases, Primary (NCBI), Secondary (PIR) and Tertiary or Composite (KEGG) Databases, Structure and Sequence Databases. Specialized Databases - Protein Pattern Databases. Protein Structure and Classification Databases (CATH/SCOP), Genome Information Resources. DNA Sequence Databases Specialized Genomic Resources. Protein Databases based on Composition, Motifs and Patterns. Protein Structure Visualization Software.	UNIT I Introduction to Computers and Biological Databases Computer Basics : Basic Computer Operations: I/O Units, Computer Memory, Processor, Binary Arithmetic, Logic Circuit, Architecture, Operating Systems and application softwares. Biological Databases : Classification of Databases - Raw and Processed Databases, Primary (NCBI), Secondary (PIR) and Tertiary or Composite (KEGG) Databases, Structure and Sequence Databases. Specialized Databases - Protein Pattern Databases. Protein Structure and Classification Databases (CATH/SCOP), Genome Information Resources. DNA Sequence Databases Specialized Genomic Resources. Protein Databases based on Composition, Motifs and Patterns. Protein Structure Visualization Software.	10

February	UNIT II BLAST and sequence alignment: BLAST and its Types, Retrieving Sequence using BLAST. Pairwise Alignment : Identity and Similarity; Global and Local Alignment; Pairwise Database Searching. Multiple Sequence Alignment: Goal of Multiple Sequence Alignment; Computational Complexity; Manual Methods; Simultaneous Methods; Progressive Methods; Databases of Multiple Alignment; Secondary Database Searching; Analysis Packages; MSA.	UNIT II BLAST and sequence alignment BLAST and its Types, Retrieving Sequence using BLAST. Pairwise Alignment : Identity and Similarity; Global and Local Alignment; Pairwise Database Searching. Multiple Sequence Alignment Goal of Multiple Sequence Alignment; Computational Complexity; Manual Methods; Simultaneous Methods; Progressive Methods; Databases of Multiple Alignment; Secondary Database Searching; Analysis Packages; MSA.	19
February-March	UNIT III Biostatistics Theory and Problems based on- Coefficient of Correlation and Regression Analysis; Steps in Testing Statistical Hypothesis; Parametric Tests:- z Test – Single Mean and Two Means, t-Test – Single Mean, Paired and Unpaired; Chi Square Test.	UNIT III Biostatistics Theory and Problems based on- Coefficient of Correlation and Regression Analysis; Steps in Testing Statistical Hypothesis; Parametric Tests:- z Test – Single Mean and Two Means, t-Test – Single Mean, Paired and Unpaired; Chi Square Test.	10
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	**Biotechnology**
Name of teacher	**Mrs. Shweta Khapde, Dr. Priyanka Yartali**

Class: SY B.Sc. Semester-IV Subject: Research Methodology
Subject Code: USBT407

No. of lectures Allotted per week: 03 No. of lectures Covered per Semester:36
No.of lectures Allotted per Semester: 45

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
January	**UNIT I Introduction to Research Methodology and Research Problem** Meaning of Research; Objectives of Research; Motivation in Research; Types of Research; Research Approaches; Significance of Research; Research Methods versus Methodology; Research Process; Criteria of Good Research; Problems Encountered by Researchers in India;	**UNIT I Introduction to Research Methodology and Research Problem** Meaning of Research; Objectives of Research; Motivation in Research; Types of Research; Research Approaches; Significance of Research; Research Methods versus Methodology; Research Process; Criteria of Good Research; Problems Encountered by Researchers in India;	08
February	What is a Research Problem? Selecting the Problem; Necessity of Defining the Problem; Techniques Involved in Defining a Problem	What is a Research Problem? Selecting the Problem; Necessity of Defining the Problem; Techniques Involved in Defining a Problem	03

February	**UNIT II Research Design, Data Collection and processing** Meaning of Research Design; Need for Research Design; Features of a Good Design; Important Concepts Relating to Research Design; Different Research Designs; Basic Principles of Experimental Designs; Developing a Research Plan Collection of Primary Data; Observation Method; Interview Method; Collection of Data through Questionnaires; Collection of Data through Schedules; Other Methods of Data Collection, Collection of Secondary Data, Selection of Appropriate Method for Data Collection, Case Study Method	**UNIT II Research Design, Data Collection and processing** Meaning of Research Design; Need for Research Design, Features of a Good Design; Important Concepts Relating to Research Design; Different Research Designs; Basic Principles of Experimental Designs; Developing a Research Plan Collection of Primary Data; Observation Method; Interview Method; Collection of Data through Questionnaires; Collection of Data through Schedules; Other Methods of Data Collection, Collection of Secondary Data, Selection of Appropriate Method for Data Collection, Case Study Method	13

February	UNIT III Interpretation and Report Writing Meaning of Interpretation, Why Interpretation?, Technique of Interpretation, Precautions in Interpretation.	UNIT III Interpretation and Report Writing Meaning of Interpretation, Why Interpretation?, Technique of Interpretation, Precautions in Interpretation.	06
March	Significance of Report Writing, Different Steps in Writing Report, Layout of the Research Report, Types of Reports, Oral Presentation, Mechanics of Writing a Research Report, Precautions for Writing Research Reports.	Significance of Report Writing, Different Steps in Writing Report, Layout of the Research Report, Types of Reports, Oral Presentation, Mechanics of Writing a Research Report, Precautions for Writing Research Reports.	07
Signature of Coordinator:		Signature of Subject Teacher:	

Signature of Coordinator:	Signature of Subject Teacher:

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	**Biotechnology**
Name of teacher	**Ms. Dayananda Ghadi, Dr. Priyanka Vartak**
Class: TY B.Sc. Semester-V **Subject Code: USBT501**	**Subject: Cell Biology**
No. of lectures Allotted per week:04	**No.of lectures Covered per Semester:45** **No.of lectures Covered per Semester:60**

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	Unit - I: Cell cycle Introduction Prokaryotic and Eukaryotic (03) The Early Embryonic Cell Cycle and the Role of MPF (03) Yeasts and the Molecular Genetics of Cell-Cycle. (04) Apoptosis overview (02) Cell-Division Controls in Multicellular Animals.(03)	Unit - I: Cell cycle Introduction Prokaryotic and Eukaryotic. (03) The Early Embryonic Cell Cycle and the Role of MPF (03) Yeasts and the Molecular Genetics of Cell-Cycle. (04) Apoptosis overview (02) Cell-Division Controls in Multicellular Animals.(03)	19

July	**Unit - 2:** Cell signalling and signal transduction: Introduction General Principles of Cell Signaling (03) Signaling via G-Protein-linked Cell-Surface Receptors - (03) Signaling via Enzyme-linked Cell-Surface Receptors (02) Signaling: Lessons from Computer-based "Neural Networks"- (02) Target-Cell Adaptation, The Logic of Intracellular Signaling: Lessons from Computer-based "Neural Networks"- (04)	**Unit - 2:** Cell signalling and signal transduction: Introduction General Principles of Cell Signaling (03) Signaling via G-Protein-linked Cell-Surface Receptors - (03) Signaling via Enzyme-linked Cell-Surface Receptors (02) Signaling: Lessons from Computer-based "Neural Networks"- (02) Target-Cell Adaptation, The Logic of Intracellular Signaling: Lessons from Computer-based "Neural Networks"- (04)	10
July	**Unit - 4:** Cancer: Introduction, Cancer as a Microevolutionary Process - (04)	**Unit - 4:** Cancer: Introduction, Cancer as a Microevolutionary Process - (04)	10
	The Molecular Genetics of Cancer (05) Cancer and Cancer diagnosis	**Unit 4:** The Molecular Genetics of Cancer (05) Cancer and Cancer diagnosis (01)	

August	The Molecular Genetics of Cancer (05) Cancer and Cancer diagnosis (01) Virus Cancer diagnosis and chemotherapy (02) **Unit -3 Overview of how the modern era of developmental biology emerged through multidisciplinary approaches - (03)** Stages of development- zygote, blastula, gastrula, neurula cell fate & commitment – potency- (04) Concept of embryonic stem cells, differential gene expression, terminal differentiation (02), Images of three germ layers, fate map - (01) Mechanisms of differentiation- cytoplasmic determinants, embryonic induction, (01) Concept of morphogen, mosaic and regulative development Pattern formation– axis specification, positional identification (regional specification), Morphogenetic movements (02) Model organisms in Developmental biology - (01)	The Molecular Genetics of Cancer (05) Virus Cancer diagnosis and chemotherapy (02) **Unit -3 Overview of how the modern era of developmental biology emerged through multidisciplinary approaches - (03)** Stages of development- zygote, blastula, gastrula, neurula cell fate & commitment – potency- (04) Concept of embryonic stem cells, differential gene expression, terminal differentiation (02), Images of three germ layers, fate map - (01) Mechanisms of differentiation- cytoplasmic determinants, embryonic induction, (01) Concept of morphogen, mosaic and regulative development Pattern formation– axis specification, positional identification (regional specification), Morphogenetic movements (02) Model organisms in Developmental biology - (01)	10
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	**Biotechnology**
Name of teacher	**Shweta Khapde, Dayanada Ghosh, Dhwani Kapadia**

Class: TY B.Sc. Semester-V **Subject: Medical Microbiology**
Subject Code: USBT502

No.of lectures Allotted per week:04 No.of lectures Covered per Semester:54
No.of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
July	Unit - 2 Discovery and Design of antimicrobial agents -(01) Classification of Antibacterial agents, Selective toxicity, MIC, MLC - (02) Inhibition of cell wall synthesis (Mode of action for): Beta lactam antibiotics: Penicillin, Cephalosporins; Glycopeptides: Vancomycin; Polypeptides: Bacitracin -(02) Inhibition of protein synthesis Aminoglycosides, Tetracyclines Chloramphenicol, MacrolidesErythromycin- (02)	Unit - 2 Discovery and Design of antimicrobial agents -(01) Classification of Antibacterial agents, Selective toxicity, MIC, MLC - (01) Inhibition of cell wall synthesis (Mode of action for): Beta lactam antibiotics: Penicillin, Cephalosporins; Glycopeptides: Vancomycin; Polypeptides: Bacitracin -(02) Inhibition of protein synthesis Aminoglycosides, Tetracyclines Chloramphenicol, Macrolides Erythromycin- (02)	10

	Injury to Plasma membrane: Polymyxin – (01) Inhibition of Nucleic acid synthesis:Quinolones, Rifampicin (01) Metabolitic - (01) Antimetabolites: Sulphonamides, Trimethoprim - (01) Drug Resistance: Mechanism, Origin and transmission of drug resistance - (01) Use and misuse of antimicrobial agents - (01) Antifungal drugs, Antiviral drugs (02)	Injury to Plasma membrane: Polymyxin – (01) Inhibition of Nucleic acid synthesis:Quinolones, Rifampicin (01) Metabolitic - (01) Antimetabolites: Sulphonamides, Trimethoprim - (01) Drug Resistance: Mechanism, Origin and transmission of drug resistance - (02) Use and misuse of antimicrobial agents - (01) Antifungal drugs, Antiviral drugs (02)	
August	Unit - I Introduction to viruses-Position in biological spectrum; Virus properties -(02) General structure of viruses Baltimore Classification and Taxonomy(ICTV) -(02) Cultivation of viruses -(02) Reproduction of ds DNA phages Hepatitis ssRNA (influenza) (01) Animal viruses and plant (TMV)virus - (02) Virus purification and assays - (01) Cytocidal infections and cell damage,Viroids and Prions (01)	Unit - I Introduction to viruses-Position in biological spectrum; Virus properties -(02) General structure of viruses Baltimore Classification and Taxonomy(ICTV) -(02) Cultivation of viruses - (02) Reproduction of ds DNA phages Hepatitis ssRNA (influenza) (01) Animal viruses and plant (TMV)virus - (02) Virus purification and assays - (01) Cytocidal infections and cell damage ,Viroids and Prions (01)	13
June	Unit 3: Principle, instrumentation, working and applications of: Fluorescence Spectroscopy -(03) Luminometry – (03) Infrared Spectroscopy - (02) Light scattering spectroscopy (03) Infrared Spectroscopy introduction (01) Atomic absorption Spectroscopy - (03)	Unit 3: Principle, instrumentation, working and application of: Fluorescence Spectroscopy -(02) Luminometry - (02) Infrared Spectroscopy - (02) Light scattering spectroscopy (02) Infrared Spectroscopy introduction (01) Atomic absorption Spectroscopy - (02)	13

July	Unit 4: Principle, working and applications of: Affinity chromatography Ion-exchange chromatography Molecular (size) exclusion chromatography HPLC – Method development and validation	Unit 4: Principle, working and applications of: Affinity chromatography – (02) Ion-exchange chromatography – (02) Molecular (size) exclusion chromatography – (01) HPLC – Method development and validation- (03)	13
	Isotopes in Biology: Nature of radioactivity Introduction to Scintillation counter,Detection Techniques using GM counter, Scintillation counter, autoradiography Applications of Tracer techniques in Biology -	Isotopes in Biology: Nature of radioactivity – (01) Introduction to Scintillation counter (01),Detection Techniques using GM counter, Scintillation counter, autoradiography - (01) Applications of Tracer techniques in Biology – (01)	
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Biotechnology
Name of teacher	Dr. Priyanka Varak
Class: TY B.Sc. Semester-V Biology	Subject: Genetics and Molecular Subject Code: USBT503

No.of lectures Allotted per week: 04 No. of lectures Covered per Semester: 49
No. of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	Unit 1- Genetic engineering of plants: Methodology (02)	Unit 1- Genetic engineering of plants: Methodology (02)	14

	Plant transformation with the Ti plasmid of A tumefaciens, Ti plasmid derived vector system (02)	Plant transformation with the Ti plasmid of A tumefaciens, Ti plasmid derived vector system (02)	
July	Transgenic plants: Physical methods of transferring genes in plants: electroporation (02) Microprojectile bombardment, liposome mediated (02), Vectors for plant cells (04) Protoplast fusion (01), Improvement of seed quality protein(02) Unit 2 : Transgenic micro-methodology-retroviral method (01), DNA microinjection, RB method (02), genetic manipulation with cre-lox/P (02)	Transgenic plants: Physical methods of transferring genes in plants: electroporation (02) Microprojectile bombardment, liposome mediated (02), Vectors for plant cells (04) Protoplast fusion (01), Improvement of seed quality protein(02) Unit 2 : Transgenic micro-methodology-retroviral method (01), DNA microinjection, RB method (02), genetic manipulation with cre-lox/P (02)	14

July August	Vectors for animal cells (02), Transgenic animals recombination system (02), Cloning livestock by nuclear transfer (02) Green Fluorescent Protein (01), Transgenic fish (01) Unit 3 - Cloning vectors-Plasmids (pUC series), Cosmids, phagemids M13, shuttle vectors, YAC vectors, expression vectors pET (04), Gene cloning-Isolation and purification of DNA, Isolation of gene of interest: Restriction digestion, electrophoresis, blotting, cutting, and joining DNA, methods of gene transfer in prokaryotes and eukaryotes (03) Expression of cloned DNA molecules (01)Recombinant selection and screening methods: genetic	Vectors for animal cells (02), Transgenic animals recombination system (02), Cloning livestock by nuclear transfer (02) Green Fluorescent Protein (01), Transgenic fish (01) Unit 3 - Cloning vectors-Plasmids (pUC series), Cosmids, phagemids M13, shuttle vectors, YAC vectors, expression vectors pET (04), Gene cloning-Isolation and purification of DNA, Isolation of gene of interest: Restriction digestion, electrophoresis, blotting, cutting, and joining DNA, methods of gene transfer in prokaryotes and eukaryotes (03) Expression of cloned DNA molecules (01), Recombinant selection and screening methods: genetic	04 07

	immunochemical, Southern and Western analysis, nucleic acid hybridization, HART, IHRT (02) Maximization of expression of cloned DNA molecules (01), Cloning strategies-genomic DNA libraries, cDNA libraries (02), chromosome walking (01) Chromosome jumping (01)	immunochemical, Southern and Western analysis, nucleic acid hybridization, HART, IHRT (02) Maximization of expression of cloned DNA molecules (01), Cloning strategies-genomic DNA libraries, cDNA libraries (02), chromosome walking (01) Chromosome jumping (01)	
August	Unit 4 - Maxam Gilbert's method, Sanger's dideoxy method (02) , Automated DNA sequencing, Pyrosequencing (03), Human genome mapping and its implications in health and disease (02),	Unit 4 - Maxam Gilbert's method, Sanger's dideoxy method (02) , Automated DNA sequencing, Pyrosequencing (03), Human genome mapping and its implications in health and disease (02),	04
September	RNAi, ZNF(Zinc finger nucleases) (02) TALENS(Transcription Activator Like Effector Nucleases) (02) CRISPER/Cas system(Clustered Regularly Interspersed Repeats) (02)	RNAi, ZNF(Zinc finger nucleases) (03) TALENS(Transcription Activator Like Effector Nucleases) (01) CRISPER/Cas system(Clustered Regularly Interspersed Repeats) (01)	06
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Biotechnology
Name of teacher	Shweta Khopde, Dayananda Ghadi

Class: TY B.Sc. Semester-V Subject: Marine Biotechnology
Subject Code: USBT504

No.of lectures Allotted per week: 04 Semester:53	No. of lectures Covered per No. of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	**Unit 2** - Drugs from Marine organisms: Pharmaceutical compounds from marine flora and fauna - marine toxins, antiviral and antimicrobial agents (04), Approved Marine Drugs as Pharmaceuticals (02) Marine Microbial Enzymes (01) Marine Extremozymes and Their Significance (04) Marine Natural products and its Challenges (02) Current Use of Marine Microbial Enzymes (02)	**Unit 2** - Drugs from Marine organisms: Pharmaceutical compounds from marine flora and fauna - marine toxins, antiviral and antimicrobial agents (04), Approved Marine Drugs as Pharmaceuticals (4) Marine Microbial Enzymes (01) Marine Extremozymes and Their Significance (04) Marine Natural products and its Challenges (02) Current Use of Marine Microbial Enzymes (02)	15
July	**Unit 3** - Marine Functional Foods: Marine Sources as Healthy Foods or Reservoirs of Functional Ingredients (02) Marine-Derived Ingredients with Biological Properties (03) Functional Foods Incorporating Marine-Derived Ingredients (02) Polyunsaturated Fatty Acids (01), Carotenoids, Soluble Calcium, Fish Collagen and Gelatin (03) Marine Nutraceuticals /Marine Bioactives as Potential Nutraceuticals, Functional Carbohydrates (02) Marine Probiotics (01) Marine Nutraceuticals /Marine Bioactives as Potential Nutraceuticals, Functional Carbohydrates (02)	**Unit 3** - Marine Functional Foods: Marine Sources as Healthy Foods or Reservoirs of Functional Ingredients (02) Marine-Derived Ingredients with Biological Properties (03) Functional Foods Incorporating Marine-Derived Ingredients (02) Polyunsaturated Fatty Acids (1), Carotenoids, Soluble Calcium, Fish Collagen and Gelatin (04) Marine Probiotics (01) Marine Nutraceuticals /Marine Bioactives as Potential Nutraceuticals, Functional Carbohydrates (02)	11

August	**Unit 1** -Introduction to Marine Biotechnology (01) The marine ecosystem and its functioning: intertidal, estuarine, salt marsh, mangrove, coral reef, coastal & deep sea ecosystem: Hydrothermal vents (04) Bioprospecting, Marine Microbial Habitats and Their Biotechnologically relevant Microorganisms (01) Methods for Microbial Bioprospecting in Marine Environments(02), Biotechnological Potential of Marine Microbes (03) Bioactive compounds from other Marine Organisms: Fungi, Microalgae(01) Seaweeds, Actinomycetes, sponges (01)	**Unit 1** -Introduction to Marine Biotechnology (01) The marine ecosystem and its functioning: intertidal, estuarine, salt marsh, mangrove, coral reef, coastal & deep sea ecosystem: Hydrothermal vents (04) Bioprospecting, Marine Microbial Habitats and Their Biotechnologically relevant Microorganisms (01) Methods for Microbial Bioprospecting in Marine Environments(02), Biotechnological Potential of Marine Microbes (03) Bioactive compounds from other Marine Organisms: Fungi, Microalgae(01) Seaweeds, Actinomycetes, sponges (01) (13)	12
August	**Unit 4** - Marine Bioresources, Marine Secondary Metabolites, Marine Proteins, Marine Lipids (03), Cosmetics from Marine Sources: Scenario of Marine Sources in the Cosmetic Industry(03) Cosmetics: Definition and Regulations (03) Major Functions of Some Marine Components	**Unit 4** - Marine Bioresources, Marine Secondary Metabolites, Marine Proteins, Marine Lipids (03), Cosmetics from Marine Sources: Scenario of Marine Sources in the Cosmetic Industry (03), Cosmetics: Definition and Regulations (03) Major Functions of Some Marine Components in Cosmetics and Cosmeceuticals (02),	13

	in Cosmetics and Cosmeceuticals (02) Target Organs and Cosmetics Delivery Systems (02) Unit 4: Components of Cosmetics (02) Treatments Based on Marine Resources , Products Based on Marine Resources (02)	Target Organs and Cosmetics Delivery Systems (02) Unit 4 - Components of Cosmetics (02) Treatments Based on Marine Resources , Products Based on Marine Resources (02)	
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Biotechnology
Name of teacher	Shweta Khopde, Priya Vishwakarma,
Class: TY B.Sc. Semester-V Biosafety	Subject: Applied Component- Subject Code: USBTAC
No.of lectures Allotted per week: 04 Semester: 37	No. of lectures Covered per No. of lectures Allotted per Semester:48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	Unit I - Introduction (01), Biological Risk Assessment, Hazardous Characteristics of an Agent (02), Genetically modified agent hazards (01), Cell cultures (01), Hazardous	Unit I - Introduction (01), Biological Risk Assessment, Hazardous Characteristics of an Agent (02), Genetically modified agent hazards (01), Cell cultures (01), Hazardous	10

	Characteristics of Laboratory Procedures (01) Potential Hazards Associated with Work Practices (02), Safety Equipment and Facility Safeguards (02)	Characteristics of Laboratory Procedures (01) Potential Hazards Associated with Work Practices (02), Safety Equipment and Facility Safeguards (02)	
July	Pathogenic risk and management (02) **Unit 2**: Concept of GLP (01), Practicing GLP (01), Guidelines to GLP (02), Documentation of Laboratory work (01), Preparation of SOPs (02) Validation of methods, Documentation of results, Audits & Audit reports (03) Calibration records (01)	Pathogenic risk and management (02) **Unit 2**: Concept of GLP (01), Practicing GLP (01), Guidelines to GLP (02), Documentation of Laboratory work (01), Preparation of SOPs (02) Validation of methods, Documentation of results, Audits & Audit reports (03) Calibration records (01)	16
September	**Unit 3**- Microbial Contamination in food and pharma product (03) Some common microbial contaminants(02) Some common microbial contaminants(01) , Microbiological Assays for pharmaceutical products(04), Regulatory Microbiological testing in pharmaceuticals (03)	**Unit 3**- Microbial Contamination in food and pharma product (04) Some common microbial contaminants(01) Some common microbial contaminants(01) , Microbiological Assays for pharmaceutical products(1), Regulatory Microbiological testing in pharmaceuticals (1)	03
September	**Unit 4** - Concepts on biosafety in Biotechnology (02), Regulating food and food ingredients (01), Genetically engineered crops (01) Regulating rDNA technology (02), Genetically engineered crops, livestock Bioethics (02),	**Unit 4** - Concepts on biosafety in Biotechnology (02), Regulating food and food ingredients (01), Genetically engineered crops (01) Regulating rDNA technology (02), Genetically engineered crops, livestock Bioethics (02), Contemporary issues in Bioethics (02)	06
	Contemporary issues in Bioethics (02)		

Signature of Coordinator:	Signature of Subject Teacher:

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Biotechnology
Name of teacher	Ms. Dnyanada Ghadi, Dr. Priyanka Vartak
Class: TY B.Sc. Semester-V Subject Code: USBT501	Subject: Cell Biology
No. of lectures Allotted per week:04	No.of lectures Covered per Semester:45 No.of lectures Covered per Semester:60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	Unit – I: Cell cycle Introduction Prokaryotic and Eukaryotic. (03) The Early Embryonic Cell Cycle and the Role of MPF (03) Yeasts and the Molecular Genetics of Cell-Cycle. (04) Apoptosis overview (02) Cell-Division Controls in Multicellular Animals (03)	Unit – I: Cell cycle Introduction Prokaryotic and Eukaryotic. (03) The Early Embryonic Cell Cycle and the Role of MPF (03) Yeasts and the Molecular Genetics of Cell-Cycle. (04) Apoptosis overview (02) Cell-Division Controls in Multicellular Animals.(03)	18

July	**Unit - 2:** Cell signalling and signal transduction: Introduction, General Principles of Cell Signaling (03) Signaling via G-Protein-linked Cell-Surface Receptors - (03) Signaling via Enzyme-linked Cell-Surface Receptors (02) Signaling: Lessons from Computer-based "Neural Networks"- (02) Target-Cell Adaptation, The Logic of Intracellular Signaling: Lessons from Computer-based "Neural Networks"- (04)	**Unit - 2:** Cell signalling and signal transduction: Introduction General Principles of Cell Signaling (03) Signaling via G-Protein-linked Cell-Surface Receptors - (03) Signaling via Enzyme-linked Cell-Surface Receptors (02) Signaling: Lessons from Computer-based "Neural Networks"- (02) Target-Cell Adaptation, The Logic of Intracellular Signaling: Lessons from Computer-based "Neural Networks"- (04)	10
July	**Unit - 4:** Cancer: Introduction, Cancer as a Microevolutionary Process - (04)	**Unit - 4:** Cancer: Introduction, Cancer as a Microevolutionary Process - (04)	08
	The Molecular Genetics of Cancer (03) Cancer and Cancer diagnosis	**Unit 4:** The Molecular Genetics of Cancer (03) Cancer and Cancer diagnosis (01)	

August	The Molecular Genetics of Cancer (03) Cancer and Cancer diagnosis (01) Virus Cancer diagnosis and chemotherapy (02) Unit -3 Overview of how the modern era of developmental biology emerged through multidisciplinary approaches - (03) Stages of development- zygote, blastula, gastrula, neurula cell fate & commitment – potency- (04) Concept of embryonic stem cells, differential gene expression, terminal differentiation (02), Images of three germ layers, fate map - (01) Mechanisms of differentiation- cytoplasmic determinants, embryonic induction, (01) Concept of morphogen, mosaic and regulative development Pattern formation-- axis specification, positional identification (regional specification), Morphogenetic movements (02) Model organism in Developmental biology - (01)	The Molecular Genetics of Cancer (05) Virus Cancer diagnosis and chemotherapy (02) Unit -3 Overview of how the modern era of developmental biology emerged through multidisciplinary approaches - (03) Stages of development- zygote, Blastula, gastrula, neurula cell fate & commitment – potency- (04) Concept of embryonic stem cells, differential gene expression, terminal differentiation (02), Images of three germ layers, fate map - (01) Mechanisms of differentiation- cytoplasmic determinants, embryonic induction, (01) Concept of morphogen, mosaic and regulative development Pattern formation-- axis specification, positional identification (regional specification), Morphogenetic movements (02) Model organism in Developmental biology - (01)	10
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHRI L.U.J. & SMT. M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	**Biotechnology**
Name of teacher	**Shweta Khapde, Deepanjali Ghadi, Dhwani Kapadia**

Class: TY B.Sc. Semester-V **Subject: Medical Microbiology**
Subject Code: USBT502

No.of lectures Allotted per week:04 No.of lectures Covered per Semester:51
No.of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
July	**Unit - 2** Discovery and Design of antimicrobial agents -(01) Classification of Antibacterial agents, Selective toxicity, MIC, MLC - (02) Inhibition of cell wall synthesis (Mode of action for): Beta lactam antibiotics: Penicillin, Cephalosporins; Glycopeptides: Vancomycin; Polypeptides: Bacitracin -(02) Inhibition of protein synthesis Aminoglycosides, Tetracyclines Chloramphenicol, MacrolidesErythromycin- (02)	**Unit - 2** Discovery and Design of antimicrobial agents -(01) Classification of Antibacterial agents, Selective toxicity, MIC, MLC - (01) Inhibition of cell wall synthesis (Mode of action for): Beta lactam antibiotics: Penicillin, Cephalosporins; Glycopeptides: Vancomycin; Polypeptides: Bacitracin -(02) Inhibition of protein synthesis Aminoglycosides, Tetracyclines Chloramphenicol, Macrolides Erythromycin -(02)	**10**

	Injury to Plasma membrane: Polymyxin - (01) Inhibition of Nucleic acid synthesis:Quinolones, Rifampicin (01) Metronidazole - (01) Antimetabolites: Sulphonamides, Trimethoprim - (01) Drug Resistance: Mechanism, Origin and transmission of drug resistance - (01) Use and misuse of antimicrobial agents - (01) Antifungal drugs, Antiviral drugs (02)	Injury to Plasma membrane: Polymyxin - (01) Inhibition of Nucleic acid synthesis:Quinolones, Rifampicin (01) Metronidazole - (01) Antimetabolites: Sulphonamides, Trimethoprim - (01) Drug Resistance: Mechanism, Origin and transmission of drug resistance - (02) Use and misuse of antimicrobial agents - (01) Antifungal drugs, Antiviral drugs (02)	
August	Unit - I Introduction to viruses-Position in biological spectrum; Virus properties -(02) General structure of viruses Baltimore Classification and Taxonomy(ICTV) -(02) Cultivation of viruses - (02) Reproduction of ds DNA phages Hepatitis /ssRNA (influenza) (01) Animal viruses and plant (TMV)virus - (02) Virus purification and assays - (01) Cytocidal infections and cell damage,Viroids and Prions (01)	Unit - I Introduction to viruses-Position in biological spectrum; Virus properties -(02) General structure of viruses Baltimore Classification and Taxonomy(ICTV) -(02) Cultivation of viruses - (02) Reproduction of ds DNA phages Hepatitis /ssRNA (influenza) (01) Animal viruses and plant (TMV)virus - (02) Virus purification and assays - (01) Cytocidal infections and cell damage ,Viroids and Prions (01)	13
June	Unit 3: Principle, instrumentation, working and applications of: Fluorescence Spectroscopy -(01) Luminometry - (03) Infrared Spectroscopy - (02) Light scattering spectroscopy (02) Infrared Spectroscopy introduction (01) Atomic absorption Spectroscopy - (03)	Unit 3: Principle, instrumentation, working and applications of: Fluorescence Spectroscopy -(02) Luminometry - (02) Infrared Spectroscopy - (02) Light scattering spectroscopy (02) Infrared Spectroscopy introduction (01) Atomic absorption Spectroscopy - (02)	13

July	Unit 4: Principle, working and applications of: Affinity chromatography Ion-exchange chromatography Molecular (size) exclusion chromatography HPLC - Method development and validation	Unit 4: Principle, working and applications of: Affinity chromatography - (02) Ion-exchange chromatography - (02) Molecular (size) exclusion chromatography - (01) HPLC - Method development and validation- (03)	13
	Isotopes in Biology: Nature of radioactivity Introduction to Scintillation counter,Detection Techniques using GM counter, Scintillation counter, autoradiography Applications of Tracer techniques in Biology -	Isotopes in Biology: Nature of radioactivity - (01) Introduction to Scintillation counter (01),Detection Techniques using GM counter, Scintillation counter, autoradiography - (01) Applications of Tracer techniques in Biology - (01)	
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SHI M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Biotechnology
Name of teacher	Dr. Priyanka Vartak
Class: TY B.Sc. Semester-V Biology	Subject: Genomics and Molecular Subject Code: USBT503

No.of lectures Allotted per week: 04 No. of lectures Covered per Semester: 49
No. of lectures Allotted per Semester: 48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	Unit 1- Genetic engineering of plants; Methodology (02)	Unit 1- Genetic engineering of plants; Methodology (02)	14

	Plant transformation with the Ti plasmid of A tumefaciens, Ti plasmid derived vector system (02)	Plant transformation with the Ti plasmid of A tumefaciens, Ti plasmid derived vector system (02)	
July	Transgenic plants: Physical methods of transferring genes to plants: electroporation (02) Microprojectile bombardment, Ipomoea mediated (02), Vectors for plant cells (04) Protoplast fusion (01), Improvement of seed quality protein(02) Unit 2 - Transgenic mice-methodology-retroviral method (03), DNA microinjection, ES method (02), genetic manipulation with cre-loxP (02),	Transgenic plants: Physical methods of transferring genes to plants: electroporation (02) Microprojectile bombardment, Ipomoea mediated (02), Vectors for plant cells (04) Protoplast fusion (01), Improvement of seed quality protein(02) Unit 2 - Transgenic mice-methodology-retroviral method (03), DNA microinjection, ES method (02), genetic manipulation with cre-loxP (02),	14

July August	Vectors for animal cells (02), Transgenic animals recombination system (02), Cloning livestock by nuclear transfer (02) Green Fluorescent Protein (01), Transgenic fish (01) **Unit 3 - Cloning vectors-Plasmids** (pBR322 series), Cosmids, phagemids M13, shuttle vectors, YAC vectors, expression vectors pET (04), Gene cloning-Isolation and purification of DNA, Isolation of gene of interest: Restriction digestion, electrophoresis, blotting, cutting, and joining DNA, methods of gene transfer in prokaryotes and eukaryotes (03) Expression of cloned DNA molecules (01)Recombinant selection and screening methods: genetic	Vectors for animal cells (02), Transgenic animals recombination system (02), Cloning livestock by nuclear transfer (02) Green Fluorescent Protein (01), Transgenic fish (01) **Unit 3 - Cloning vectors-Plasmids** (pBR322 series), Cosmids, phagemids M13, shuttle vectors, YAC vectors, expression vectors pET (04), Gene cloning-Isolation and purification of DNA, Isolation of gene of interest: Restriction digestion, electrophoresis, blotting, cutting, and joining DNA, methods of gene transfer in prokaryotes and eukaryotes (03) Expression of cloned DNA molecules (01), Recombinant selection and screening methods: genetic	84 87

	immunochemical, Southern and Western analysis, nucleic acid hybridization, HART, HRT (02) Mutagenization of expression of cloned DNA molecules (01), Cloning strategies-genomic DNA libraries, cDNA libraries (02), chromosome walking (01) Chromosome jumping (01)	immunochemical, Southern and Western analysis, nucleic acid hybridization, HART, HRT (02) Mutagenization of expression of cloned DNA molecules (01), Cloning strategies-genomic DNA libraries, cDNA libraries (02), chromosome walking (01) Chromosome jumping (01)	
August-	Unit 4 - Maxam Gilbert's method, Sanger's dideoxy method (03) , Automated DNA sequencing, Pyrosequencing (03), Human genome mapping and its implications in health and disease (03).	Unit 4 - Maxam Gilbert's method, Sanger's dideoxy method (02) , Automated DNA sequencing, Pyrosequencing (02), Human genome mapping and its implications in health and disease (02).	04
September	RNAi, ZNF(Zinc finger nucleases) (02) TALENS(Transcriptase Activator Like Effector Nucleases) (02) CRISPER/Cas system(Clustered Regularly Interspaced Repeats) (02)	RNAi, ZNF(Zinc finger nucleases) (01) TALENS(Transcription Activator Like Effector Nucleases) (01) CRISPER/Cas system(Clustered Regularly Interspaced Repeats) (01)	06
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Biotechnology
Name of teacher	Shweta Khopde, Dnyananda Ghadi

Class: TY B.Sc. Semester-V Subject: Marine Biotechnology
Subject Code: USBT504

No.of lectures Allotted per week: 04 Semester:53	No. of lectures Covered per No. of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	**Unit 2** - Drugs from Marine organisms: Pharmaceutical compounds from marine flora and fauna - marine toxins, antiviral and antimicrobial agents (04), Approved Marine Drugs as Pharmaceuticals (02) Marine Microbial Enzymes (01) Marine Extremozymes and Their Significance (04) Marine Natural products and its Challenges (02) Current Use of Marine Microbial Enzymes (02)	**Unit 2** - Drugs from Marine organisms: Pharmaceutical compounds from marine flora and fauna - marine toxins, antiviral and antimicrobial agents (04), Approved Marine Drugs as Pharmaceuticals (4) Marine Microbial Enzymes (01) Marine Extremozymes and Their Significance (04) Marine Natural products and its Challenges (02) Current Use of Marine Microbial Enzymes (02)	15
July	**Unit 3** - Marine Functional Foods: Marine Sources as Healthy Foods or Reservoirs of Functional Ingredients (03) Marine-Derived Ingredients with Biological Properties (03) Functional Foods Incorporating Marine-Derived Ingredients (02) Polyunsaturated Fatty Acids (01), Carotenoids, Soluble Calcium, Fish Collagen and Gelatin (03) Marine Nutraceuticals :Marine Bioactives as Potential Nutraceuticals, Functional Carbohydrates (02) Marine Probiotics (01) Marine Nutraceuticals :Marine Bioactives as Potential Nutraceuticals, Functional Carbohydrates (02)	**Unit 3** - Marine Functional Foods: Marine Sources as Healthy Foods or Reservoirs of Functional Ingredients (03) Marine-Derived Ingredients with Biological Properties (03) Functional Foods Incorporating Marine-Derived Ingredients (02) Polyunsaturated Fatty Acids (1), Carotenoids, Soluble Calcium, Fish Collagen and Gelatin (04) Marine Probiotics (01) Marine Nutraceuticals :Marine Bioactives as Potential Nutraceuticals, Functional Carbohydrates (02)	11

August	**Unit 1** -Introduction to Marine Biotechnology (01) The marine ecosystem and its functioning: intertidal, estuarine, salt marsh, mangrove, coral reef, coastal & deep sea ecosystem Hydrothermal vents (04) Biopropspecting, Marine Microbial Habitats and Their Biotechnologically relevant Microorganisms (01) Methods for Microbial Biopropspecting in Marine Environments(02), Biotechnological Potential of Marine Microbes (01) Bioactive compounds from other Marine Organisms: fungi, Microalgae(01) Seaweeds, Actinomycetes, sponges (01)	**Unit 1** -Introduction to Marine Biotechnology (01) The marine ecosystem and its functioning: intertidal, estuarine, salt marsh, mangrove, coral reef, coastal & deep sea ecosystem Hydrothermal vents (04) Biopropspecting, Marine Microbial Habitats and Their Biotechnologically relevant Microorganisms (01) Methods for Microbial Biopropspecting in Marine Environments(02), Biotechnological Potential of Marine Microbes (01) Bioactive compounds from other Marine Organisms: fungi, Microalgae(01) Seaweeds, Actinomycetes, sponges (01) (13)	12
August	**Unit 4** - Marine Bioresources, Marine Secondary Metabolites, Marine Proteins, Marine Lipids (01), Cosmetics from Marine Sources: Scenario of Marine Sources in the Cosmetic Industry(03) Cosmetics: Definition and Regulations (03) Major Functions of Some Marine Components	**Unit 4** - Marine Bioresources, Marine Secondary Metabolites, Marine Proteins, Marine Lipids (03), Cosmetics from Marine Sources: Scenario of Marine Sources in the Cosmetic Industry (03), Cosmetics: Definition and Regulations (03) Major Functions of Some Marine Components in Cosmetics and Cosmaceuticals (03),	13

	in Cosmetics and Cosmeceuticals (02) Target Organs and Cosmetics Delivery Systems (02) Unit 4: Components of Cosmetics (02) Treatments Based on Marine Resources., Products Based on Marine Resources (02)	Target Organs and Cosmetics Delivery Systems (02) Unit 4 - Components of Cosmetics (02) Treatments Based on Marine Resources., Products Based on Marine Resources (02)	
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 099

Teaching Plan and Implementation Record (2023-24)

Department	Biotechnology
Name of teacher	Shweta Khopde, Priya Vishwakarma,
Class: TY B.Sc. Semester-V Biotechnology	Subject: Applied Component- Subject Code: USBTAC
No.of lectures Allotted per week: 04 Semester: 37	No. of lectures Covered per No. of lectures Allotted per Semester: 48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	Unit 1 - Introduction (01), Biological Risk Assessment, Hazardous Characteristics of an Agent (02), Genetically modified agent hazards (01), Cell cultures (01), Hazardous	Unit 1 - Introduction (01), Biological Risk Assessment, Hazardous Characteristics of an Agent (02), Genetically modified agent hazards (01), Cell cultures (01), Hazardous	10

	Characteristics of Laboratory Procedures (01) Potential Hazards Associated with Work Practices (02), Safety Equipment and Facility Safeguards (02)	Characteristics of Laboratory Procedures (01) Potential Hazards Associated with Work Practices (02), Safety Equipment and Facility Safeguards (02)	
July	Pathogenic risk and management (02) **Unit 2**: Concept of GLP (01), Practicing GLP (01), Guidelines to GLP (02), Documentation of Laboratory work (01), Preparation of SOPs (02) Validation of methods, Documentation of results, Audits & Audit reports (03) Calibration records (01)	Pathogenic risk and management (02) **Unit 2**: Concept of GLP (01), Practicing GLP (01), Guidelines to GLP (02), Documentation of Laboratory work (01), Preparation of SOPs (02) Validation of methods, Documentation of results, Audits & Audit reports (03) Calibration records (01)	16
September	**Unit 3**- Microbial Contamination in food and pharma product (03) Some common microbial contaminants(02) Some common microbial contaminants(01) , Microbiological Assays for pharmaceutical products(04), Regulatory Microbiological testing in pharmaceuticals (01)	**Unit 3**- Microbial Contamination in food and pharma product (01) Some common microbial contaminants(01) Some common microbial contaminants(01) , Microbiological Assays for pharmaceutical products(1), Regulatory Microbiological testing in pharmaceuticals (1)	03
September	**Unit 4** - Concepts on biosafety in Biotechnology (02), Regulating food and food ingredients (03), Genetically engineered crops (01) Regulating rDNA technology (02), Genetically engineered crops, livestock Bioethics (02),	**Unit 4** - Concepts on biosafety in Biotechnology (02), Regulating food and food ingredients (03), Genetically engineered crops (01) Regulating rDNA technology (02), Genetically engineered crops, livestock Bioethics (02), Contemporary issues in Bioethics (02)	06
	Contemporary issues in Bioethics (02)		

Signature of Coordinator:	Signature of Subject Teacher:

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI - 400 069

Teaching Plan and Implementation Record (2023-24)

Department	**Biotechnology**
Name of teacher	**Ms. Dipanada Ghosh**

Class: TY B.Sc. Semester-VI Subject: Biochemistry
Subject Code: USBT601

No. of lectures Allotted per week:04 No. of lectures Covered per Semester:43
No. of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
November	**Unit I:** Protein structure: Protein Tertiary and Quaternary Structures – (2), Protein Denaturation and Folding – (3)	**Unit I:** Protein structure: Protein Tertiary and Quaternary Structures – (2), Protein Denaturation and Folding – (3)	01
December	Protein Function: Reversible Binding of a Protein to a Ligand: Oxygen-Binding Proteins – (2), Complementary Interactions Between Proteins and Ligands: Immunoglobulins – (1), Protein Interactions Mediated by Chemical Energy: Actin, Myosin, and Molecular Motors (3) Protein purification –	Protein Function: Reversible Binding of a Protein to a Ligand: Oxygen-Binding Proteins – (2), Complementary Interactions between Proteins and Ligands: Immunoglobulins – (1), Protein Interactions Mediated by Chemical Energy: Actin, Myosin, and Molecular Motors (3) Protein purification –	09

December	(4) **Unit 2**: Carbohydrate biosynthesis and its regulation: Starch (01)	(4) **Unit 2**: Carbohydrate biosynthesis and its regulation: Starch (01)	06
January	Carbohydrate biosynthesis and its regulation: Starch and sucrose in Plants -(3) Glycogen in Animals - (4) Introduction to Peptidoglycan biosynthesis (1) Peptidoglycan in Bacteria - (1) Biosynthesis and regulation of Cholesterol, Atherosclerosis – (5) **Unit 3**: Mechanism of action of group I and II hormones- (1) Structure, storage, release, transport, biochemical functions and disorders associated with hormones secreted by Hypothalamus -(1)	Carbohydrate biosynthesis and its regulation: Starch and sucrose in Plants -(3) Glycogen in Animals - (4) Introduction to Peptidoglycan biosynthesis (1) Peptidoglycan in Bacteria - (1) Biosynthesis and regulation of Cholesterol, Atherosclerosis – (5) **Unit 3**: Mechanism of action of group I and II hormones- (1) Structure, storage, release, transport, biochemical functions and disorders associated with hormones secreted by Hypothalamus -(1)	05

January/	Anterior Pituitary gland - GH, stimulating hormone) -(1) Posterior Pituitary gland – oxytocin and vasopressin -(1) Thyroid gland – Thyroxine, calcitonin - (2) Parathyroid gland – PTH -(1) Adrenal medulla – epinephrine and norepinephrine -(1) Pancreas – insulin and glucagon - (2) Adrenal cortex – Glucocorticoids - (1) Female Gonads – estrogen and progesterone - (2) Male gonads – testosterone- (1) Placenta – hCG - (1) Unit 4: Introduction to	Anterior Pituitary gland - GH, stimulating hormone) -(1) Posterior Pituitary gland – oxytocin and vasopressin -(1) Thyroid gland – Thyroxine, calcitonin - (2) Parathyroid gland – PTH -(1) Adrenal medulla – epinephrine and norepinephrine -(1) Pancreas – insulin and glucagon - (B1) Adrenal cortex – Glucocorticoids - (1) Female Gonads – estrogen and progesterone - (2) Male gonads – testosterone- (1) Placenta – hCG - (1) Unit 4: Introduction to Minerals and Vitamins (1)	12

	Minerals and Vitamins (1) Dietary sources, bioactive form, functions and disorders associated with fat soluble (A) (2)	Dietary sources, bioactive form, functions and disorders associated with fat soluble (A) (2)	
February	Dietary sources, bioactive form, functions and disorders associated with fat soluble (D E K) and water soluble vitamins – (4) Minerals - physiological and biochemical functions of principal and trace elements (4) Minerals - physiological and biochemical functions of principal and trace elements. - (3) Malnutrition - Over nutrition (obesity) and PEM (Kwashiorkor and Marasmus) - (1)	Dietary sources, bioactive form, functions and disorders associated with fat soluble (D E K) and water soluble vitamins - (4) Minerals - physiological and biochemical functions of principal and trace elements (4) Minerals - physiological and biochemical functions of principal and trace elements. - (3) Malnutrition - Over nutrition (obesity) and PEM (Kwashiorkor and Marasmus) - (1)	10
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Biotechnology
Name of teacher	Mrs. Shweta Khopde
Class: TY B.Sc. Semester-VI Microbiology USBT602	Subject: Industrial Subject Code:
No.of lectures Allotted per week: 04 No.of lectures Covered per Semester:42 No.of lectures Allotted per Semester: 60	

Month of teachi	Topic Proposed	Topic Covered	No. of lectures per

Novembe- Decem ber	Unit 1: Milk: Normal flora, changes in raw milk.(02) Enumeration; Factors affecting bacteriological quality.(03) Dairy technology Preservation methods; (02) Pasteurization; Starter Cultures.(02) Fermented products - Production process and spoilage of Cheese: Swiss and Cheddar; (03) Butter; Yogurt; Buttermilk. (04)	Unit 1: Milk: Normal flora, changes in raw milk.(03) Enumeration; Factors affecting bacteriological quality.(05) Dairy technology Preservation methods; (04) Pasteurization; Starter Cultures(04) Fermented products - Production process and spoilage of Cheese: Swiss and Cheddar; (7) Butter; Yogurt; Buttermilk. (08)	02 09
December January	Unit 2: Introduction of DSP(01) Foam separation; Types of Precipitation; (04) Filtration; Centrifugation; Chromatography in DSP.(04) Cell disruption – Physical and Chemical methods; Solvent recovery.(05) Membrane processes; Drying; Crystallization and Whole broth processing. (03)	Unit 2: Introduction of DSP(01) Foam separation; Types of Precipitation; (04) Filtration; Centrifugation; Chromatography in DSP.(05) Cell disruption – Physical and Chemical methods; Solvent recovery.(04) Membrane processes; Drying; Crystallization and Whole broth processing. (03)	08 03
January	Unit 3: Introduction to Inoculum development; Bacterial and Fungal (02) Introduction to Inoculum development; Fungal inoculum development with one example each; (03) Scale up, Scale down; Production of: Streptomycin; Protease; (02) Production of : Mushroom; Glutamic acid; Lysine.(04) Ethanol production; Semi- synthetic Penicillin; Biotransformation. (05)	Unit 3: Introduction to Inoculum development; Bacterial and Fungal (02)Introduction to Inoculum development; Fungal inoculum development with one example each; (03) Scale up, Scale down; Production of: Streptomycin; Protease; (02) Production of : Mushroom; Glutamic acid; Lysine.(04) Ethanol production; Semi-synthetic Penicillin; Biotransformation. (05)	10

January February	Unit 4: Concepts of GMP; Requirements of GMP implementation:(03) Documentation of GMP practices (01) Regulatory certification of GMP; Quality Control (QC) : Concept of QC:(04) Requirements for implementing QC:(04) Quality Assurance (QA): Concept of QA; Requirements for implementing QA (03)	Unit 4: Concepts of GMP; Requirements of GMP implementation:(03) Documentation of GMP practices (01) Regulatory certification of GMP; Quality Control (QC) : Concept of QC:(04) Requirements for implementing QC:(04) Quality Assurance (QA): Concept of QA; Requirements for implementing QA (03)	05 05
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SHE M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)	
Department	Biotechnology
Name of teacher	Dr. Priyanka Varrak
Class: TY B.Sc. Semester-VI	Subject: Pharmacology and Neurochemistry Subject Code: USBT603
No.of lectures Allotted per week: 04 Semester:53 No. of lectures Allotted per Semester: 60	No. of lectures Covered per

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
November December	**Unit 1 - Mechanism of drug action** (02);drug receptors and biological responses (02); second-messenger systems (01), the chemistry of drug-receptor binding (01), dose-response relationship (02) therapeutic index; ED, LD ; Potency and Intrinsic Activity (03) Drug antagonism (02)	**Unit 1 - Mechanism of drug action** (02);drug receptors and biological responses (02); second-messenger systems (01), the chemistry of drug-receptor binding (01), dose-response relationship (02) therapeutic index; ED, LD ; Potency and Intrinsic Activity (03) Drug antagonism (02)	02 10
January February	**Unit 2 - Absorption of drugs from the alimentary tract** (01) Absorption of drugs from the alimentary tract (02) factors affecting rate of gastrointestinal absorption (02) Absorption of drugs from lungs ;skin (02) absorption of drugs after parenteral administration (02) factors influencing drug distribution (02);binding of drugs to plasma proteins (02);Physiological barriers to drug distribution (02) **Unit 3 - Background Definitions** (01) Causation: degrees of certainty Classification (01)Causes Allergy in response to drugs, Effects of prolonged administration: chronic organ toxicity (02);	**Unit 2 - Absorption of drugs from the alimentary tract** (01) Absorption of drugs from the alimentary tract (02) factors affecting rate of gastrointestinal absorption (02) Absorption of drugs from lungs ;skin (02) absorption of drugs after parenteral administration (02) factors influencing drug distribution (02);binding of drugs to plasma proteins (02);Physiological barriers to drug distribution (02) **Unit 3 - Background Definitions** (01) Causation: degrees of certainty Classification (01)Causes Allergy in response to drugs, Effects of prolonged administration: chronic organ toxicity (02);	14 03

February	Adverse effects on reproduction (01); Poisons Deliberate and accidental self-poisoning Principles of treatment Poison-specific measures General measures (02); Specific poisonings: cyanide, methanol, ethylene glycol, hydrocarbons, volatile solvents, heavy metals (03)	Adverse effects on reproduction (01); Poisons Deliberate and accidental self-poisoning Principles of treatment Poison-specific measures General measures (02); Specific poisonings: cyanide, methanol, ethylene glycol, hydrocarbons, volatile solvents, heavy metals (03)	12

	herbicides and pesticides (02)Biological substances (overdose of medicinal drugs is dealt with under individual agents) (01)Incapacitating agents: drugs used for torture (01)Nonmedical use of drugs (01) **Unit -4** Anatomy and functioning of the brain - (2) Neuronal pathways - (1)	herbicides and pesticides (02)Biological substances (overdose of medicinal drugs is dealt with under individual agents) (01)Incapacitating agents: drugs used for torture (01)Nonmedical use of drugs (01) **Unit -4** Anatomy and functioning of the brain - (2) Neuronal pathways - (1)	
April (12/04/24)	Neuronal pathways - (1) Propagation of nerve impulses - (2) Neuronal excitation and inhibition - (3) Introduction to Synapses and gap junctions - (2) Synapses and gap junctions - (1) Action of Neurotoxins and neurotransmitters(3)	Neuronal pathways - (1) Propagation of nerve impulses - (2) Neuronal excitation and inhibition - (3) Introduction to Synapses and gap junctions - (2) Synapses and gap junctions - (1) Action of Neurotoxins and neurotransmitters(3)	12
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)	
Department	**Biotechnology**
Name of teachers	**Divyani Kapadia and Priya Vishwakarma**

Class: TY B.Sc. Semester-VI Biotechnology	Subject: Environmental Subject Code: USBT604		
No.of lectures Allotted per week: 04 No. of lectures Covered per Semester:47 Semester:60	No. of lectures Allotted per		
Month of teaching	**Topic Proposed**	**Topic Covered**	**No. of lectures per topic**
November - December	Unit 1 - Energy sources renewable – solar energy, wind power, geothermal energy and hydropower, biomass energy :Biogas technology- biogas plant & types, biodigester. Biogas- composition, production and factors affecting production, uses Unit 1 - Biofuels – ethanol production , Microbial hydrogen production(Biodiesel, Petroleum Unit 2 - Biological processes for industrial effluent treatment	Unit 1 - Energy sources renewable – solar energy, wind power, geothermal energy and hydropower, biomass energy :Biogas technology- biogas plant & types, biodigester. Biogas- composition, production and factors affecting production, uses Biofuels – ethanol production ,Microbial hydrogen production Biodiesel, Petroleum Unit 2 - Biological processes for industrial effluent treatment (III)	12

February	**Unit 2** - Aerobic biological treatment- activated sludge process, CASP, advanced activated sludge processes (any two) (02) Biological filters (01), RBC, FBR (02); Anaerobic biological treatment- contact digesters (01), packed bed reactors, anaerobic baffled digesters (01), UASB (01) Solid waste treatment (01); pollution indicators & biomarkers (02); biodegradation of xenobiotics- persistent compounds, chemical properties influencing biodegradability, microorganisms in biodegradation; Use of immobilized enzymes or	**Unit 2** - Aerobic biological treatment- activated sludge process, CASP, advanced activated sludge processes (any two) (02) Biological filters (01), RBC, FBR (02); Anaerobic biological treatment- contact digesters (01), packed bed reactors, anaerobic baffled digesters (01), UASB (01) Solid waste treatment (01); pollution indicators & biomarkers (02); biodegradation of xenobiotics- persistent compounds, chemical properties influencing biodegradability,	Unit 2:11 Unit 3:11

December – January (Dhwani Kapadia)	microbial cells for treatment (03) **Unit 3 -** Wastewater treatment- introduction, biological treatment	microorganisms in biodegradation, Use of immobilized enzymes or microbial cells for treatment (03) **Unit 3 -** Wastewater treatment- Introduction, biological treatment (02).	
January-February	Impact of pollutants on biotreatment, use of packaged organisms and genetically engineered organisms in waste treatment ; Heavy metal pollution – sources, microbial systems for heavy metal accumulation, techniques used for heavy metal removal biosorption by bacteria, fungi and algae, factors affecting biosorption, limitations of biosorption **Unit4 -** Biodegradation of waste from tanning industry; petroleum industry	Impact of pollutants on biotreatment (01), use of packaged organisms and genetically engineered organisms in waste treatment (02) ; Heavy metal pollution – sources, microbial systems for heavy metal accumulation (03), techniques used for heavy metal removal(02) biosorption by bacteria, fungi and algae, factors affecting biosorption (01), limitations of biosorption (01) **Unit4 -** Biodegradation of waste from tanning industry (02); petroleum industry (01)	
February – March	Petroleum industry; paper & pulp industry; Dairy, Distillery; Dye Antibiotic industry; Removal of oil spillage & grease deposits	Petroleum industry (01); paper & pulp industry (02); Dairy (01); Distillery (01); Dye (02) Antibiotic industry (02); Removal of oil spillage & grease deposits (01)	Unit 4: 13
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SHRI JAI LALJI & SHRI MV COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, AMBERNATH (E), MUMBAI - 400 097

Teaching Plan and Implementation Record (2023-24)

Department	**Biotechnology**
Name of teacher	**Mrs. Shweta Khopde, Ms. Divyanshu Ghosh, Dr. Priyanka Vartak**
Class: TY B.Sc. Semester-VI	**Subject: Agri Biotechnology** **Subject Code: USBTAC**
No. of lectures Allotted per week: 04	**No. of lectures Covered per Semester: 44** **No. of lectures Allotted per Semester: 48**

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
November-December **Unit 2: DG March**	**Unit 1:** Introduction to Agriculture and Agriculture systems; Green house Technology:- Types of green house, importance, (02)functions and features of greenhouse, Design criteria and calculation;(02) Constructing material, covering material and its characteristics, Growing media, greenhouse irrigation system, nutrient management;(02) Greenhouse heating, cooling and shedding and ventilation system, Computer controlled environment; (01) Phytotrons, Fertigation and roof system; Precision Cultivation- tools, sensors for information acquisition. (02)	**Unit 1:** Introduction to Agriculture and Agriculture systems; Green house Technology- Types of green house, importance, (02)functions and features of greenhouse, Design criteria and calculation;(02) Constructing material, covering material and its characteristics, Growing media, greenhouse irrigation system, nutrient management;(02) Greenhouse heating, cooling and shedding and ventilation system, Computer controlled environment; (01) Phytotrons, Fertigation and roof system; Precision Cultivation- tools, sensors for information acquisition. (01)	16 Unit 2: 04

February	**Unit 2**: Abiotic stress – Physiological and molecular responses of plants to water stress, salinity stress, temperature stress – heat and cold.(03) Photooxidative stress perception and stress signaling pathways (01)	**Unit 2**: Abiotic stress – Physiological and molecular responses of plants to water stress, salinity stress, temperature stress – heat and cold.(03) Photooxidative stress perception and stress signaling pathways (01)	04
March	Ionic and osmotic homeostasis, reactive oxygen species scavenging. (02) Biotic stress – plant interaction with bacterial, viral and fungal pathogens,Plant responses to pathogen – biochemical and molecular basis of host-plant resistance, (03) Toxins of fungi and bacteria, systemic and induced resistance – pathogen derived resistance, signalling. (03) **Unit 3**: Genetic markers in plant breeding – Classical markers, DNA markers (RFLP, RAPD, AFLP, SSR, SNPs (02) Application of Molecular Markers in Plant Breeding (Quantitative trait locus mapping).(06) Plant DNA Barcoding – Barcoding markers (matK, rbcL, ITS, trnH-psbA), Steps, (02) Recent advances, Benefits, Limitations. (02)	Ionic and osmotic homeostasis, reactive oxygen species scavenging. (02) Biotic stress – plant interaction with bacterial, viral and fungal pathogens,Plant responses to pathogen – biochemical and molecular basis of host-plant resistance, (03) Toxins of fungi and bacteria, systemic and induced resistance – pathogen derived resistance, signalling. (03) **Unit 3**: Genetic markers in plant breeding – Classical markers, DNA markers (RFLP, RAPD, AFLP, SSR, SNP). (02) Application of Molecular Markers in Plant Breeding (Quantitative trait locus mapping).(06) Plant DNA Barcoding – Barcoding markers (matK, rbcL, ITS, trnH-psbA), Steps, (02) Recent advances, Benefits, Limitations. (02)	08
February – March	**Unit 4**: Biofertilizer: Nitrogen-fixing Rhizobacteria – Symbiotic Nitrogen Fixers, Nonsymbiotic Nitrogen Fixers Plant Growth Promoting Microorganisms – Phosphate Solubilizing Microbes (PSM).(01)	**Unit 4**: Biofertilizer: Nitrogen-fixing Rhizobacteria – Symbiotic Nitrogen Fixers, Nonsymbiotic Nitrogen Fixers Plant Growth Promoting Microorganisms – Phosphate Solubilizing Microbes (PSM).(01)	12

	Phytoalexins and Cytokinins, Induced Systemic Resistance; Plant Growth Promotion by Fungi - Mycorrhizae Arbuscular Mycorrhizae Ectomycorrhizae;(04) Microbial Inoculants – Inocula, Carriers and Applications, Monoculture and Co-culture Inoculant Formulations Biocontrol, (04) Polymicrobial Inoculant Formulations;(01) Biopesticides – Types, Bacillus thuringiensis, insect viruses and entomopathogenic fungi (characteristics, physiology, mechanism of action and application). (01)	Phytoalexins and Cytokinins, Induced Systemic Resistance; Plant Growth Promotion by Fungi - Mycorrhizae Arbuscular Mycorrhizae Ectomycorrhizae;(04) Microbial Inoculants – Inocula, Carriers and Applications, Monoculture and Co-culture Inoculant Formulations Biocontrol, (04) Polymicrobial Inoculant Formulations (01) Biopesticides – Types, Bacillus thuringiensis, insect viruses and entomopathogenic fungi (characteristics, physiology, mechanism of action and application). (01)	
Signature of Coordinator:		**Signature of Subject Teacher:**	

Teaching Plan Semester Science Department 2023-2024
T.Y.B.Sc. (COMPUTER SCIENCE)
SEMESTER I

LAXMI CHAND NAVAL CHANDA
SHETH L. U. J. & SHRI V. P. CHEDDA COLLEGE OF ARTS, SCIENCE & COMMERCE
SHE. H. RAGHAVJI MARG, GHATKOPAR (E), MUMBAI - 400 077

Teaching Plan and Implementation Report 2023-24

Department		B.Sc. Computer Science	
Name of teacher		Ms. Nilima Kowale	
Class: T.Y.B.Sc. (CS) Semester I	Subject: Digital Systems & Architecture - Theory		Subject Code: 0747[illegible]
No. of lectures allotted per week: 03	No. Of Subjects Covered per Semester: 06	No. Of Lectures allotted per Semester: 48	

Month of teaching	Topic Proposed	Topic Taught/Can each week remark	No. of lectures
July	Fundamentals of Digital Logic: Introduction of Logic Circuits & Combinational Circuits, Sequential Circuits, Counters	Logic Circuits: Introduction to Digital Systems, Sequential Circuits, Counters	08
August	Computer Systems: Memory, Instruction Representation, Storage Devices, Cache Memory, Computer Memory	All proposed topics are covered	14
Sept	Instruction Representation, Instruction representation, Instruction Representation Representation, Basic Processor operations, Instruction	Computer arch: Instruction set Representation, Storage Devices, Instruction of Instruction Cycle	11
Oct	Computer Core: Fundamentals of Advanced Computer Architecture, Parallel Architecture, Multiprocessor Systems	Topic: Digital Logic and Fundamentals	12
Nov	Digital and Computer Arithmetic: Hardware and Performance	Computer Core: Fundamentals of Advanced Computer Architecture, Parallel Architecture, Multiprocessor Systems	10

Signature of Coordinator: _____

Signature of Subject Teacher: _____

[illegible]

Teaching Plan and Diagnostic Report (2023-24)

Department	[illegible]
Name of teacher	Mrs. Pushpa Khanal

Class: [illegible] Semester: I | Subject: Digital Systems & Architecture – Practical | Subject Code: CS/SP/101

No. of Periods Allotted per week: [illegible] | No. Of lectures Conducted per Semester: 36 | No. Of lectures Allotted per Semester: 36

Month of teaching	Topic Proposed	Topic Conducted with remarks	No. of lectures
August	1. Study and verify the truth table of various logic gates (NOT, AND, OR, NAND, NOR, EXOR, and EXNOR) 2. Simplify given Boolean expressions and realize it. 3. Design and verify half adder. 4. Design and verify full adder.	1. Design and verify half adder. 2. Design and verify full adder. [illegible] holidays of **Independence day and Parsi New Year**	06
Sept	1. Design a 3:8 multiplexer using minimum gates. 2. Design and verify the operation of flip flops using logic gates. 3. Verify the operation of a counter. 4. Verify the operation of a shift register.	1. Verify the operation of a counter. 2. Verify the operation of a 4 bit shift register. 3. [illegible] **Ganesh Chaturthi**	06
Oct	1. Design and implement combinational circuits using multiplexer, demultiplexer. 2. Design and implement 4 bit binary adder/subtractor using IC 7483. Design synchronous decade counter using minimum number of flip flops. 3. Design a synchronous decade counter using JK flip flops.	All programs mentioned are completed. Conducted revision and practicals [illegible]	06

Signature of Lecturer: _____ | Signature of Subject Teacher: _____

[illegible]

[illegible]

[illegible]

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

Month of teaching	Topic Proposed	Topic Not Covered with reason	No. of lectures
July	[illegible]	[illegible]	[illegible]
August	[illegible]	[illegible]	[illegible]
Sept	[illegible]	[illegible]	[illegible]
Oct	[illegible]	[illegible]	[illegible]

Signature of Coordinator	Signature of Subject Teacher

[illegible]

[illegible]

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	Subject: Introduction to Programming with Python - Practical / Subject Code: [illegible]
[illegible]	[illegible]

Month of teaching	Topic Proposed	Topic to be Covered with course	No. of Periods
August	1. Write a program to [illegible] using Python program to implement various control statement using variable computer. 2. Write program in Python to solve [illegible] for variable problem. 3. Write Python program to [illegible] types of function arguments. 4. Write a Python program to demonstrate the precedence and associativity of operators. 5. Write variable Python program to implement recursion for problem such as Fibonacci series, Factorial, Power of Numbers. 6. Write Python program to implement and use variable function in python.	[illegible]	11
Sept	7. Write a Python program to create and manipulate arrays in Python. Write demonstrate use of [illegible] and [illegible] for accessing elements from the array. 8. Write a program to implement [illegible] in Python for variable problem. Demonstrate [illegible] etc. 9. Write a program to implement [illegible] in Python for variable problem. Demonstrate [illegible] etc.	[illegible]	[illegible]
Oct	10. Write a program to implement [illegible] in Python for variable problem. Demonstrate [illegible] etc.	[illegible]	[illegible]

Signature of Coordinator: _____ Signature of Subject Teacher: _____

[illegible]

[illegible]

[illegible]

[illegible]		[illegible]	
[illegible]		[illegible]	
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	

Month of meeting	Topic Proposed	Topic Covered in [illegible]	No. of Students
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

Signature of Coordinator: [illegible]	Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

Working Plan and Implementation Record (2023-24)

Department:		[illegible]	
Name of teacher:		[illegible]	
Class: [illegible]	Subject: [illegible] Operating System - Practical	Subject Code: [illegible]	
No. of lectures allotted per week: [illegible]	No. of lectures required per Semester: [illegible]	No. of lectures scheduled per Semester: [illegible]	
Month of teaching	**Topic Proposed**	**Topic Covered with review**	**No. of lectures**
August	1. [illegible] 2. [illegible] 3. [illegible]	[illegible]	[illegible]
September	4. [illegible] 5. [illegible] 6. [illegible]	[illegible]	[illegible]
October	7. [illegible] 8. [illegible] 9. [illegible] 10. [illegible]	[illegible]	[illegible]
Signature of Coordinator:		Signature of Subject Teacher:	

[illegible]

[illegible]

[illegible]

Department	[illegible]
Name of teacher	[illegible]
Class: [illegible] Semester: [illegible]	Subject: [illegible] Subject Code: [illegible]
No. of lectures Allotted per week: [illegible]	No. of lectures Covered per Semester: [illegible] No. of lectures Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Actual Covered with content	No. of lectures
June	Introduction to Open Source, Software Foundation and the GNU Project, Open Source Principles and Methodologies, Licensing in Open S/S, Licensing	All proposed topics are covered	[illegible]
August	Open Source projects, Starting and Maintaining an Open Source Project, Open Source Business, Open Source Design, Open source Teaching, Open source Media, Collaboration Platforms and Communication, Networking and Operations Projects, Introduction to Cloud, Interacting with the community on IRC/IM, Communication and etiquette, Joining open source teams, organizing issues, contributing code, Introduction to Wikipedia and editing, Wikipedia as contributing to any government open source project of Gujarat Lecture, Open Source Ethics and Social Impact, Open source vs. Closed source, Open source Governance, Ethics of Open source, Social and Financial impacts of open source technology, Shared software, Shared source, Open Source as a Business Strategy	All proposed topics are covered	[illegible]
Sept	Understanding Open Source Licenses, Open Source Operating Systems, GNU/Linux, Windows, Free BSDs, Open Solaris, Open Source Databases, Virtualization Technologies, Communication Technologies, Practice Plan (Support Staff), RDBMS, Debugging, Programming Languages, LAMP, Open Source Database technologies of any kind(s), Complex Projects, Apache Web server, MySQL, GNU Cases, Artificial Plurality of Systems, Wikipedia Project, SourceForge, GNU, LDAP, Gentoo, Open Office, Consultancy Study, Understanding the development models, licensing, costs of training, software as a commercial site	All proposed topics are covered	[illegible]

Signature of Coordinator: [illegible]

Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Report (2023-24)

Department	B.Sc. Computer Science
Name of teacher	Mr. Akash Nair

Class: [illegible] Semester: I Subject: Open Source Technologies - Practical Subject Code: [illegible]

No. of Sessions Allotted per week: [illegible] No. Of Sessions Conducted per Semester: 30 No. Of Sessions Allotted per Semester: 75

Month of teaching	Topic Proposed	Topic Co-Curricular with course	No. of Sessions
July	1. Open Source Operating Systems	All proposed topics are covered	[illegible]
Aug	1. Hands on with [illegible] 2. Hands on with GIMP Photo Editing Tool 3. Hands on with Open or Color Editing Tool 4. Hands on with Blender Graphics and Animation Tool 5. Hands on with Sahoo Web Server 6. Hands on with WordPress CMS 7. Coding in PGAdmin	All proposed topics are covered	[illegible]
Sept	8. Gimp	All proposed topics are covered	[illegible]
Oct	1. Virtualization 2. Containerization	All proposed topics are covered	[illegible]

Signature of Coordinator: _____ Signature of Subject Teacher: _____

[illegible]

[illegible]

Teaching Plan and Implementation Record (2022-23)

Department		[illegible]
Name of teacher		[illegible]
Class: [illegible] Semester: I	Subject: [illegible] Mathematics - Theory	Subject Code: [illegible]
No. of lectures allotted per week: [illegible]	No. of lectures Conducted per Semester: [illegible]	No. of hours allotted per Semester: [illegible]

Month of Teaching	Topic Prepared	Topic Conducted with remarks	No. of lectures
July	Functions, Relations Measurement Estimation	Topic: Teaching Algorithms [illegible] [illegible] Measurement	[illegible]
Aug	Graphs and Types	Graph Completed and Tests upto Dijkstra's shortest path [illegible] [illegible] Independence dim and Euler Tour Tree (MST)	[illegible]
Sept	Binary trees Permutations and Combinations	Topic: Mathematical Induction (Weak proof) and applications [illegible]	[illegible]
Oct	Languages, Grammars and Machines Languages and Grammars - Introduction, Phase structure grammars, Types of grammar, derivation trees, Finite State Machines with Output, Finite State Machines with No Output	Topic: Finite State Machines, Finite State Machines with No Output [illegible]	[illegible]
Nov	Regular Expressions and Regular Languages	[illegible]	[illegible]

Signature of Teacher: [illegible]

Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Programme:	M.Sc. Computer Science
Name of teacher:	Mrs. Prabha Elavarasi
Class: I [illegible] Semester: I	Subject: Discrete Mathematics - Theoretical / Code: [illegible]
No. of Sections: 4 Batch (27 Sets) / No. Of Sections Conducted per Semester: 24	No. Of Sections Allotted per Semester: 24

Month of teaching	Topic Proposed	Topic Taught/ Activity conducted with content	No. of Sections
July	Functions Relations Recurrence Relations	1. Relations & Matrices (Theory topic not completed due to student absenteism)	[illegible]
Aug	Graphs Trees	All prescribed topics are completed Completed the remedy teaching on [illegible]	[illegible]
Sept	1. Combinatorics and Combinatorics 2. Languages and Grammars	Pending: 1. Languages and Grammars Students are [illegible] in the theory of Formal Languages	[illegible]
Oct	1. Finite State Machines 2. Regular Expressions and Regular Language	All prescribed topics are completed Completed the remedy teaching on [illegible]	[illegible]

Signature of HoD with Seal: _____

Signature of Subject Teacher:

(A) (B)

[illegible]

[illegible]

Programme		[illegible]	
Name of teacher		[illegible]	
Class: [illegible]	Subject: [illegible]	Subject Code: [illegible]	
No. of lectures allotted per week (C)	No. of lectures Conducted (upto Semester) (D)	No. of lectures adjusted (upto Semester) (E)	
Month of teaching	Topic Proposed	Topic Actually covered with exercise	No. of lectures
July	[illegible]	[illegible]	[illegible]
Aug	[illegible]	[illegible]	[illegible]
Sept	[illegible]	[illegible]	[illegible]
Oct	[illegible]	[illegible]	[illegible]

Signature of Coordinator: _____

Signature of Subject Teacher:

[illegible]

[illegible]

Teaching Plan and Implementation Record (2022-23)

Department	[illegible]
Name of teacher	[illegible]
[illegible]	Subject Description Semester / Paper [illegible] Subject Code [illegible]
No. of lectures Allotted per week [illegible]	No. of lectures Conducted per Semester [illegible] No. of lectures Allotted per Semester [illegible]

Month of teaching	Topic Proposed	Topic Taught as per syllabus	No. of lectures
July	[illegible]	[illegible]	[illegible]
Aug	[illegible]	[illegible]	[illegible]
Sept	[illegible]	[illegible]	[illegible]
Oct	[illegible]	[illegible]	[illegible]

Signature of Coordinator: [illegible]

Signature of Subject Teacher: [illegible]

(7)

(7)

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Programme:	[illegible]
Name of teacher:	[illegible]

Class: [illegible] Subject: Soft Skills - Theory Subject Code: [illegible]

No. of lectures scheduled per week: [illegible] No. of lectures conducted per September: [illegible] No. of lectures scheduled per September: [illegible]

Month of teaching	Topic Covered	Topic Yet Covered with reason	No. of lectures
July	Introduction to Soft Skills Soft Skills: Introduction - Definition and Importance of Soft Skills Theories, Importance and Measurement of Soft Skill Development	All proposed topics are covered	[illegible]
Aug	Personality Development: Fundamental Attributes Psychology and Personality, Cognitive and Emotionally Bright Skills and Communication Effective strategies, Basic Technical communication, Conversational Communication Soft Skills [illegible]	All proposed topics are covered	[illegible]
Sep	[illegible]	All proposed topics are covered	[illegible]
Oct	Soft Skills Interviews Group Discussion, Academic and Professional Skills Symbiotic and Cross Pollinating Interaction Matrix and Organizations, Introduction to Business Etiquette, Negotiation Skills, Time Management, Decision Making, Conflict Resolution, Stress Management Interpersonal Skills, Motivational Concepts Intra and Inter Personal Skills, Statistical Skills, Mind Maps [illegible]	All proposed topics are covered	[illegible]

Signature of Class Teacher: [illegible]

Signature of Subject Teacher: [illegible]

Teaching Plan Academic Session Semester 2023-2024
F.Y.B.Sc. (COMPUTER SCIENCE)
SEMESTER-II

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department	[illegible]
Name of Teacher	[illegible]
Class: F.Y.B.Sc. (CS) Semester II	Subject: Design & Analysis of Algorithms (Theory) Subject Code: [illegible]
No. of lectures Allotted per week: 03	No. Of lectures Conducted per Semester: 45 No. Of lectures Allotted per Semester: 45

Month of teaching	Topic Proposed	Topic Actually covered with remarks	No. of lectures
Dec	[illegible]	[illegible]	13
Jan	[illegible]	[illegible]	16
Feb	[illegible]	[illegible]	17
Mar	[illegible]	[illegible]	16

Signature of Coordinator: _____ Signature of Subject Teacher: _____

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department	[illegible]
Name of faculty	[illegible]

Class: [illegible] Semester: [illegible] Subject: Design & Analysis of Algorithms - Practical Subject Code: [illegible]

No. of lectures allotted per week: [illegible] No. of lectures allotted per Semester: 90 No. of lectures allotted per Semester: 45

Planned for month	Topic Proposed	Topic Taught/ Completed with remarks	No. of lectures
June	1. Programs on 1-D array (Min- 2. Programs on 2-D arrays 3. Programs on [illegible] 4. Programs on pointers for array and binary search	[illegible]	[illegible]
July	5. Programs on [illegible] 6. Programs on [illegible] 7. Programs on [illegible] 8. Programs on [illegible]	[illegible]	[illegible]
Aug	9. Programs on [illegible] 10. Programs on [illegible] 11. Programs on [illegible] 12. Programs on [illegible]	[illegible]	[illegible]

Signature of Subject Teacher: [illegible]

Signature of Subject Teacher:

[illegible]

[illegible]

Teaching Plan and Implementation Report (2023-24)

Department	B.Sc. Computer Science
Name of teacher	Dr. Mahendra Ramajo

Class: F.Y.B.Sc.(CS) Semester: II	Subject: Advanced Python Programming - Theory	Subject Code: [illegible]
No. of lectures Allotted per week: 03	No. Of lectures Conducted per Semester: 47	No. Of lectures Allotted per Semester: 39

Month of teaching	Topic Proposed	Topic Taught/ Conducted with remarks	No. of lectures
Dec	Working with files: Opening a python file, Read and write a python [illegible]	All proposed topics were covered	06
Feb	Numpy in python, Data and time in python, Numpy in python	All proposed topics were covered	07
Feb	Exceptions in python, Numpy, Graphical user interface (GUI) in python, Features of GUI and Tkinter GUI programming, [illegible]	All proposed topics were covered	13
Mar	Matplotlib and Introduction, Matplotlib in python, Scatter plot, Line chart, Histogram, Pie chart, Scatter plot, [illegible]	All proposed topics were covered	13

Signature of Coordinator: _____

Signature of Subject Teacher: _____

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Programme:	B.Sc. Computer Science
Name of the Faculty:	Dr. Alphonsa Kuriakose

Class: I [illegible] Semester: II | Subject: Allied Python Programming - Practical | Subject Code: [illegible]

No. of lectures allotted per week: [illegible] | No. of lectures allotted per Semester: 28 | No. of lectures allotted per Semester: 28

Months of Academic	Topic Proposed	Topic Taught/ Learnt with exercise	No. of Reflexive
June	1. Write a program in Python to [illegible] 2. Write a program in Python to [illegible] 3. Write a Program [illegible] in Python.	[illegible]	[illegible]
July	1. Write a Python Program to [illegible] in Python to perform operations [illegible] 2. Write a Python Program to [illegible] different types of Exception Handling. 3. Write a [illegible] Program in Python to [illegible]	[illegible]	[illegible]
Aug	1. Write Python [illegible] and vice versa in Python. 2. Write a Python [illegible] in Python. 3. Write a [illegible] Program in Python to [illegible] in Python. 4. Write a [illegible] Program in Python to [illegible]	[illegible]	[illegible]

Signature of Coordinator: [illegible] | Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. Computer Science
Name of teacher	Dr. [illegible] Fathima
Class: I [illegible] Semester: [illegible]	Subject: Introduction to OOPs using C++ – Theory Subject Code: [illegible]
No. of Sessions Allotted per week: [illegible]	No. of Sessions Conducted per Semester: [illegible] No. of Sessions Allotted per Semester: [illegible]

Months of Teaching	Topic Proposed	Topic Taught/Learned with content	No. of Sessions
Nov	Introduction to Object-oriented Programming Concepts: Object-oriented programming paradigm, Key concepts of object-oriented programming, benefits of object-oriented programming, object-oriented languages, applications of object-oriented programming. Introduction to tokens, identifiers, constants, keywords, data types and type conversions, Input/Output statements, Operators of C++ and its level, declaration, [illegible]	[illegible]	[illegible]
Dec	Flow Control: Flow Control Statements Decision Making, Loops, Jumps and Switch Conditional Operator (?:) Functions: Introduction & Advantages Function Declaration and Definition	[illegible]	[illegible]
Jan	Polymorphism Identifying Relationships in Class Diagrams: Inheritance, Aggregation, Composition and Association, including class principles, inheritance. Constructor Overloading	[illegible]	[illegible]
Feb	Non-inline Member Functions Friends File Handling	[illegible]	[illegible]

Signature of Coordinator: [illegible]

Signature of Subject Teacher: [illegible]

KAMALA CHARITABLE TRUST'S

[illegible] COLLEGE OF ARTS, SCIENCE & COMMERCE

DR. S. RAMADAS [illegible] MARG, [illegible] (E), MUMBAI – [illegible]

Teaching Plan and Implementation Record (2021-22)

Department:	B.Sc. Computer Science
Name of teacher:	Ms. [illegible] Chaudhary

Class: F.Y.B.Sc.(CS) Semester: II	Subject: [illegible] in OOPS using C++ - Practicals	Subject Code: [illegible]
No. of lectures Allotted per week: [illegible]	No. of lectures Conducted per Semester: [illegible]	No. of lectures Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Actual covered with remarks	No. of lectures
Jan	1. Program to demonstrate use of late modifier & member functions 2. Program based on handling and freeing memory using classes 3. Program to demonstrate use and invocation of static using classes 4. Program to use scope resolution operator. Display the common share of the same variable in local & different scope levels	All proposed topics were covered	16
Feb	5. Program to demonstrate various types of constructors and destructors 6. Program to demonstrate use of public, protected & private scope identifiers 7. Program on demonstration single and multiple inheritance 8. Program to demonstrate include statement and header file information	All proposed topics were covered	12
Mar	9. Program to demonstrate constructor and destructor completion 10. Program to demonstrate friend function, inline function, this pointer 11. Program on demonstration function overloading and overriding 12. Program to demonstrate use of pointers 13. Program to demonstrate use of binary file handling	All proposed topics were covered	14

Signature of Coordinator: _____ Signature of Subject Teacher: _____

[illegible]

[illegible]

Teaching Plan and Implementation Report (2022-23)

Department	[illegible]
Name of teacher	[illegible]
Class: [illegible] Semester [illegible] Subject: [illegible] - Practical	Subject Code: [illegible]
No. of lectures allotted per week: [illegible]	No. of lectures Executed per Semester: [illegible] / No. of lectures Allotted per Semester: [illegible]

Month of Teaching	Topic Proposed	Topic Taught/Executed with remarks	No. of lectures
Dec	1. [illegible] 2. Factors for Adhesive 3. Testing of Adhesive 4. Cleaning a Fastener 5. Cleaning of Table in a Fastener 6. Cleaning Latex (Wet and Without Coagulant) 7. Measuring Cleaning the Image Remnants on a Table 8. Table [illegible]	All proposed topics were covered	[illegible]
Feb	1. [illegible] 2. Graphic Checkers 3. Graphic Checkers with Aggregate Inventory 4. Cleaning involving Fastenings 5. Table Cleaner 6. [illegible]	All proposed topics were covered	[illegible]
Mar	1. Cleaning [illegible] in a Natural Object 2. Tester 3. [illegible] 4. Cleaning [illegible]	All proposed topics were covered	[illegible]

Signature of Coordinator: [illegible]

Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department:	B.Sc. Computer Science
Name of teacher:	Ms. Jyoti Chauhan
Class: I YBSc/I Sc. Semester: II	Subject: Database Systems - Theory / Subject Code: 17SCS2DS
No. of lectures Allotted per week: 03	No. Of lectures Conducted per Semester: 44 / No. of lectures Allotted per Semester: 45

Month of teaching	Topic Proposed	Topic Conducted with remarks	No. of lectures
Nov	Introduction to DBMS - Data models - Entity Relationship Model - [illegible]	All proposed topics were covered	10
Dec	SQL Fundamentals - DML Operations - Relational data model - Constraints - Relational Algebra operations	All proposed topics were covered	11
Jan	Functions: Subqueries - subqueries with IN, EXISTS, comparison operations, Nested subqueries, correlated / Joins, correlated subqueries Scalar subqueries and Derived Tables, Functional dependencies, Trees, normal, third, and BCNF, overall Joins functions purpose Joins, Identity, joins (in categories)	All proposed topics were covered	12
Feb	Database Protection: Security Issues, Threats to Database Security, Mechanisms, Role of DBA, Microcomputer Access Control, Working Up and Monitoring procedures Topics including, altering, dropping, renaming and manipulating control DCL Statements, including dropping users, give Rights, introducing, granting, revoking privileges, creating privileges, Transaction control commands - Commit, Rollback Indexes: Implement Clear, Metadata view, Dropping indexes, Clustering Indexes, Dropping indexes	All proposed topics were covered	10

Signature of Coordinator: _____ Signature of Subject Teacher: _____

[illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Record (2022-24)

Department	[illegible]
Name of teacher	[illegible]

Class: [illegible] Semester: [illegible] Subject: Calculus - Theory Subject Code: [illegible]

No. of Sessions Allotted per week: [illegible] No. of Sessions Allotted per Semester: [illegible] No. of Sessions Allotted per Semester: [illegible]

Month of teaching	Topic Progressed	Number of sessions with remarks	No. of Sessions
Dec	[illegible]	[illegible]	[illegible]
Jan	[illegible]	[illegible]	[illegible]
Feb	[illegible]	[illegible]	[illegible]
Mar	[illegible]	[illegible]	[illegible]

Signature of Coordinator: [illegible]

Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department:	[illegible]
Name of teacher:	[illegible]

Class: [illegible] Subject: Calculus - Practical Subject Code: [illegible]

No. of lectures Allotted per week: [illegible] No. of lectures Conducted per Semester: [illegible] No. of lectures Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Actually covered with remarks	No. of lectures
Jan.	[illegible]	[illegible]	[illegible]
Feb.	[illegible]	[illegible]	[illegible]
Mar.	[illegible]	[illegible]	[illegible]

Signature of Coordinator: [illegible]

Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Record (2025-26)

Department	[illegible]
Name of Teacher	[illegible]
Class: [illegible] Semester: [illegible] Subject: Statistical Methods - Practical	Subject Code: [illegible]
No. of lectures Allotted per week: [illegible] No. of lectures Carried per Semester: [illegible]	No. of lectures Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Carried out in the course	No. of lectures
June	[illegible]	All proposed topics were carried	[illegible]
July	[illegible]	All proposed topics were carried	[illegible]
Aug	[illegible]	All proposed topics were carried	[illegible]

Signature of Coordinator: [illegible]

Signature of Subject Teacher: [illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Registration	[illegible]
Name of Supervisor	[illegible]
Class: [illegible] Semester: [illegible]	Subject: [illegible] Subject Code: [illegible]
No. of Periods Allotted per week: [illegible]	No. of Periods Conducted per Semester: [illegible] No. of Periods Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Taught/ Conducted with remarks	No. of Periods
May	[illegible]	[illegible]	[illegible]
June	[illegible]	[illegible]	[illegible]
July	[illegible]	[illegible]	[illegible]
Aug	[illegible]	[illegible]	[illegible]

Signature of Coordinator: [illegible]

Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Record (2022-23)

Programme:	B.Sc. Computer Science
Name of Faculty:	Mr. Anilkumar Sahu

Class: F.Y.B.Sc.(CS) Semester: II	Subject: E-Commerce & Digital Marketing - Theory	Subject Code: 19SCS201

No. of lectures allotted per week: (3)	No. Of lectures Conducted per Semester: (36	No. Of lectures Allotted per Semester: (45

Month of teaching	Topic Proposed	Topic Co-Curricular/Activities	No. of lectures
Dec	Introduction to E-Commerce and E-Business. e-Commerce Applications. Overview of Domain Registration, Hosting and Keywords Digital Marketing	All proposed topics were covered	16
Feb	Social Media Marketing, Lifecycle Marketing, Email Marketing, Email Deliverability & Email Marketing automation Mobile Marketing: Introduction, Mobile Usage, Mobile Advertising, Mobile Marketing, Types Mobile Marketing Features, Mobile Campaign	All proposed topics were covered	12
Mar	Development, Mobile Advertising Analytics Content Marketing: Introduction, Content marketing matrices, Types of Content, Types of blog posts, Content Curation, Content optimization, Reputation Management & Monitoring, Content Marketing Strategy, Content creation tools and tips, Challenges in Content Marketing Search Engine Optimization: Ranking, Crawlers, SEO Techniques, Understanding Web 2.0 Applications, Internet of Resources, Google Analytics, E-mail Marketing, Steps to optimize website, Site page and off page optimization Social Media Marketing Mobile Marketing	All proposed topics were covered	17

Signature of Coordinator:	Signature of Subject Teacher:

Teaching Plan Computer Science Department 2023-2024
B.Tech (COMPUTER SCIENCE)
SEMESTER-III

[illegible]			
Teaching Plan and Implementation Report (2023-24)			
Department		[illegible]	
Name of teacher		[illegible]	
[illegible]	Subject: Principles of Operating Systems - Theory	Subject Code: [illegible]	
No. of lectures allotted per week: [illegible]	No. of lectures taken per week: [illegible]	No. of lectures allotted per semester: [illegible]	
Month of activity	Topic Proposed	Topic Taught/covered with remarks	No. of lectures
June	Introduction of Operating System, Operating System Structure	[illegible]	[illegible]
July	Processes, Threads, Process Synchronization	[illegible]	[illegible]
Aug	CPU Scheduling, Deadlocks, Main Memory, Virtual Memory, Implementation Topics, Mid-term of the Paper (MT)	[illegible]	[illegible]
Sept	Mass Storage Structure, Storage Topics, File-system Mass Storage, Storage Management, Advanced Topics, File-system Structure, Allocation of Frames, Thrashing, Mass Storage Structure, Overview, Disk Structure, Disk Scheduling, Disk Management, File System Interface, File Concept, Access Methods, Directory and Disk Structure, File System Mounting, File Sharing, File System Implementation, File System Structure, File System Implementation, Directory Implementation, Allocation Methods, Free Space Management	[illegible]	[illegible]
Signature of Coordinator:		Signature of Subject Teacher:	

[illegible]

[illegible]

Teaching Plan and Implementation Report (2023-24)

Department:	[illegible]
Name of teacher:	[illegible]
Class: [illegible] Semester: [illegible]	Subject: Principles of Operating Systems – Practical / Subject code: [illegible]
No. of lectures Allotted per week: [illegible]	No. of lectures Conducted per Semester: [illegible] / No. of lectures Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Taken Conducted with remarks	No. of lectures
July	1. Practical Completion report 2. Viva-voce 3. a. Write a program to give a reference to the Shortest Job first problem b. Write a program to give a reference to the round-robin scheduling problem	All proposed topics were conducted	[illegible]
Aug	1. Write a program that implements FCFS scheduling algorithm 2. Write a program that implements priority scheduling algorithm 3. Write a program that implements SJF scheduling algorithm	All proposed topics were conducted	18
Sept	1. Write a program that implements the Banker's algorithm 2. Write a program that implements the FIFO page replacement algorithm 3. Write a program that implements the LRU page replacement algorithm 4. Write assignment to [illegible]	All proposed topics were conducted	18

Signature of Coordinator: _____ Signature of Assigned Teacher: _____

[illegible]

Teaching Plan and Implementation Record (TPIR)-[illegible]

Department:		B.Sc. (Computer Science)
Name of Teacher:		[illegible]
Class: [illegible]	Subject: [illegible]	Subject Code: [illegible]
No. of lectures delivered per week: [illegible]	No. of lectures delivered per fortnight: [illegible]	No. of lectures delivered per fortnight: [illegible]

Month of teaching	Topic Proposed	Topic Taught as well with outcome	No. of lectures
June	[illegible]	All proposed topics are covered	[illegible]
July	The Value Space: Linear combination, span. The geometry of vector [illegible]	All proposed topics are covered	[illegible]
August	Matrix: Rank. Consistency of linear equations by rank criterion. Linear dependence, Basis. Unique representation. Change of basis, Rank-nullity. Computational problem involving finding a basis. Dimension. Dimension and rank. Direct sum. Dimension and linear functions. Eigenvalues and eigenvectors. Characteristic polynomial. Cayley-Hamilton theorem. Diagonalization. Linear forms. Dual space. Dual basis. Hyperplanes. Bilinear forms. Symmetric bilinear forms. Quadratic forms. Inner product spaces. Orthogonality. Orthogonal complement. Orthogonal projection. Gram-Schmidt process. Adjoint of a linear operator. Self-adjoint operators. Normal operators. Orthogonal operators. Spectral theorem. Positive operators. Polar decomposition. Singular value decomposition.	All proposed topics are covered	[illegible]
September	Inner Product: The inner product for matrices and the trace. Orthogonality. Orthogonal Matrices. Eigenvalues and Eigenvectors: Characteristic Polynomial of degree 2 and 3. Eigenvalues and eigenvectors. Properties of eigenvalues and eigenvectors. Cayley Hamilton Theorem. Minimal Polynomials. Consistent system of linear equations by rank of matrices. The Matrix Norm. Matrix Charts. Simple Four Bank Algorithm.	All proposed topics are covered	[illegible]

Signature of Concerned Teacher: _____ Signature of Subject Teacher: _____

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. Computer Science
Name of teacher	Ms. [illegible]

Class: [illegible] Semester: [illegible]	Subject: Linear Algebra - Practical	Subject Code: [illegible]
No. of Sections Allotted per week: [illegible]	No. of Subjects Covered per Semester: [illegible]	No. of Subjects Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Co-Curricular activities covered	No. of Subjects
August	1. Write a program which determines whether a given subgroup is normal. 2. Write a program to find the cosine sin – for the different values of x and n. Find the sum product of x and n. 3. Classify given data using upper lower quartile (IQR) 4. Show Matrix Multiplication 5. Write a program to compute a matrix after multiplying it by the Transpose	[illegible]	[illegible]
September	6. Show Matrix Application – Determination of Image in Matrix Inverse and Image Transformations. 7. Show Matrix Application – [illegible] Image Addition, multiplication and subtraction. 8. Write a program to do the following. Enter a course based faculty, [illegible] and find the proportion of [illegible] 9. Write a program to calculate regression and correlation between [illegible] and [illegible] 10. Implement Dijkstra's Algorithm [illegible]	[illegible]	[illegible]

Signature of Coordinator: _____ Signature of Teaching Teacher: _____

[illegible]

[illegible]

[illegible]

[illegible]	[illegible]
[illegible]	[illegible]

[illegible]

[illegible]	[illegible]

Months of teaching	Topic Proposed	Topic Taught/Learnt with remarks	No. of lectures
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

Signature of Course Mentor:	Signature of Subject Teacher:

[illegible]

Teaching Plan and Implementation Record (PAC-IV)

Department:	[illegible]
Name of Faculty:	[illegible]

Class: [illegible] Semester: [illegible] Subject: Data Structures - Practical Subject Code: [illegible]

No. of Periods Allotted per week: [illegible] No. Of Sessions Conducted per Semester: [illegible] No. Of Sessions Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Actually Covered with remarks	No. of Sessions
July	1. Write a program to implement Array as Data Types (ADT). 2. Write a program to implement Single Linked List with insertion, deletion, traversal operations. 3. Write a program to implement Doubly Linked list with insertion, deletion, traversal operations.	All programs are covered	[illegible]
Aug	4. Write a program to implement Stack with insertion, deletion, traversal operations. 5. Write a program to implement Queue with insertion, deletion, traversal operations. 6. Write a program to implement Circular Queue with insertion, deletion, traversal operations.	All programs are covered	[illegible]
Sept	7. Write a program to implement Binary Tree with insertion, deletion, traversal operations. 8. Write a program to implement Traversal in a tree. 9. Write a program to implement Graph with insertion, deletion, traversal operations. 10. Write a program to implement Travelling Salesman Problem. 11. Write a program to create Hash Table for insertion, deletion, searching operations (Hint: Hash function used). 12. Write a program to create Hash table to handle collisions using Hashing chaining.	All programs are covered	[illegible]

Signature of Faculty: [illegible] Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. Computer Science
Name of Faculty	[illegible]

Class: [illegible] Semester: III	Subject: Advanced Database Concepts – Theory	Subject Code: [illegible]
No. of lectures allotted per week: 03	No. Of lectures Conducted per Semester: 48	No. Of lectures Attended per Semester: 48

Month of teaching	Topic Proposed	Topic Actually covered with revision	No. of lectures
June	Overview of PL/SQL: Advantages of PL/SQL, Block Structure of PL/SQL, Architecture of PL/SQL Fundamentals of PL/SQL: Character Sets, Lexical Units, Declarations, Variables or Identifiers, Scope and Visibility of Identifiers, Assigning Values to Variables, Expressions, Loop Processing Exercises, Data Types	All proposed topics are covered	[illegible]
July	Control Structures: Conditional Selection Statements, GOTO Statements, Sequential Control Statements, LOOPS and EXITS Statements Sequences: Creating sequences, Querying, Altering, and Dropping a sequence, Special Functions and Expressions, Collections and Records: Array Handling, Formal Definition of Cursor, Types of Cursors, Record cursor Exceptions	All proposed topics are covered	[illegible]
August	Stored and Remote SQL: Static SQL, Dynamic or Stored SQL, Cursors Variables, Processing Stored Procedures, Cursor Variables, COMMIT Implications, Transaction Processing and Control Statements, Transaction Events, SQL Stored Functions, SQL, DDL, DCL and TCL Statements, Packages: Overview of Packages, Standard Packages, Package Specification, Package Body, Package Initialization and Initialization Procedures, Transaction Management, Crash Recovery	All proposed topics are covered	[illegible]

Signature of Faculty: _____

Signature of Subject Teacher: _____

[illegible]

[illegible]

Teaching Plan and Implementation Record (2021-22)

Department	[illegible]
Name of faculty	[illegible]

[illegible]	Subject: Advanced Database Concepts (Practical)	Subject Code: [illegible]
No. of lectures allotted per week: [illegible]	No. of lectures delivered per semester: [illegible]	No. of lectures allotted per semester: [illegible]

Month of teaching	Topic Planned	Topic Covered with remarks	No. of lectures
July	[illegible]	[illegible]	[illegible]
August	[illegible]	[illegible]	[illegible]
September	[illegible]	[illegible]	[illegible]

Signature of Coordinator: [illegible]

Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. Computer Science
Name of Course	DSC Core Course
Class: S.Y.B.Sc.(CS) Semester: III	Subject: Java Based Application Development - I (Theory) Subject Code: [illegible]
No. of lectures Allotted per week: 03	No. Of lectures Conducted per Semester: 45 No. Of lectures Allotted per Semester: 45

Month of teaching	Topic Proposed	Topic Co-Curricular activities conducted	No. of lectures
July	Introduction OOPS, Principles, Encapsulation Handling, Multitasking	All proposed topics were covered	08
Aug	Collection Framework: Hierarchies in JCF and Group Event Handling, JDBC	All proposed topics were covered	11
Sept	Net Core Introduction, Service Life Cycle, Types of Servers, Server Configuration with Postgresql Database, Working with Servlet session and Servlet config Object, Attributes in Servlet, Response and Redirection using Request Dispatcher and using HttpRequest Method, Filter API, Manipulating Response using Cookie API, Session Tracking using Cookies, JSP Elements, Hidden Form Fields and URL Rewriting, Types of Scripting Tags, Declaration and Implementation Java Server Pages (JSP), Introduction to JSP, Components with Servlet, JSP Architecture, JSP Life Cycle, JSP Scripting Elements, JSP Directives, JSP Actions, JSP Implicit Objects, JSP Exchange Components, JSP Standard Tag Libraries, JSP Custom Tag, JSP Session Management, JSP Exception Handling, JSP CRUD Applications JSON: Introduction, Syntax, Data Types, Objects, Arrays, Conversion with AJAX, JSON with Ajax	All proposed topics were covered	16

Signature of Coordinator: [illegible]

Signature of Subject Teacher: [illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

[illegible]	[illegible]
[illegible]	[illegible]

[illegible]	Subject: Java Swift Application Development Practical	Subject Code: [illegible]
No. of lectures Allotted per weeks: [illegible]	No. Of lectures Conducted per Semester: 30	No. Of Lectures Allotted per Semester: 32

Month of Teaching	Topic Proposed	Topic Actually covered with remarks	No. of lectures
Aug.	1. a. Write a program to create a class and implement the concepts of Constructor Overloading, Method Overloading, Static methods b. Write a program to implement the concept of Inheritance and Method Overriding 2. a. Write a program to implement the concepts of Abstract classes and methods b. Write a program to implement the concept of interfaces 3. Write a program to define user defined exceptions and raise them as per the requirements 4. Write a program to demonstrate the methods of Exec, Start and NOOP 5. Write a program using various swing components 6. a. Write a JDBC program that displays the data of a given table b. Write a JDBC program to update the data in a specified table from a given table c. Write a JDBC program to insert / update / delete records into a given table	All planned topics were covered	12
Sept.	7. a. Construct a simple Calculator using the GUI Package with necessary functionalities b. Construct a JDBC Program to accept details of a student of a given class and subject from the database using JDBC methodology on the GUI of a Platform 8. a. Write a Servlet that accepts a User Name from a HTML form and returns it as a response. Write another Servlet that returns the name of the current visit number to	All planned topics were covered	12

	[illegible]		
Signature of E-Gov Manager:		Signature of Subject Teacher:	

[illegible]

[illegible]

[illegible]

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

Month of Teaching	Topic Proposed	Topic Taught/Covered with remarks	No. of Periods
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]		[illegible]

Signature of Coordinator: [illegible]

Signature of Subject Teacher: [illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department	[illegible]
Name of faculty	[illegible]
Class: [illegible]	Subject: [illegible] Subject Code: [illegible]
No. of lectures Allotted per week: [illegible]	No. of lectures Conducted per Semester: [illegible] No. of lectures Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Actually Covered with remarks	No. of lectures
June	1. [illegible] a. [illegible] 1. [illegible] a. [illegible]	[illegible]	[illegible]
July	1. [illegible] a. [illegible] 1. [illegible] a. [illegible] b. [illegible] c. [illegible]	[illegible]	[illegible]
Aug	1. [illegible] a. [illegible] 1. [illegible] a. [illegible]	[illegible]	[illegible]

	[illegible]		
Total	[illegible]	[illegible]	[illegible]
Signature of Coordinator:		Signature of Subject Teacher:	

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department	[illegible]
Name of teacher	[illegible]
Class: [illegible] Semester: [illegible]	Subject: Creative Content Writing - Theory / Subject Code: [illegible]
No. of lectures allotted per week: [illegible]	No. of lectures conducted per Semester: [illegible] / No. of lectures allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Actual covered with remarks	No. of lectures
June	History of Content Writing, Role Platforms for Writing for the Web, Social Media Writing, Writing for Twitter, writing with Hashtags, Writing Social Media with Photos, writing for Facebook, writing for LinkedIn, Writing Tools, LinkedIn Profile, writing for Google, Writing Landing Pages, Writing Headlines, writing a Home Page, Writing the About Us Page, Writing Blog Posts, Writing Annual Reports. Infographics, Visual Communication, What are Infographics?, Six Secrets of Visualization, Creating Infographics Projects, The Art of Information Processing Your Data, Designing Your Infographics, Publishing Your Infographics.	[illegible]	[illegible]
July	Content Tools, Keyword and Keyword Research Tools, Writing Tools, Proofreading Tools, Editing Tools, A Few Excel Best Practices, Note Taking Tools, Blog Map Generator, Google Authorship, Image Sources, Tools for Collaborative Writing. Check and Equal aspects of creative writing, Correct and Explicit, Letter Length, Vocabulary in Legal Writing, SW Laws, and Copyrighting, Plagiarism laws in Content Writing.	[illegible]	[illegible]

Signature of Coordinator: _____ Signature of Subject Teacher: _____

Teaching Plan: Computer Science Department 2023-2024
B.Sc.(B.Sc.) (COMPUTER SCIENCE)
SEMESTER-IV

[illegible]			
Teaching Plan and Implementation Record (2023-24)			
Department		B.Sc. (Computer Science)	
Name of Faculty		Mr. Vishwa Dhanak	
Class: B.Sc. (B. Semester: IV)	Subject: Theory of Computation - Theory	Subject Code: [illegible]	
No. of lectures Allotted per week: [illegible]	No. of lectures Conducted per Semester: [illegible]	No. of lectures Allotted per Semester: [illegible]	
Month of teaching	Topic Proposed	Topic Actually Covered with remarks	No. of lectures
Nov	Automata Theory: Definition, Deterministic Finite Automata, Nondeterministic Finite Automata, Equivalence of Finite Automata, Minimization of Finite State Machines, DFA and NFA to Regular Expressions, DFA to and Moore Machines, Minimization Automata.	All topics taken as per syllabus	[illegible]
Dec	Formal Languages: Regular Sets and Regular Expressions, Closure properties of Regular Sets, Pumping Lemma and Applications, Regular Grammars, Context Free Grammars, Ambiguity, Simplification of Context Free Grammars, Chomsky Normal Form, Greibach Normal Form.	All topics taken as per syllabus	[illegible]
Jan	Pushdown Automata: Definition, Equivalence of Pushdown Automata and Context Free Grammars.	All topics taken as per syllabus	[illegible]
Feb	Turing Machines: Turing Machine Model, Turing Machine Computations, Modifications of Turing Machines, Turing Machine Representations, Universal Turing Machines.	All topics taken as per syllabus	[illegible]
Mar	Undecidability: The Church-Turing Thesis, Universal Turing Machines, Halting Problem, Decidable and Undecidable Problems.	All topics taken as per syllabus	[illegible]
Signature of HOD with Date:		Signature of Subject Teacher:	

[illegible]

[illegible]

Teaching Plan and Implementation Report (2023-24)

Department	B.Sc. Computer Science
Name of teacher	Ms. Prachiti Khanale
Class / S.Y.B.Sc (CS) Semester (II)	Subject: Theory of Computation – Practical
No. of lectures Allotted per week: (2) +(2)	No. Of lectures Conducted per Semester: (30)

Month of teaching	Topic Proposed	Topic Co-Curricular with course	No. of lectures
Mar	1. Write a program for tokenization of given input 2. Write a program for generating regular expressions for regular grammar 3. Write a program for generating derivation sequence / language for the given regular grammar (production)	All proposed topics were covered	10
Apr	4. Design a Program for creating machine that accepts three consecutive one 5. Design a Program for creating machine that accepts the string always ending with 100 6. Design a program for accepting decimal number divisible by 3	All proposed topics were covered	10
May	7. Design a program for creating a machine to find accepts string having equal no. of 1's and 0's 8. Design a program for creating a machine to find sum of two binary numbers 9. Design a PDA to accept WCWR where w is any string and WR is reverse of that string and C is a special symbol 10. Design a Turing machine that accepts the following language $a^n b^n c^n$ where $n \geq 0$	All proposed topics were covered	10

Signature of Coordinator: _____

Signature of Subject Teacher:

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Program Name:	B.Sc. Computer Science
Name of Faculty:	Mr. Charles Emmanuel
Class: I [illegible] Semester; IV	Subject: Computer Networks - Practical Subject Code: CM [illegible]
No. of Sections Allotted per week: [illegible]	No. Of Sections Covered per Semester: [illegible] No. Of Sections Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Actual covered with remarks	No. of Sections
Jan	1. Using Linux material in Windows and execute following networking commands and note the output: ping, traceroute, netstat, arp, ipconfig, ifconfig, hostname, DNS utility, pathping, hostnames 2. Using Packet Tracer, create a basic network and configure using appropriate network wire. Use Static IP address allocation and Show connectivity 3. Using Packet Tracer, create a basic network and configure using appropriate network wire. Use Dynamic IP address allocation and Show connectivity	All proposed topics were covered	06
Feb	4. Using Packet Tracer, create a basic network and configure using appropriate network wire. Show connectivity 5. Using Packet Tracer, create a network with five routers with RIP v1 and each router associated network with two networks. Show IP connectivity 6. Using Packet Tracer, create a network with five routers with RIP v2 and each router associated network with two networks. Show IP connectivity	All proposed topics were covered	06
Mar	7. Using Packet Tracer, create a network with five routers with OSPF and each router associated network with two networks. Show IP connectivity 8. Using Packet Tracer, create a network with five routers with BGP and each router associated network with two networks. Show IP connectivity 9. Using Packet Tracer, create a network network of minimum PC using appropriate switch ports 10. Using Wireshark, network analyzer, use the filter for IP, TCP, UDP, ARP and perform simple packet sniffing. Capture packets in Ethernet frame. Run the arp-scan command in Kali Linux	All proposed topics were covered	02

Signature of Course Teacher: _____

Signature of Subject Teacher: _____

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department	[illegible]
Name of Faculty	[illegible]

Class: [illegible]	Subject: Computer Networks - Theory	Subject Code: [illegible]

No. of lectures (Monday) per week: [illegible]	No. of lectures (Tuesday) per Semester: [illegible]	No. of lectures (Monday) per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Actually covered with remarks	No. of lectures
Oct	Introduction: Network Models: The OSI model, [illegible] protocols in depth	All proposed topics were covered	[illegible]
Nov	Introduction to Physical layer: Digital Transmission, Digital to digital conversion, analog to digital conversion, transmission modes	All proposed topics were covered	[illegible]
Dec	Multiplexing and switching: Multiplexing: Time division multiplexing, Frequency division multiplexing, Time division multiplexing, Data link control: Framing, Flow and error control, HDLC, Point to point protocol, Media Access Control: Random access, Controlled access, Channelization, Wired LAN: Ethernet, Classic Ethernet, Switched Ethernet, Fast Ethernet, Gigabit Ethernet, Wireless LAN: IEEE 802.11	All proposed topics were covered	18
Jan	Introduction to Network Layer: Internal logical service provided by network layer, Internal logical connection, IPv4 addressing, Subnetting of IP packets, Network Layer Protocols: Internet Protocol, IPv4 & IPv6, NAT, IP Unicast Routing: Introduction, routing algorithms, unicast routing protocols	All proposed topics were covered	[illegible]
Feb	Next generation IP: IPv6 addresses, IPv6 packet, IPv6 packet transition from IPv4 to IPv6, Internet Control Message Protocol, [illegible]	All proposed topics were covered	[illegible]
Mar	Multicast Distribution Trees, [illegible] Multicast Routing Protocols, IGMP, [illegible] Quality of Service	All proposed topics were covered	[illegible]

Signature of HOD coordinator: _____	Signature of Subject Teacher: _____

[illegible]

[illegible]

Training Plan and Implementation Report (2023-24)

Department	[illegible]
Name of teacher	[illegible]

Class: [illegible]	Subject: Software Engineering - Theory	Subject Code: [illegible]
No. of lectures allotted per week: [illegible]	No. of lectures delivered per week: [illegible]	No. of lectures allotted per Semester: [illegible]

Month of training	Topic Proposed	Topic [illegible] with reason	No. of lectures
Nov	Introduction, The Nature of Software, Software Engineering, Professional Software Development, Layered Technology, Process Assessment, CMM, Process Failures and Assessment Evaluation Models, Waterfall Model, Incremental RAD Models, Evolutionary Process Models, Prototyping, Spiral and Concurrent Development Model, Requirements Analysis, Requirements Gathering and Types, [illegible]	All proposed topics were covered	[illegible]
Dec	Software Design, System Software Design, Architectural Design, User Interface Design, Coupling and Cohesion, Functional Oriented Design, Object Oriented Approach, Design Specifications, Verification for Design, Metrics for Design, Software Measurement and Metrics, Process Metrics and Project Metrics, Software Measurements, Object Oriented Metrics	All proposed topics were covered	[illegible]
Jan	Software Project Management, Size estimation, Techniques, LOC based, FP based and Use case based estimation, Cost estimation, Model Software Project Management, Constraints in Project Planning, Planning Process, Organizational Structures, Risk Management, RMMM activities, Software security, CVE, Software reliability and availability, SRE, Cyber Software Configuration Management, elements of SCM, SCM Process, Change Control, Version Control, Software Model	All proposed topics were covered	[illegible]
Feb	Software Testing, Verification and Validation, Introduction to Testing, Testing Principles, Testing Objectives, Test Oracles, Levels of Testing, White Box Testing Techniques, Functional Black Box Testing, Exit Criteria, Test Cases, Process	All proposed topics were covered	[illegible]

Signature of HOD (Academic): [illegible]

Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Report (2023-24)

Department	[illegible]
Name of the faculty	[illegible]

[illegible] Semester (I) | Subject: Software Engineering (Practical) | Subject Code: [illegible]

[illegible] | [illegible]

Month of teaching	Topic Proposed	Topic Learned/Actual SLB covered	No. of lectures
Oct	1. [illegible] 2. [illegible] 3. [illegible]	[illegible]	[illegible]
Feb	4. [illegible] 5. [illegible] 6. [illegible] 7. [illegible] 8. [illegible] 9. [illegible]	[illegible]	[illegible]
Mar	10. [illegible] 11. [illegible] 12. [illegible]	[illegible]	[illegible]

Signature of Candidates:	Signature of Subject Teacher:

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department	[illegible]
Name of Faculty	[illegible]

Class: [illegible] Semester: [illegible] Subject: IoT Technologies – Theory Subject Code: [illegible]

No. of lectures allotted per week: [illegible] No. of lectures Conducted per Semester: [illegible] No. of lectures Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Uploaded on [illegible]	No. of lectures
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

Signature of Coordinator: [illegible]

Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Record (2024-25)

Department	[illegible]
Name of teacher	[illegible]

[illegible]	Subject: IoT Technologies – Practical	Subject Code: [illegible]
No. of lectures Allotted per week: [illegible]	No. Of lectures Conducted per Semester: [illegible]	No. Of lectures Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Taught/Conducted with remarks	No. of lectures
Nov	1. Programming Raspberry Pi: Hardware preparation and installation 2. Operational Amplifiers Circuit and its gain monitoring with DMM 3. LDR & Light dim LED with Pulses with a fixed [illegible]	All proposed topics were covered	[illegible]
Dec	4. DC Current Controller and signal [illegible] using NPN 5. LDR & LED based Passive Proximity Detector using Arduino [illegible]	All proposed topics were covered	[illegible]
Jan	6. Designing Sensor Control PWM technique (signal based speed control using Line Follower) [illegible] 7. Node RED & [illegible] to Internet of Things 8. Controlling an output of sensor of DHT Temperature with Raspberry Pi [illegible]	All proposed topics were covered	[illegible]
Mar	9. Project a set of [illegible] on any IoT platform (to any cellular network service) 10. Interface a [illegible] sensor and send its value to an [illegible] on the internet using any cellular phone [illegible]	All proposed topics were covered	[illegible]

Signature of Course Teacher: [illegible]

Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

Facility Plan and Implementation Record (FIR) [illegible]

Organization	[illegible]
Name of Activity	[illegible]
Class [illegible]	Subject: [illegible] Subject Code: [illegible]
No. of Periods Allotted per week: [illegible]	No. of Periods Conducted per Semester: [illegible] No. of Periods Allotted per Semester: [illegible]

Month of Working	Work Proposed	Topic Covered towards [illegible]	No. of Periods
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

Signature of Coordinator: [illegible]

Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Programme		B.Sc. Computer Science
Name of teacher		Mr. [illegible]
Class: I / II / III / IV Semester: [illegible]	Subject: Android Application Development - Practical	Subject Code: [illegible]
No. of hours allotted per week: (2+4)	No. Of hours allotted per Semester: 36	No. Of Sections Allotted per Semester: (2)

Month of teaching	Topic Proposed	Topic Covered in the month	No. of Sections
June	1. a. Write a program using Kotlin for natural arithmetic and logic. b. Program with OOPS. 2. Create an Android application to design a form using different layouts and UI including Button, Checkbox, Textview, Radio Button etc. to collect user interaction in a Class Entry Form. Notice of Update 3. Create an application to create Image Flipper and Image Gallery. a. Gallery for displaying user	All proposed topics were covered	12
July	3. a. Create an Android application to demonstrate static and explicit intents. b. Create an application to demonstrate physical performance. 4. a. Create an form to apply intents to demonstrate the use of Broadcast Receivers. b. Create an Android application to create and send notifications. 5. a. Create an Android application to demonstrate SMS. Send messages. b. Create an Android application to display current date and allow the user to know one is. 6. a. Create a media player application in Android that plays audio. Implement play, pause and stop functions. b. Create an Android application to use a camera and capture images. Display those on the screen. 7. a. Create an Android application to implement Notification and Alerting notification. b. Create an Android application that stores e.g. Name of Student, Course Name, Marks Obtained.	All proposed topics were covered	16
Aug	8. Create an Android application to record the current location. 9. Create a simple Android application to store and retrieve data in the SQLite database. 10. Create a simple Android application to work with Firebase. Do database and authentication APIs.	All proposed topics were covered	08

Signature of Course Teacher: [illegible]

Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Record (TPIR)

Department	B.Sc. (Computer Science)
Name of Teacher	Mrs. [illegible]

Class: [illegible]	Subject: Advanced Application Development - Theory	Subject Code: [illegible]

No. of lectures Attended per week: [illegible]	No. of lectures Conducted per Semester: [illegible]	No. of Lectures Attended per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Out of Covered with remark	No. of lectures
Dec	[illegible]	[illegible]	[illegible]
Dec	[illegible]	[illegible]	[illegible]
Dec	[illegible]	[illegible]	[illegible]
Jan	[illegible]	[illegible]	[illegible]
Feb	[illegible]	[illegible]	[illegible]
Mar	[illegible]	[illegible]	[illegible]

Signature of Coordinator: _____

Signature of Subject Teacher: _____

[illegible]

[illegible]

[illegible]

[illegible]	[illegible]	
[illegible]	[illegible]	
[illegible]	[illegible]	
[illegible]	[illegible]	

Month of teaching	Topic Assigned	Topic Taught as per lesson plan	No. of lectures
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

Signature of Class Teacher:	Signature of Subject Teacher:

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department	[illegible]
Name of Faculty	[illegible]
Class: [illegible] Semester: [illegible]	Subject: Research Methodology – Theory / Subject Code: [illegible]
No. of Lectures Allotted per week: [illegible]	No. of Lectures Conducted per Semester: [illegible] / No. of Lectures Allotted per Semester: [illegible]

Month of Teaching	Topic Proposed	Topic Actually covered with remarks	No. of lectures
Nov	Introduction to Research Methodology, Meaning of Research, Objectives of Research, Motivations in Research, Types of Research, Research Approaches, Significance of Research.	All proposed topics were covered	[illegible]
Nov	Research Methods vs Methodology, Defining the Research Problem, Formulating a Research Problem, Tools for Data Collection, Sampling Design, Characteristics of Hypothesis Testing.	All proposed topics were covered	[illegible]
Dec	Data Diagram for Qualitative Testing, Type I and Type – II errors, Null Hypothesis, Alternative Hypothesis, Theories of Testing, Preparing the Tool, How to Prepare the Title, How to Lay the Outline and Additions, How to Prepare the Abstract, How to Write the Introduction.	All proposed topics were covered	[illegible]
Feb	How to Write the Materials and Methods Section, How to Write the Results, How to Write the Discussion, How to Write the Acknowledgements, How to Cite the References, Preparing the Tables and Figures, How to Prepare Effective Tables, How to Prepare Effective Graphs, How to Prepare Effective Photographs, Publishing the Paper, Rights and Permissions, How to Submit the Manuscript, How and Where to Use Bibliography.	All proposed topics were covered	[illegible]
Mar	How to Write a Thesis, Characteristics of Research, Ethical issues in research	All proposed topics were covered	[illegible]

Signature of Evaluator: [illegible]

Signature of Subject Teacher: [illegible]

Teaching Plan Computer Science Department 2023-2024
U.G.B.Sc. (COMPUTER SCIENCE)
SEMESTER-V

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department	U.G. (Computer Science)
Name of teacher	Dr. Sukhendu Kumar

Paper: [illegible] Subject: Artificial Intelligence - Theory Subject Code: [illegible]

No. of lectures allotted per week: [illegible] No. of lectures Covered per Semester: [illegible] No. of lectures scheduled per Semester: 45

Month of teaching	Topic Proposed	Topic Actually covered	No. of lectures
Dec	Introduction to AI and Intelligent Agents, Search: AI Foundations, Theory and state of the Art of Intelligent Agents, Agents and Environment, Nature of Environment, Structure of Agents.	All proposed topics were covered	[illegible]
July	Problem Solving by searching, Problem Solving and Agents, Uninformed Search Strategies, Informed Search Strategies, Knowledge Representation, Reasoning, and Machine Learning, Knowledge Representation and Reasoning, Propositional Logic, First Order Logic, Inference, Horn Clauses, Forward and Backward Chaining, Resolution, Machine Learning, Forms of Learning, Decision & Non-Decision Models, Classification, Regression, Reinforcement, Decision Trees, ANN	All proposed topics were covered	[illegible]
Aug	Model-on Neural Networks, Feed-forward Networks, Training Neural Networks, Model-on Probabilistic Models, Uncertainty in Learning, and Reinforcement, Learning, Probabilistic models, Unsupervised Learning, Learning with Complete Data, Naive Bayes Classifier, Learning with Hidden Variables: The EM Algorithm	All proposed topics were covered	[illegible]
Sep	Unsupervised Learning, Concept of Dimensionality Reduction, Association, Mark Mining, Reinforcement Learning, Concept of Reinforcement Learning, Markov Decision Process, Markov Models	All proposed topics were covered	[illegible]

Signature of Coordinator: Signature of Subject Teacher:

[illegible]

[illegible]

Teaching Plan and Implementation Record (2021-22)

Department	[illegible]
Name of teacher	[illegible]

[illegible]	Subject: [illegible]	Subject Code: [illegible]
No. of lectures allotted per week: [illegible]	No. of lectures allotted per Semester: [illegible]	No. of lectures delivered per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Actually covered with remarks	No. of lectures
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

Signature of Coordinator:	Signature of Subject Teacher:

[illegible]

[illegible]

Teaching Plan and Implementation Record (2021-22)

Programme:	B.Sc. Computer Science
Name of teacher:	Mr. [illegible]

Class: [illegible] Semester: [illegible] Subject: Information & Network Security – Theory Subject Code: [illegible]

No. of lectures allotted per week: [illegible] No. of lectures allotted per Semester: [illegible] No. of lectures allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Covered (with remarks)	No. of lectures
June	Introduction: Security Trends, The OSI Security Architecture, Security Attacks, Security Services, Mechanisms, Classical Encryption Techniques: Symmetric Cipher Model, Substitution Techniques, Transposition Techniques, Steganography, Block Cipher Principles, The Data Encryption Standard, The Strength of DES, AES Cipher, Multiple Encryption and Triple DES, Block Cipher Modes of Operation, Stream Ciphers, Public Key Cryptography and RSA: Principles of Public Key Cryptosystems, The RSA Algorithm	All proposed topics were covered	[illegible]
July	Key Management, Public Key Cryptosystems, Key Management, DES, Without Key Exchange, Message Authentication and Hash Functions: Authentication Requirements, Authentication Functions, Message Authentication Codes, Hash Functions, Security of Hash Functions and Macs, Secure Hash Algorithm, SHA-1, Digital Signature and Authentication: Digital Signature, Authentication Protocols, Digital Signature Standard, Authentication Applications: Kerberos, X.509 Authentication Service, Public Key Infrastructure	All proposed topics were covered	[illegible]
Aug	Electronic Mail Security, Pretty Good Privacy, S/MIME, IP Security: Overview, Architecture, Authentication Header, Encapsulating Security Payload, Combining Security Associations, Key Management, Web Security: Web Security Considerations, Secure Socket Layer and Transport Layer Security, Secure Electronic Transaction, Intruders, Intrusion Detection, Password Management, Malicious Software: Viruses and Related Threats, Virus Countermeasures, DMZ Networks, Firewall Design Principles, Types of Firewalls	All proposed topics were covered	[illegible]

Signature of Coordinator: [illegible] Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Report (2023-24)

Department	[illegible]
Name of teacher	[illegible]

[illegible] Subject: Information & Network Security (Practical) Subject Code: [illegible]

No. of lectures Allotted per week: [illegible] No. Of lectures Conducted per Semester: [illegible] No. Of lectures Scheduled per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Lecture actually taken	No. of lectures
July	[illegible]	[illegible]	[illegible]
Aug	[illegible]	[illegible]	[illegible]

Signature of Subject Teacher: _____

Signature of Subject Teacher: _____

[illegible]

[illegible]

Teaching Plan and Implementation Record (2021-24)

Programme	[illegible]
Name of Teacher	[illegible]

Class: [illegible] Semester: [illegible]	Subject: [illegible]	Subject Code: [illegible]

No. of lectures Allotted per week: [illegible]	No. [illegible] Lectures Conducted per Semester: [illegible]	No. [illegible] Lectures Allotted per Semester: [illegible]

Month of Teaching	Topic Proposed	Topic Actual covered with remarks	No. of lectures
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

Signature of Teacher: [illegible]

Signature of Principal: [illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Record (2022-23)

Department	B.Sc. (Computer Science)
Name of teacher	Ms. Asha Chaithra

Class: [illegible] Semester: V Subject: Linux Server Administration – Practical Subject Code: [illegible]

No. of lectures Allotted per week: [illegible] No. Of lectures Conducted per Semester: [illegible] No. Of lectures Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Actual covered with remarks	No. of lectures
July	1. Install DHCP Server in Linux (RH)	All proposed topics are covered	[illegible]
August	2. Setup static IP, Gateway, Change in name IP address, Disable IPv6 of network card, Configure hostnames, Configure the hosts remote access and networking, Stop and remove FTP, setup clock setting for positions of year, date & time, Setup firewalls 3. Configure NFS Server (NFSv3, Install and configure NFS, Configure FTP, Create & Share and Mountpoints	All proposed topics are covered	[illegible]
September	4. Web Server, Apache and its Configuration, Configure SSH server to manage a server from the remote machines, OpenSSH, Client and Windows 5. Install DNS server, BIND, Configure DNS, setup which resolves domain name to IP address, Install BIND, Configure BIND, Start, stop, Test, place in active, Firewall 6. Configure DHCP Server, Configure DHCP Dynamic Host Configuration Protocol Server, Configure NTP, Configure Time Synchronization using NTP, Configure NTP Client, Windows and Windows Client NTP	All proposed topics are covered	[illegible]
October	7. Configure LDAP Server, Configure LDAP Server to store centralized accounts in some local machine, Add LDAP User Accounts to the networks, Install phpLDAPadmin to operate LDAP server using Web browser 8. Configure NIS Server to share users accounts in some local networks, Configure NIS Client to bind NIS Server 9. MySQL/MariaDB, Install, Configure Database server, Install phpMyAdmin to operate MySQL on web browser from Clients 10. Install Samba to share folders in Windows Workgroup and Linux	All proposed topics are covered	[illegible]

Signature of Teacher: [illegible] Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Record (2025-26)

Department	[illegible]
Name of Teacher	[illegible]

Class: [illegible] Semester: [illegible] Subject: [illegible] Subject Code: [illegible]

No. of lectures delivered per week: [illegible] No. of lectures delivered per Semester: [illegible] No. of lectures delivered per Trimester: [illegible]

Month of teaching	Topic Proposed	Topic Taught as per Lesson plan with remarks	No. of lectures
[illegible]	[illegible]	[illegible]	[illegible]
July	[illegible]	[illegible]	[illegible]
Aug	[illegible]	[illegible]	[illegible]

Sept	[illegible]	[illegible]	[illegible]
Oct	[illegible]	[illegible]	[illegible]
Nov		[illegible]	[illegible]
Signature of Candidate:		Signature of Subject Teacher:	

[illegible]

[illegible]

Teaching Plan and Implementation Record (DETAIL)

[illegible]	[illegible]
[illegible]	[illegible]

[illegible] Semester: [illegible] Subject: [illegible] Programming - Practical Subject Code: [illegible]

No. of Sections Allotted per week [illegible] No. Of Sections Allotted per Semester [illegible] No. Of Sections Allotted per Semester [illegible]

Month of teaching	Topic Proposed	Topic Actually Covered	No. Of Sections
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		[illegible]	[illegible]

Signature of [illegible]

Signature of Subject Teacher

[illegible]

[illegible]

[illegible]

Regulation		[illegible]	
Name of teacher		[illegible]	
Class: [illegible] Semester: [illegible]	Subject: Project Management - Theory	Subject Code: [illegible]	
No. of lectures scheduled per week: [illegible]	No. of lectures conducted per Semester: [illegible]	No. of lectures scheduled per Semester: [illegible]	
Month of teaching	Topic Proposed	Topic Actually Covered in the month	No. of lectures
Aug	Introduction to Project Management Project Life cycle and Level, Project Charter & Risk Management Project Planning & Project Management Project Integrated Management Project integrated planning and activities, Change management and project closure, Lessons Learned and knowledge transfer	All proposed topics are covered	[illegible]
Sep	Advanced Topics in Project Management Agile Project Management in the Digital Age Efficient People Management in Projects, Project Stakeholders and Effective Project Communication, Statistics and accountability, Ethical considerations in project management, Professional responsibility, attributes of a leader	All proposed topics are covered	[illegible]
Signature of Coordinator:		Signature of Subject Teacher:	

[illegible]

Teaching Plan: Computer Science Department 2023-2024
T.Y.B.Sc. (COMPUTER SCIENCE)
SEMESTER-VI

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department:	B.Sc. (Computer Science)
Name of teacher:	Dr. Mahendra Kumar

Class: T.Y.B.Sc.(CS) Semester: VI Subject: Data Science - Theory Subject Code: [illegible]

No. of lectures allotted per week: [illegible] No. of Lectures Conducted per Semester: [illegible] No. of Revisions Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Covered with reference	No. of lectures
Jan	Introduction to Data Science and Data Preprocessing: Data Types and Sources, [illegible] Data cleaning, Data transformation, Data merging, Data Wrangling and Feature Engineering, Feature selection, Dimensionality Reduction, Tools and Libraries.	All groups of regular [illegible]	[illegible]
Feb	Data Analytics and Machine Learning: Exploratory Data Analysis, Data Representation, Machine Learning, Model Evaluation and Choice, Supervised Learning, Unsupervised Learning.	All groups of regular [illegible]	[illegible]
Mar	Data Visualization: Data Visualization and Management, Graphical Analysis Techniques, Data Visualization and Communication, Types of visualization, Visualization tools, Data Management: Data pipelines, data collection, transformation, and loading of ETL, Data governance and interoperability, standards, Data privacy and security considerations.	All groups of regular [illegible]	[illegible]

Signature of Coordinator: _____ Signature of Subject Teacher: _____

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. Computer Science
Name of Teacher	Dr. Mahendra Ramakant

Class: [illegible] Semester: [illegible] Subject: [illegible] Subject Code: [illegible]

No. of Lectures Allotted per week: [illegible] No. of Lectures Conducted per Semester: [illegible] No. of Practicals Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Taught/ Practical conducted with remarks	No. of Lectures
June	[illegible]	[illegible]	[illegible]
July	[illegible]	[illegible]	[illegible]
Aug	[illegible]	[illegible]	[illegible]
Sept	[illegible]	[illegible]	[illegible]

Signature of Coordinator: [illegible]

Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Programme		Batch: [illegible]	
Name of Faculty		Sem: [illegible]	
Course: [illegible]	Subject: Cloud Computing and Web Services (Theory)	Subject Code: [illegible]	
No. of lectures Allotted per week: [illegible]	No. Of lectures Covered per Semester: [illegible]	No. Of lectures Allotted per Semester: [illegible]	
Month of Teaching	**Topic Proposed**	**Topic Taught with remarks**	**No. of Lectures**
Jan	Cloud Computing Basics and Web Services	All topics as per syllabus completed	[illegible]
Feb	Introduction to Cloud computing Cloud's operational Platform, Security, Interoperability, Cloud Infrastructure Operation Office 365, Administrability, Interoperability, Cloud Security, Services, Safety and Cloud Security Manage Production Tasks, Cloud Platform Requirements, Access the organization's policies, Approaches and Cloud Collaboration, Business Intelligence, Cloud Provider Public Relationships	All topics as per syllabus completed	[illegible]
Mar	Cloud Applications Cloud Applications, Interoperability in Associated and Accounting, Classification considerations Cloud Platform, Infrastructure as a service, Cloud Platform, Architecture Understanding Microsoft Azure Services, Classification Classification, Introduction to Microsoft's Operational and Analytics Stack Classification operations, Classification, Cloud Office, Business model agreements, Quotes, Price list, cloud Portfolio, Blocks, Customer Agreements, Partnership model, Microsoft Energy Partnership, Company Agreements, Analytics and sales, Cloud Office, Transformation, Customer Portfolio and Offers	All topics as per syllabus completed	[illegible]
Apr	Environmental, Agreements and Environmental Management Plans GDPR, Technology and GDPR, Providing complete Information with Security Cloud Security & Data Protection (CPS)	All topics as per syllabus completed	[illegible]

Signature of Coordinator: Signature of Subject Teacher:

[illegible]

Teaching Plan and Implementation Record (2024-24)

Department	[illegible]
Name of Teacher	[illegible]
Class: [illegible] Semester: [illegible]	Subject: Cloud computing and Web Services - Practical / Subject Code: [illegible]
No. of lectures Allotted per week: [illegible]	No. Of lectures Covered per Semester: [illegible] / No. Of lectures Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic to be Covered with remarks	No. of lectures
Feb	Define a single virtual machine [illegible] Configure Remote Desktop and [illegible] Different platforms like [illegible] and .NET Create a Sample MASH concept Create a Sample REST Service Develop application to convert Google's search, Google's Map REST[illegible] Web services	All proposed topics were covered	06
Mar	Installation and configuration of virtualization using KVM Develop applications to download things when from server or upload things [illegible] using [illegible] services Implement [illegible] mechanisms, [illegible] Internet Information Services on a Windows Azure Storage Implement Windows Azure Cloud Services, [illegible] Platform as a Service (PaaS) Using [illegible] Framework, develop applications that include a simple scenario. Workflow gets an order to process [illegible] the contents. It must define the back-end [illegible] Framework, including defining contracts, implementation of services, and workflow orchestration logic and worker processes to [illegible] Implementation of Data-link multicast and [illegible] protocols	All proposed topics were covered	14

Signature of Teacher: _____ Signature of Subject Teacher: _____

[illegible]

[illegible]

Teaching Plan and Implementation Report (2023-24)

Department	B.Sc. Computer Science
Name of Faculty	Mr. Chetan Kumar
Class: [illegible] Semester: [illegible]	Subject: Wireless and Mobile Networks - Theory / Subject Code: [illegible]
No. of lectures Allotted per week: [illegible]	No. of lectures Conducted per Semester: [illegible] / No. of Periods Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Covered with remarks	No. of lectures
June	Introduction and Overview of Wireless Mobile Networks: Basic System Standards, Evolution and Generations, Advantages and challenges, Applications, Mobile Node Technologies, Network Operations, GPS, Operating Environment, Mobile Technology, Network architecture, Operational goals and figures of merit, Design principles for WMN, Overview and Layers of WMN, Cellular networks, Wireless Mobile Network Planning, Services and Advice, Sustainable Observation of Wireless Mobile Network Operating Features, Examples of WMN Operating Systems, Advice Approach in Wireless Mobile Networks, Characteristics and Influence of Mobile Networks in WMN, Energy Efficiency Considerations in Ad Hoc Networks, Security and Privacy in Ad Hoc Networks, Integration Examples of WMN (3G, 3G Ad Hoc Networks)	All proposed topics were covered	[illegible]
July	Mobile Ad Hoc Networks: Fundamentals of IEEE Protocols, Network AAA, Case Study Routing in WMN, Mobility Models and Routing Issues in Wireless Mobile Networks, IEEE 802.11 (A,B,G,N,AC) Standard Case Study, Routing Strategies in Wireless Mobile Networks, Transport Control Protocol, Traditional Transport Issues in Wireless, Transport Protocol Design Issues, IEEE 802.16 (WiMAX), TCP/IP [illegible]	All proposed topics were covered	[illegible]
Mar	Wireless Environment Complexity, Ad Hoc Administration, Network Administration, Signal Propagation, Multipathing, Multiplexing, Spread spectrum, Cellular systems, Telecommunication, Satellite, and Broadcast Systems, Satellite and Broadcast Systems, [illegible] Mobile services, System architecture, Radio interface, Protocols, Localization, Paging, Handover, [illegible]	All proposed topics were covered	[illegible]
Apr	[illegible] Mobile Systems Overview, [illegible] Network architecture, Protocol architecture, [illegible] and [illegible] Satellite Systems Overview, [illegible] Applications, Basics of [illegible] Routing, Localization, Handover	All proposed topics were covered	[illegible]

Signature of Coordinator: _____

Signature of Subject Teacher: _____

[illegible]

[illegible]

Teaching Plan and Implementation Record (2021-22)

Programme:	B.Sc. Computer Science
Name of Teacher:	Mr. [illegible]

Class: [illegible] Semester: [illegible] Subject: Science and Social Sciences - Degree Subject Code: [illegible]

No. of Sessions Allotted per week: [illegible] No. of Sessions Covered per Semester: [illegible] No. of Sessions Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Taught as scheduled with reasons	No. of Sessions
Jun	Understanding the Sensor Data Hardware of Pi Cig Sensor, Technologies used, Data Sensor Graphical User Interface (GUI) and understanding Tech Pi components concepts - Events, Commands, and Talk - and model - And Component Understanding [illegible] Use - Main code data communication - Basic PC value communication, Events and controls a simple office [illegible]	All proposed topics were covered	[illegible]
Feb	Understanding, Running and Analyzing Sensor Data in a controlled, Under a Basic IAQUET Implementation consideration for [illegible] and [illegible] Engineers - Working where [illegible] Create IAQ [illegible] of [illegible] implementation for [illegible] Sensors	All proposed topics were covered	[illegible]
Mar	Connect Sensor values Network with Electronic services Create a student [illegible] Cell Phone, Laptop/Office Server, Web Services and Web Server, Sensitive Connected Software Store	All proposed topics were covered	[illegible]

Signature of Teacher: [illegible]

Signature of Coordinator: [illegible]

[illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Record (2022-23)

Degree/course:	[illegible]
Name of faculty:	[illegible]

Class: [illegible]	Subject (Object Oriented Programming – Theory)	Subject Code: [illegible]

No. of lectures Allotted per week: [illegible]	No. Of lectures Conducted per Semester: [illegible]	No. Of lectures Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Out Covered with course	No. of lectures
June	Introduction: Ways to Conduct Object Oriented Programming, Advantages, Interpretation, Evaluating Multitasking Computers, Ins/Bytes, MSD Concatenation, Inline and ARM Certificate Types of DPIS Records, Functions in Programming, Critical Nonfunction of Engineering, Functions, Types, Pre Processor and Conditional Port Scanning Network Scanning, Vulnerability Scanning, CVE Scanning Methodology, Flag Scanning Techniques, Stealth Connection Detection, [illegible]	All proposed topics were covered	[illegible]
July	Types of Processors, Advantages and Other Operation Systems Backup, Performance Analysis, Techniques, Types of Processors, Advantages and Other Operation Techniques, Functional Principles, Number Analysis, Performance Interpretation of Backing, Access and Process Scheduling, AMP Scanning, MAC Flooding, DHCP Spoofing Vulnerability, Stalking Communications Control of Scheduling, ARP Scanning, MAC Flooding, DHCP Spoofing Vulnerability, Stalking Communications Control of Scheduling, Types of Port Scanner, Modeling of Port scanner, [illegible], "Stealth" Scanner, "Spoof" Flooding, [illegible], Communications, Secondary Processing, Spoofing vs. Hijacking, Types, Dependent Traditional, Basic, Performance Backing Web Servers, Web Server Vulnerabilities, Attacks against Web Servers, Cache Poisoning Techniques, Web Server Hardening	All proposed topics were covered	[illegible]
Mar	Mode, Supervisor Vulnerabilities, MAC Implementation Backing, Mode, Supervisor Mode, Strength Hardening Communications, Multi Dental Processed Cracking Techniques, Authentication Rights, Processed Checkers, Communications MAC, Implement Mode, DOS Service Vulnerabilities, Communications Radio Conditions Types, Basic Broad Radio Conditions, Mobilities Technologies Wireless Hacking, WEP, WPA Authentication Mechanisms, and Cracking	All proposed topics were covered	[illegible]
Apr	Technologies, Mobile Networks, Wireless Access Points, Wireless Hacking Techniques, Securing Wireless Networks, Wireless Hacking Methodologies, Methodologies, Steps, Footprinting Tools, Port Scan Methodology	All proposed topics were covered	[illegible]

Signature of Course Instructor:	Signature of Subject Teacher:

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department	[illegible]
Name of Teacher	[illegible]

Class: [illegible] Semester: [illegible] Subject: [illegible] Subject Code: [illegible]

No. of lectures Allotted per week: [illegible] No. Of lectures Conducted per Semester: [illegible] No. Of lectures Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Yet Covered with remarks	No. of lectures
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

Signature of Faculty: [illegible]

Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Report (PRIT-[illegible])

Programme:	M.Sc. [illegible]
Name of Faculty:	Mr. [illegible]

Class: [illegible] Semester: [illegible] Subject: Customer Relationship Management / Elective Subject Code: [illegible]

No. of Lectures Allotted per week: [illegible] No. of Lectures Conducted per Semester: [illegible] No. of Lectures Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Taught and Activities with remarks	No. of Lectures
June	Understanding Customer Relationships, Introduction to CRM, Managing the customer journey, Managing customer experiences and offers	[illegible]	[illegible]
July	Strategic and Operational CRM, Customer portfolio management	[illegible]	[illegible]
May	Marketing automation, Service automation, Sales force CRM Developing and managing customer-related analytics, Capturing customer-related data, Internal and environmental data, Developing a customer-centred mindset, Data integration, Data warehousing, Data marts, Analytics for CRM strategy and tactics, Big data analytics, Analytics for customer profiles, ways to generate analytical insights, Data mining procedures, artificial intelligence (AI), machine learning (ML) and deep learning (DL) Implementing CRM, Introduction, Develop the CRM strategy, Audit CRM processes, benchmarks, social media and partner networks, project implementation, governance, evaluation Case studies and success stories related to CRM	[illegible]	[illegible]

Signature of Coordinator: [illegible]

Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department:	Information Technology
Name of Teacher	Mr. [illegible]

[illegible] Semester: III
Subject: Programming Principles with C
Subject Code: [illegible]
No. of lectures allotted per week: 04
No. of lectures Covered per Semester: 39
No. of lectures Allotted per Semester: 48

Month of Teaching	Topic Proposed	Topic Covered	No. of lectures per topic
July	Introduction	Introduction	[illegible] lecture commenced from 13th July 23 1
August	Dynamic program characteristics Type of operators 1. Programmer Control Flow Functions and Program Structure	Dynamic program characteristics Type of operators 1. Programmer Control Flow Functions and Program Structure	10
September	User defined and Library functions, Function parameters, Return values, Recursion, External variables, Scope Rules, Standard Input and Output, Formatted Output printf() and Formatted Input scanf(), Line input and Output, Error Handling, Stdlib and Ctype Header Files	User defined and Library functions, Function parameters, Return values, Recursion, External variables, Scope Rules, Standard Input and Output, Formatted Output printf() and Formatted Input scanf(), Line input and Output, Error Handling, Stdlib and Ctype Header Files	8
October	Pointer and Array, Pointer and Addresses Pointer Array Structures File management in C	Pointer and Array, Pointer and Addresses Pointer Array Structures File management in C	11

Signature of Coordinator: _____ Signature of Subject Teacher: _____

LAXMI CHANDMAL TRUST'S
SHETH LUJI & SHMC COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. E. BALAKRISHNAN MARG, ANDHERI (E), Mumbai - 400 059

Teaching Plan and Implementation Record (2023-24)

Department	Information Technology
Name of Teacher	Ms. Sunita Tripathi

Class: FYBSc IT **Semester:** III
Subject: Programming Principles with C Practical
Subject Code: 1107T21
No. of lectures Allotted per week: 04 (hrs lecture)
No. Of lectures Covered per Semester: 63
No. Of lectures Allotted per Semester: 60

Month of Teaching	Topic Proposed	Topic Covered	No. of lectures per topic
July	1. Flowchart a. Write an algorithm and draw flowchart for area of circle, height, the given no. is even or odd, to print 1 to 10 numbers, for sum of 1 to 5 numbers, to compute the addition of digits of a given number	1. Flowchart a. Write an algorithm and draw flowchart for area of circle, to print the given no. is even or odd, to print 1 to 10 numbers, for sum of 1 to 5 numbers, to compute the addition of digits of a given number	4
August	2. Linear Basic Programs 3. Statements 4. Pattern Printing 5. Functions 6. Arrays	2. Linear Basic Programs 3. Statements 4. Pattern Printing 5. Functions 6. Arrays	14
September	7. Strings 8. Pointers	7. Strings 8. Pointers	12
October	9. File handling 10.a. Create a mini project on "Bank management system". The program should be menu driven	9. File handling 10.a. Create a mini project on "Bank management system". The program should be menu driven Revision	10

Signature of Coordinator:	Signature of Subject Teacher:

SAFEE CHARITABLE TRUST'S
SHETH L.U.J. & SHRI M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. E. MOSES ROAD, ANTOP HILL, MUMBAI - 400 037

Teaching Plan and Implementation Record (2020-21)

Department	Information Technology
Name of Teacher	Mrs. Sneha Gaonkar

Class: B.Sc. IT Semester: I
Subject: DIGITAL LOGIC AND APPLICATIONS
Subject Code: USIT101

No. of lectures Allotted per week: 10
No. Of lectures Covered per Semester: 50
No. Of lectures Attended per Semester: 00

Month of Teaching	Topic Proposed	Topic Covered	No. of lectures per topic
July	I Digital Systems and Binary numbers	I Digital Systems and Binary numbers upto binary code	6
August	II Boolean algebra and Gate	I Assignment Exam II Boolean algebra and Gate level minimization	10
September	III Combinational logic: IV Sequential circuits:	III Combinational logic IV Sequential circuits	13 (Four lectures were taken due to Sem-III Mother tongue Marathi literature New topics were covered upto month)
October	V Applications	I Assignment 2 Exams V Applications	03
Signature of Coordinator:		Signature of Subject Teacher:	

LAKSHMI CHARITABLE TRUST'S
SHRI M.J.J. B.M.N.V. COLLEGE OF APPL. SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN ROAD, SHENOY NAGAR, MUMBAI - 400 030

Teaching Plan and Implementation Record (2024-26)

Department	Information Technology
Name of Teacher	Ms. Sneha Sakhardeo

Class: B.Sc. IT Semester : I
Subject : DIGITAL LOGIC AND APPLICATIONS PRACTICAL
Subject Code: 24PT1P8
No. of Practicals Allotted per week:04 (Both Batches)
No. Of Practicals Covered per Semester: 30
No. Of Practicals Allotted per Semester: 60

Months of Teaching	Topic Proposed	Topic Covered	No. of Practicals per topic
August	1. Study of Basic gates and verify the Truth Tables. 2. Study of Universal gates and verify the Truth Tables of NAND and NOR gates. 3. Study of other gates and verify the Truth Tables of XOR and X-NOR gates 4 Fix implement and verify NAND and NOR as Universal gates. 5. Verifying De Morgan's laws. 6. Implement the given expressions using a minimum number of gates using Boolean Algebra. 7. Design and implement a combinational circuit for the given problem using minimization Techniques using K-maps 8. Design and implement Half adder	1. Study of Basic gates and verify the Truth Tables. 2. Study of universal gates and verify the Truth Tables of NAND and NOR gates. 3. Study of other gates and verify the Truth Tables of XOR and X-NOR gates 4 Fix implement and verify NAND and NOR as Universal gates. 5. Verifying De Morgan's laws. 6. Implement the given expressions using a minimum number of gates using Boolean Algebra. 7. Design and implement a combinational circuit for the given problem using minimization Techniques using K-maps. 8. Design and implement Half adder	16
September	9 Design and implement Full adder. 10. Design and implement B.C.D encoder. 11. Design and implement 3:8 decoder. 12. Study of Positive Level Triggered SR Flip-flop.	9 Design and implement Full adder. 10. Design and implement B.C.D encoder. 11. Design and implement 3:8 decoder. 12. Study of Positive Level Triggered SR Flip-flop.	10
October	Revision Practicals	Revision Practicals taken for both the batches	4

Signature of Coordinator: _____ Signature of Subject Teacher: _____

LAXMI CHARITABLE TRUST'S
SMT. H.L.U. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. E. MOSES GONSALVES MARG, ANDHERI (E), MUMBAI – 400 059

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. Information Technology
Name of Teacher	Nalini V. Upadhyay

Class : F.Y. B.Sc. IT Semester- I
Subject: Fundamentals of Database Management System
Subject Code: [illegible]

No. of lectures Allotted per week: [illegible]
No. of lectures Conducted per Semester: 43
No. of lectures Allotted per Semester: [illegible]

Month of Teaching	Topic Proposed	Topic Covered	No. of lectures per topic
July	Database system concept and Architecture, Introduction to SQL	Database system concept and Architecture, Introduction to SQL	8
August	Complex queries, Relational model and Relational database constraints, Relational Algebra.	Complex queries, Relational model and Relational database constraints	14 (Relational algebra was covered due to ganpati leave & health issue.)
September	Relational database design and further dependencies, Triggers, views, joining database tables and schema modification Query Processing and optimization Transaction management and concurrency control and recovery	Relational database design and further dependencies, Triggers, views, joining database tables and schema modification Query Processing and optimization Transaction management and concurrency control and recovery	17
October	Conceptual modeling and database design, Database Design theory and normalization	Conceptual modeling and database design, Database Design theory and normalization	12

Signature of Coordinator:	Signature of Subject Teacher:

VAVAI CHARITABLE TRUST'S
SREE SAI A.S.A. & SRI M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN ROAD, ANDHRA III, SELAMPUR - 600 069

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. Information Technology
Name of Teacher	Name: S. Lagamala

Class : IV B.Sc. IT Semester : I
Subject: Fundamentals of Database Management System Practical
Subject Code: 23IT1P5

No. of lectures allotted per week (5)
No. of lectures Covered per Semester : 90
No. of lectures allotted per Semester: 45

Month of Teaching	Topic Proposed	Topic Covered	No. of lectures per topic
July	3. Defining Data b. Using CREATE statement b. Using ALTER statement	3. Defining data a. Using CREATE statement b. Using ALTER statement	2
August	c. Using DROP statement d. Using TRUNCATE statement e. Using RENAME statement 4. Manipulating Data	c. Using DROP statement d. Using TRUNCATE statement e. Using RENAME statement 4. Manipulating data	10
September	5. Creating and managing the tables 6. Restricting and sorting data 7. Aggregate and Mathematical functions 8. Views and Joins	5. Creating and managing the tables 6. Restricting and sorting data 7. Aggregate and Mathematical functions 8. Views and Joins	8
October	9. Database trigger 10. Index 11. Draw E-R diagram and convert entities and relationships to relational tables for a given scenario a. Bank b. College 12. Write relational algebra queries for a given set of relations	9. Database trigger 10. Index 11. Draw E-R diagram and convert entities and relationships to relational tables for a given scenario a. Bank b. College 12. Write relational algebra queries for a given set of relations Revision	10

Signature of Coordinator: _____ Signature of Subject Teacher: _____

LAXMI CHARITABLE TRUST'S

M.T.B.L.U.J. & [illegible] COLLEGE OF ARTS, SCIENCE & COMMERCE

DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2019-20)

Department	B.Sc. IT
Name of Teacher	Ms. Sunni Trivedi

Class: B.Sc. IT Semester: III

Subject: Computational Logic and Discrete Structures

Subject Code: [illegible]

No. of lectures Allotted per week: 05

No. Of lectures Covered per Semester: 46

No. Of lectures Allotted per Semester: 60

Month of Teaching	Topic Proposed	Topic Covered	No. of lectures per topic
July	Set Theory	Set Theory	Lecture commenced from 29th July '19 8
August	Relations Functions and Algorithms Probability	Relations Functions and Algorithms Probability	14
September	Techniques of Counting Advanced Counting Techniques, Recursion Graph Theory	Techniques of Counting Advanced Counting Techniques, Recursion Graph Theory	15
October	Directed Graphs Binary Trees Ordered Sets and Lattices	Directed Graphs Binary Trees Ordered Sets and Lattices	9

Signature of Coordinator: _____

Signature of Subject Teacher: _____

SAINI CHARITABLE TRUST'S

[illegible] & SR NYAS COLLEGE OF ARTS, SCIENCE & COMMERCE

[illegible]

Teaching Plan and Implementation Record (2019-20)

Department	B.Sc. IT
Name of Teacher	Mr. Sunil Vasishi

Class: B.Sc. IT Semester: III

Subject: Computational Logic and Discrete Structures Practical

Subject Code: USITP3

No. of Practical Allotted per week (01-hour Batches)

No. of Practical Covered per Semester: 24

No. of Practical Allotted per Semester: 48

Month of teaching	Topic Proposed	Topic Covered	No. of Practical per topic
August	1. Set Theory 2. Functions and Algorithms	1. Set Theory 2. Functions and Algorithms	14
September	3. Probability Theory 1 4. Counting 1	3. Probability Theory 1 4. Counting 1	10

Signature of Coordinator:	Signature of Subject Teacher:

[illegible]

[illegible] COLLEGE OF ARTS, SCIENCE & COMMERCE

DR. S. RADHAKRISHNAN MARG, [illegible] (E), MUMBAI - [illegible]

Teaching Plan and Implementation Report (2023-24)

Department:	B.Sc. IT
Name of Teacher:	Ms. Neeraj Ghewde [illegible]

Class: B.Sc. IT Semester: III **Subject:** Technical Communication

Date: **Subject Code:** USMT109

No. of lectures Allotted per week: [illegible] No. Of lectures Expected per Semester: [illegible] No. Of lectures Allotted per Semester: [illegible]

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
July	Unit I: Fundamentals of Technical Communication Introduction, The process of communication, Language as a tool of communication, Levels of communication, The Flow of communication, Communication Networks, The importance of technical communication Barriers to communication Definition of Noise, classification of Barriers Non-verbal Communication Introduction, Definition, The significance of non-verbal, Forms of non-verbal communication, Types of non-verbal communication	Unit I: Fundamentals of Technical Communication – Introduction, The process of communication, Language as a tool of communication, Levels of communication, The Flow of communication, Communication Networks, The importance of technical communication Barriers to communication Definition of Noise, classification of Barriers Non-verbal Communication Introduction, Definition, The significance of non-verbal, forms of non-verbal communication, types of non-verbal communication	[illegible]
	Unit II: The Seven C's of Effective Communication: Completeness, Conciseness, Consideration, Concreteness, Clarity, Courtesy, Correctness Conversations Introduction, importance of Business conversation, Essential of Business conversation,	Unit II: The Seven C's of Effective Communication: Completeness, Conciseness, Consideration, Concreteness, Clarity, Courtesy, Correctness Conversations Introduction, importance of Business conversation, Essential of Business conversation, Conversation Management	[illegible]

August	Conversation Management Meeting and conference Introduction, Purpose of Meeting, planning a meeting, Meeting Process, meeting effective meeting, Evaluating meeting, planning conference, teleconferencing Group Discussion and team presentation Introduction, Benefits of GD, Workplace GD guidelines, Functional and non functional roles in GD, improving group performance, Assessment of group discussion, Team presentation Email communication Introduction, Advantages of email, problems in email communication, Email etiquettes Techniques of writing Effective Email Unit 3: Active Listening Introduction, Types of listening, Traits of good listener, Active or Passive listening, Importance of effective listening Effective presentation Strategies introduction, Defining purpose, Analyzing audience and Locale, Organizing contents, preparing outline, Visual Aids, Understanding, Business of delivery, Mock interview introduction, objectives, types of interview job interviews	Meeting and conference Introduction, Purpose of Meeting, planning a meeting, Meeting Process, meeting effective meeting, Evaluating meeting, planning conference, teleconferencing Group Discussion and team presentation Introduction, Benefits of GD, Workplace GD guidelines, Functional and non functional roles in GD, improving group performance, Assessment of group discussion, Team presentation Email communication Introduction, Advantages of email, problems in email communication, Email etiquettes Techniques of writing Effective Email Unit 3: Active Listening Introduction, Types of listening, Traits of good listener, Active or Passive listening, Importance of effective listening Effective presentation Strategies introduction, Defining purpose, Analyzing audience and Locale, Organizing contents, preparing outline, Visual Aids, Understanding, Business of delivery, Mock interview introduction, objectives, types of interview, job interviews	14
September	Unit 4: Business writing introduction, importance of written Business, five main strategies of writing business messages Communication Skill Business correspondence Business letter writing, common components of Business letter, Strategies for writing body of a letter, Types of Business letter, writing memos Business reports and proposal	Unit 4: Business writing introduction, importance of written Business, five main strategies of writing business messages Communication Skill Business correspondence Business letter writing, common components of Business letter, Strategies for writing body of a letter, Types of Business letter, writing memos Business reports and proposal	09
October	What is research? Steps in writing routine Business report, parts of report, corporate reports and Business proposals, Careers and Resume	What is research? Steps in writing routine Business report, parts of report, corporate reports and Business proposals, Careers and Resume introduction to career planning,	11

	Introduction to career building, resume format, traditional, electronic and video resumes, sending resume, follow up letters and online recruitment process Unit 5: Communication across functional areas: Financial communication, MIS Errors in Business Communication, Ethical communication.	resume format, traditional, electronic and video resumes, sending resume, follow up letters and online recruitment process Unit 5: Communication across functional areas: Financial communication, MIS Errors in Business Communication, Ethical communication.	
Remarks:	Values, ethics and communication, ethical dilemmas facing managers, strategic approaches to corporate ethics Creating and using visual Aids (Board, Models, Handouts, Charts and Graphs, Text Visuals, Formatting Computer generated charts, graphs and visuals	Values, ethics and communication, ethical dilemmas facing managers, strategic approaches to corporate ethics Creating and using visual Aids (Board, Models, Handouts, Charts and Graphs, Text Visuals, Formatting Computer generated charts, graphs and visuals	06
Signature of Coordinator:		**Signature of Subject Teacher:**	

[illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Record (2022-24)

Department:	B.Sc. IT
Name of Teacher:	Ms. [illegible]

Class: B.Sc. IT **Semester:** III **Subject:** Technical Communication Skills
Practical **Subject Code:** [illegible]

No. of Practicals Allotted per week: [illegible] **No. of Practicals Covered per Semester:** All **No. Of Practicals Allotted per Semester:** All

Month of Teaching	Topic Proposed	Topic Covered	No. of Practical per topic
July	1. Use of word processing tools for communication. a. Use of various tools like spell checker, header, footer etc. b. Make formal and informal letters, creating resume	1. Use of word processing tools for communication. a. Use of various tools like spell checker, header, footer etc. b. Make formal and informal letters, creating resume	[illegible]
August	2. Designing brochures and flyers using templates in word. 3. Writing reports, minutes of meeting, action plan. 4. Use of spreadsheet for data interpretation and data analysis. 5. Basic use of what if analysis using excel. 6. Visual Representation of data using excel – pie chart, line chart, bar chart etc. 7. Summarization of data using of pivot tables and chart in excel.	2. Designing brochures and flyers using templates in word. 3. Writing reports, minutes of meeting, action plan. 4. Use of spreadsheet for data interpretation and data analysis. 5. Basic use of what if analysis using excel. 6. Visual Representation of data using excel – pie chart, line chart, bar chart etc. 7. Summarization of data using of pivot tables and chart in excel.	[illegible]
September	8. Summarization of data using of pivot tables and chart in excel. 9. Use of presentation tools like PowerPoint for communication and presentation skills.	8. Summarization of data using of pivot tables and chart in excel. 9. Use of presentation tools like PowerPoint for communication and presentation skills.	[illegible]

October	8.a. Basic communication covering the following topics - Meaning people, Asking Questions and Design of questionnaires 8.b. Using netiquettes in online mode of communication using Zoom / Google Meet / MS Teams etc 9. Use of Mail etiquette for writing effective mails 10.a. Use of Mail merge and its features 10.b. Creating profile using linkedin	8.a. Basic communication covering the following topics - Meaning people, Asking Questions and Design of questionnaires 8.b. Using netiquettes in online mode of communication using Zoom / Google Meet / MS Teams etc 9. Use of Mail etiquette for writing effective mails 10.a. Use of Mail merge and its features 10.b. Creating profile using linkedin	06
Signature of Coordinator:		Signature of Subject Teacher:	

[illegible]

[illegible]

Teaching Plan and Implementation Record (2022-23)

Department:	B.Sc. IT
Name of Teacher:	Mr. Sumit Tripathi

Class: I T B.Sc. IT **Semester:** III
Subject: Object Oriented Programming with C++
Subject Code: [illegible]

No. of lectures Allotted per week: [illegible]
No. of lectures Covered per Semester: [illegible]
No. of lectures Allotted per Semester: [illegible]

Month of Teaching	Topic Proposed	Topic Covered	No. of lectures per topic
December	I. Object Oriented Programming	I. Object Oriented Programming	Sem. [illegible] commences from 12th December 2022. 1
January	II. Principles of OOPS A. Classes and Objects Constructors and Destructors	II. Principles of OOPS A. Classes and Objects Constructors and Destructors	11
February	III. Polymorphism Virtual Functions	III. Polymorphism Virtual Functions	11
March	IV. Program Development using Inheritance Exception Handling A. Templates Working with Files	IV. Program Development using Inheritance Exception Handling A. Templates Working with Files	11

Signature of Coordinator: _____ Signature of Subject Teacher: _____

[illegible] TRUST'S
[illegible] COLLEGE OF ARTS, SCIENCE & COMMERCE
[illegible] ROAD, [illegible], MUMBAI - [illegible]

Teaching Plan and Implementation Record (2021-24)

Department	B.Sc. IT
Name of Teacher	Ms. [illegible]

Class: F. Y. B.Sc. IT Semester-II
Subject: Object Oriented Programming Practical
Subject Code: [illegible]
No. of Practical Allotted per week: [illegible]
No. Of Practicals Covered per Semester: 24
No. Of Practicals Allotted per Semester: 60

Month of Teaching	Topic Proposed	Topic Covered	No. of Practicals per topic
January	1. Classes and methods 2. Using Friend functions	1. Classes and methods 2. Using Friend functions	11
February	3. Constructors and method overloading 4. Operator Overloading 5. Inheritance 6. Virtual functions and abstract classes 7. String handling	3. Constructors and method overloading 4. Operator Overloading 5. Inheritance 6. Virtual functions and abstract classes 7. String handling	10
March	8. Exception handling 9. File handling 10. Templates	8. Exception handling 9. File handling 10. Templates	3

Signature of Coordinator: _____ Signature of Subject Teacher: _____

[illegible]

[illegible] COLLEGE OF ARTS, SCIENCE & COMMERCE

DR. E. BALSARA ROAD, [illegible], MUMBAI – [illegible]

Teaching Plan and Implementation Record (2019-20)

Department	B.Sc. Information Technology
Name of Teacher	Mrs. Sneha Gaikwad

Class: F.Y.B.Sc. IT **Semester:** II
Subject: Fundamentals of Microprocessor and Microcontrollers
Subject Code: [illegible]

No. of lectures Allotted per week: [illegible]
No. Of lectures Covered per Semester: 47
No. Of lectures Allotted per Semester: 60

Mode of Teaching	Topic Proposed	Topic Covered	No. of lectures per topic
December	1 Microprocessor, microcontroller, and Assembly Language Microprocessor Architecture and Microprocessor System. 8085 Microprocessor Architecture and Memory Interface	1 Microprocessor, microcontroller, and Assembly Language Microprocessor Architecture and Microprocessor System 8085 Microprocessor Architecture and Memory Interface	3
January	2 Interfacing of I/O Devices Introduction to 8085 Assembly Language Programming Introduction to 8085 Instructions 4 Programming Techniques With Additional Instructions	2 Interfacing of I/O Devices Introduction to 8085 Assembly Language Programming Introduction to 8085 Instructions 4 Programming Techniques With Additional Instructions	23
February	Counters and Time Delays, Stacks and Sub-Routines, Interrupts, 32 Micro Controllers	Counters and Time Delays, Stacks and Sub Routines, Interrupts, 32 Micro Controllers	12
March	8 Interfacing Peripherals Peripherals The 8051 Microcontroller 8051 Programming in C 9 Designing Embedded System with 8051 Microcontroller Programming Embedded Systems Design And Development	8 Interfacing Peripherals Peripherals The 8051 Microcontroller 8051 Programming in C 9 Designing Embedded System with 8051 Microcontroller Programming Embedded Systems Design And Development	14

Signature of Coordinator: _____ Signature of Subject Teacher: _____

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department:	B.Sc. IT
Name of teacher:	Mrs. [illegible]

Class: I Y B.Sc. IT Semester: 2

Subject: Fundamentals of Microprocessor and Microcontrollers Practical

Subject Code: USITL2P2

No. of Practicals Allotted per week: 02 (Per Batch)

No. Of Practicals Covered per Semester: 13

No. Of Practicals Allotted per Semester: 48

Month of Teaching	Topic Proposed	Topic Covered	No. of Practicals per month
January	1. Perform the following Operations related to memory locations. 2. Simple assembly language programs. 3. Packing and unpacking operations. 4. Register Operations.	1. Perform the following Operations related to memory locations. 2. Simple assembly language programs. 3. Packing and unpacking operations. 4. Register Operations.	07
February	5. Multiple memory locations. 6. Calculations with respect to memory locations. 7. Assembly programs on memory locations.	5. Multiple memory locations. 6. Calculations with respect to memory locations. 7. Assembly programs on memory locations.	04
March	Practical no. 9 & 10 Using Cambridge	Practical no. 9 & 10 Using Cambridge	02

Signature of Coordinator: [illegible] Signature of Subject Teacher: [illegible]

[illegible]

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. IT
Name of Teacher	[illegible]

Class: [illegible] **Semester:** [illegible]
Subject: Web Application Development
Subject Code: [illegible]

No. of Lectures Allotted per week: [illegible]
No. Of Lectures Covered per Semester: [illegible]
No. Of Lectures Allotted per Semester: [illegible]

Month of Teaching	Topic Proposed	Topic Covered	No. of Practical per hours
December	[illegible]	[illegible]	[illegible]
January	HTML 5 1. HTML5 Page layout and navigation HTML5 Tables, Forms and Media	HTML 5 1. HTML5 Page layout and navigation HTML5 Tables, Forms and Media	18
February	2. Java Script Operators Statements Core JavaScript Properties and Methods of Date Document and BJ event objects	2. Java Script Operators Statements Core JavaScript Properties and Methods of Date Document and BJ event objects	[illegible]
March	Events and Event Handlers 3. PHP 1. Advanced PHP and MySQL	Events and Event Handlers 3. PHP 1. Advanced PHP and MySQL	[illegible]

Signature of Coordinator: _____ **Signature of Subject Teacher:** _____

[illegible] CHARITABLE TRUST'S

[illegible] & [illegible] COLLEGE OF ARTS, SCIENCE & COMMERCE

DR. S. RADHAKRISHNAN MARG, BRAHAN [illegible], MUMBAI – [illegible]

Teaching Plan and Implementation Report (2023-24)

Department	B.Sc. IT
Name of Teacher	Ms. [illegible] Chaturghare

Class: [illegible] B.Sc. IT Semester: [illegible]
Subject: Web Application Development Practical
Subject Code: [illegible]
No. of Practical Allotted per week: [illegible]
No. of Practical Covered per Semester: [illegible]
No. Of Practical Allotted per Semester: [illegible]

Month of Teaching	Topic Proposed	Topic Covered	No. of Practical per hours
January	1. Use of Basic Tags 2. Image maps, Tables, Forms and Media 3. Java Script 4. Control and looping statements and Java Script references	1. Use of Basic Tags 2. Image maps, Tables, Forms and Media 3. Java Script 4. Control and looping statements and Java Script references	[illegible]
February	5. Basic PHP 1 6. Basic PHP 2 7. String Functions and arrays	5. Basic PHP 1 6. Basic PHP 2 7. String Functions and arrays	[illegible]
March	8. PHP and Database	8. PHP and Database	[illegible]

Signature of Coordinator: _____ Signature of Subject Teacher: _____

[illegible] TRUST'S
SMT. [illegible] & SHRIMATI [illegible] COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. [illegible] MARG, [illegible] (E), MUMBAI – [illegible]

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. Information Technology
Name of Teacher	[illegible]

Class: [illegible] B.Sc. IT Semester- [illegible]
Subject: Numerical Methods
Subject Code: [illegible]

No. of lectures Allotted per week: [illegible]
No. of lectures Covered per Semester: [illegible]
No. of lectures Allotted per Semester: [illegible]

Month of Teaching	Topics Proposed	Topics Covered	No. of lectures
December	Mathematical Modeling and Engineering Problem Solving Truncation Errors and the Taylor Series Solutions of Algebraic and Transcendental Equations.	Mathematical Modeling and Engineering Problem Solving, Truncation Errors and the Taylor Series Solutions of Algebraic and Transcendental Equations.	[illegible]
January	Interpolation Solution of simultaneous algebraic equations (linear) using iterative methods. Numerical solution of 1st and 2nd order differential equations	Interpolation Solution of simultaneous algebraic equations (linear) using iterative methods Numerical solution of 1st and 2nd order differential equations	[illegible]
February	Least Squares Regression Linear Programming	Least Squares Regression Linear Programming	[illegible]
March	Numerical Solutions of Partial Differential Equations	Numerical Solutions of Partial Differential Equations	[illegible]

Signature of Coordinator: _____ Signature of Subject Teacher: _____

[illegible]

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. Information Technology
Name of Teacher	Mr.V.V. Gopinath

Class: I-I B.Sc. (IT) Semester: II
Subject: Numerical and Statistical Methods Practical
Subject Code: 107124

No. of Practical Allotted per week: 04
No. of Practical Covered per Semester: 28
No. of Practical Allotted per Semester: 60

Month of Teaching	Topics Proposed	Topics Covered	No. of Practical per topic
January	1. Solution of algebraic and transcendental equations 2. Interpolation	1. Solution of algebraic and transcendental equations 2. Interpolation	12
February	3. Solving linear system of equations by iterative methods 4. Numerical Integration 5. Solution of differential equations 6. Numerical solution of partial differential equations	3. Solving linear system of equations by iterative methods 4. Numerical Integration 5. Solution of differential equations 6. Numerical solution of partial differential equations	14
March	Revision	Revision	4

Signature of Coordinator:	Signature of Subject Teacher:

LADIES SAMITHAGE TRUST'S
SMT. [illegible] COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN ROAD, ANTOP HILL, MUMBAI – 400 037

Teaching Plan and Implementation Report (2024-24)

Department	B.Sc. IT
Name of Teacher	Mrs. [illegible]

Class: F.Y.B.Sc. IT Semester: II
Subject: Green IT
Subject Code: [illegible]

No. of lectures Allotted per week: 03
No. of lectures Conducted per Semester: 36
No. of lectures Allotted per Semester: 39

Month of Teaching	Topic Proposed	Topic Covered	No. of lectures per topic
December	i. Overview and basic initiatives and standards	i. Overview and basic initiatives and standards	3
January	ii. Minimizing Power Usage Cooling iii. Changing the Way of Work	ii. Minimizing Power Usage Cooling iii. Changing the Way of Work	[illegible]
February	Using Paperless iv. Recycling	Using Paperless iv. Recycling	[illegible]
March	Hardware Considerations v. Greening Your Information Systems Staying Green	Hardware Considerations v. Greening Your Information Systems Staying Green	[illegible]
Signature of Coordinator:		Signature of Subject Teacher:	

SAHAK CHARITABLE TRUST'S
SHETH L.U.J. & SUNDER COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. E. MOSES ROAD, WORLI (E), MUMBAI - 400 018

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. IT
Name of Teacher	Ms. Manal Khanna

Class: T.Y.B.Sc. IT Semester: VI
Subject: PL/SQL Practical
Subject Code: UIT23P6

No. of Practical Allotted per week: 02
No. of Practical Covered per Semester: 26
No. Of Practicals Allotted per Semester: 30

Months of teaching	Topic Proposed	Topic Covered	No. of Practicals per topic
December	PL/SQL Basics Control Structures in PL/SQL Conditional Statements using if/loop Creation of sequence	PL/SQL Basics Control Structures in PL/SQL Conditional statements using if/loop Creation of sequence	08
March	Cursors (when in practical) Creation of Procedures in practical Functions in practical Creation of Trigger Handling Exceptions	Cursors (when in practical) Creation of Procedures in practical Functions in practical Creation of Trigger Handling Exceptions	18
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Information Technology
Name of teacher	Mrs. Smita Gokarnkar

Class : S.Y. B.Sc.IT Semester - III
Subject: Python Programming
Subject Code:UIUT301

No. of lectures Allotted per week:05
No. of lectures Covered per Semester:52
No. of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	I. Introduction Variables and Expressions Conditional Statements Control statements	I. Introduction Variables and Expressions Conditional Statements. Control statements	11 (College reopens on 14th June) 23
July	II. Functions Strings III. List Tuples and Dictionaries Files Exceptions	II. Functions Strings III. List, Tuples and Dictionaries. Files Exceptions (Assignment-1 Given) Test -1 Taken	15 (Had taken leave on last week so less lectures were conducted Exceptions topic covered next month)
August	IV. Regular Expressions. Classes and Objects Multithreaded Programming	IV. Regular Expressions. Classes and Objects Multithreaded Programming (Assignment-2 Given) Test -2 Taken	12 (Less Lectures taken due to holiday on Independence Day and Parsi New Year)
September	V. Creating the GUI Form and Adding Widgets: Layout Management Look and Feel Customization Storing Data in Our MySQL Database via Our GUI	V. Creating the GUI Form and Adding Widgets: Layout Management (Syllabus Done. Students presented their projects) Look and Feel Customization: Storing Data in Our MySQL Database via Our GUI	12

Signature of Coordinator: _____ **Signature of Subject Teacher:** _____

LAXMI CHARITABLE TRUST'S
SMETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI - 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Information Technology
Name of teacher	Mrs. Sneha Gokarekar

Class: S. Y. B.Sc.IT Semester - III
Subject: Python Programming Practical
Subject Code: USITP3
No. of practicals Allotted per week: 04 (Both Batches)
No. of practicals Covered per Semester: 30
No. of practicals Allotted per Semester: 40

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	**1. Write the program for the following:**	**1. Write the program for the following:**	2
July	**2.Write the program for the following:** **3a**. A pangram is a sentence that contains all the letters of the English alphabet at least once. b. Take a list, say for example this one: a = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89] and write a program that prints out all the elements of the list that are less than 5. **4a**. Write a program that takes two lists and returns True if they have at least one common member. b. Write a Python program to print a specified list after removing the 0th, 2nd, 4th, and 5th elements. c. Write a Python program to clone or copy a list. **5a.**Write a Python script to sort (ascending and descending) a dictionary by value. b.Write a Python script to concatenate the following dictionaries to create a new one. c.Write a Python program to sum up all the items in a dictionary.	**2.Write the program for the following:** **3a**. A pangram is a sentence that contains all the letters of the English alphabet at least once. b. Take a list, say for example this one: a = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89] and write a program that prints out all the elements of the list that are less than 5. **4a**. Write a program that takes two lists and returns True if they have at least one common member. b. Write a Python program to print a specified list after removing the 0th, 2nd, 4th, and 5th elements. c. Write a Python program to clone or copy a list. **5a.**Write a Python script to sort (ascending and descending) a dictionary by value. b.Write a Python script to concatenate the following dictionaries to create a new one. c.Write a Python program to sum up all the items in a dictionary.	10
August	**6a.** Write a Python program to read an entire text file.	**6a.**	14

	b. Write a Python program to append text to a file and display the text. c. Write a Python program to read the last n lines of a file. **7a.** Design a class that stores the information of students and displays the same. b. Implement the concept of inheritance using Python. c. Create a class called Numbers, which has a single class attribute called MULTIPLIER, and a constructor which takes the parameters x and y (these should all be numbers). i. Write a method called add which returns the sum of the attributes x and y. ii. Write a class method called multiply, which takes a single number parameter a and returns the product of a and MULTIPLIER. **8a.** Open a new file in IDLE ("New Window" in the "File" menu) and save it as geometry.py in the directory where you keep the files you create for this course. Then copy the functions you wrote for calculating volumes and areas in the "Control Flow and Functions" exercise into this file and save it. Now open a new file and save it in the same directory. b. Write a program to implement exception handling. **9.a.** Write the program for the following: a. Try to configure the widget with various options like bg="red", family="times". **b.** Try to change the widget type and configuration options to experiment with other widget types like Message, Button, Entry, Checkbutton, Radiobutton, Scale etc.	Write a Python program to read an entire text file. b. Write a Python program to append text to a file and display the text. c. Write a Python program to read the last n lines of a file. **7a.** Design a class that stores the information of students and displays the same. b. Implement the concept of inheritance using Python. c. Create a class called Numbers, which has a single class attribute called MULTIPLIER, and a constructor which takes the parameters x and y (these should all be numbers). i. Write a method called add which returns the sum of the attributes x and y. ii. Write a class method called multiply, which takes a single number parameter a and returns the product of a and MULTIPLIER. **8a.** Open a new file in IDLE ("New Window" in the "File" menu) and save it as geometry.py in the directory where you keep the files you create for this course. Then copy the functions you wrote for calculating volumes and areas in the "Control Flow and Functions" exercise into this file and save it. Now open a new file and save it in the same directory. b. Write a program to implement exception handling. **9.a.** Write the program for the following: a. Try to configure the widget with various options like bg="red", family="times". **b.** Try to change the widget type and configuration options to experiment with other widget types like Message, Button, Entry, Checkbutton, Radiobutton, Scale etc.	
September	10. Design a database application	10. Design a database application	04
Signature of Coordinator :		Signature of Subject Teacher :	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Information Technology
Name of teacher	Ms. Merina Ghersarghese and Mrs. Aparna Jadhav

Class : S.Y.B.Sc.IT Semester- III **Subject:** Data Structures **Subject Code:**USITR22

No. of lectures Allotted per week: 04
No. of lectures Covered per Semester: 41
No. of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	Introduction Array	Introduction Array	11
July	Linked List Stack	Linked List Stack	12
August	Queue Sorting and Searching Techniques	Queue Sorting and Searching Techniques	12
September	Hashing Techniques	Hashing Techniques	6

Signature of Coordinator : _____ **Signature of Subject Teacher :** _____

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Information Technology
Name of teacher	Ms. Merina Gheevarghese

Class: S.Y.B.Sc.IT Semester: III
Subject: Data Structures Practical
Subject Code: USIT3P2

No. of practicals Allotted per week: 04 (Both Batches)
No. of practicals Covered per Semester: 18
No. of practicals Allotted per Semester: 40

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	1. Implement the Arrays & Matrix operations	1. Implement the Arrays & Matrix operations	4
July	2. Implement Single Linked List & Double Linked List 3. Implement Stack & its operations.	2. Implement Single Linked List & Double Linked List. 3. Implement Stack & its operations.	6
August	4. Implement Queue & Deque 5. Implement the bubble sort, selection sort & insertion sort. 6. Implement data structure techniques.	4. Implement Queue & Deque 5. Implement the bubble sort, selection sort & insertion sort. 6. Implement data structure techniques.	6
September	7. Implement the following data structure techniques for trees.	7. Implement the following data structure techniques for trees.	2

Signature of Coordinator : _____ Signature of Subject Teacher : _____

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SHE M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Dr. S.

Teaching Plan and Implementation Record (2023-24)

Department:	Information Technology
Name of teacher	Mr. Sumit Tripathi

Class: S. Y. B.Sc.IT Semester - III **Subject:** Computer Networks **Subject Code:** USIT303

No. of lectures Allotted per week: 05
No. of lectures Covered per Semester:63
No. of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	I. Introduction Network Models Introduction to Physical layer Digital and Analog transmission	I. Introduction Network Models Introduction to Physical layer Digital and Analog transmission	10
July	II. Bandwidth Utilization: Multiplexing and Spectrum Spreading Transmission media Switching Introduction to the Data Link Layer III Data Link Control	II. Bandwidth Utilization: Multiplexing and Spectrum Spreading Transmission media Switching Introduction to the Data Link Layer III Data Link Control	20
August	Media Access Control Wireless LANs Connecting devices and Virtual LANs. IV. Introduction to Network Layer Unicast Routing Next generation IP	Media Access Control Wireless LANs Connecting devices and Virtual LANs. IV. Introduction to Network Layer Unicast Routing Next generation IP	20
September	V.Introduction to the Transport Layer: Standard ClientServer Protocols	V.Introduction to the Transport Layer: Standard ClientServer Protocols	11

Signature of Coordinator : _____ **Signature of Subject Teacher :** _____

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-2024)

Department	Information Technology
Name of teacher	Mrs. Rohini V. Jagadale

Class: S.Y. B.Sc. IT Semester - III **Subject:** Computer Networks Practical **Subject Code:** USITSP3

No. of practicals Allotted per week: 04 (Both Batches)
No. of practicals Covered persemester : 34
No. of practicals Allotted per Semester: 40

Month of teaching	Topic Proposed	Topic Covered	No. Of lectures
July	1. IPv4 Addressing and Subnetting b) With an IP address and network mask, determine other information about the IP address. 2. Use of ping and tracert / traceroute, ipconfig / ifconfig, route and arp utilities. 3. Configure IP static routing. 4. Configure IP routing using RIP. 5. Configuring Simple OSPF	1. IPv4 Addressing and Subnetting b) With an IP address and network mask, determine other information about the IP address. 2. Use of ping and tracert / traceroute, ipconfig / ifconfig, route and arp utilities. 3. Configure IP static routing. 4. Configure IP routing using RIP. 5. Configuring Simply OSPF.	16
August	6. Configuring DHCP server and client. 7. Configuring DNS Server and client. 8. Configuring OSPF with multiple areas.	6. Configuring DHCP server and client. 7. Configuring DNS Server and client. 8. Configuring OSPF with multiple areas.	8
September	9. Configure Telnet & HTTP. 10. Configure FTP. 11. Configure basic security	9. Configure Telnet & HTTP. 10. Configure FTP. 11. Configure basic security. Revision of all practicals	10

Signature of Coordinator: _____ **Signature of Subject Teacher:** RJagadale

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Information Technology
Name of teacher	Mrs. Aparna Panigrahy

Class: S.Y. B.Sc. IT Semester: III **Subject:** Operating Systems **Subject Code:** USIT304

No. of lectures Allotted per week: 04
No. of lectures Covered per Semester : 24
No. of lectures Allotted per Semester: 48

Month of teaching	Topic Proposed	Topic Covered	No. of lectures
July	Operating System Overview	Operating System Overview	8
August	OS design considerations for multiprocessor and multicore, overview of different operating systems Processes: Process Description and Control. **Threads, Concurrency:** Mutual Exclusion and Synchronization. **Concurrency:** Deadlock and Starvation, **Memory:** Memory Management, Virtual Memory	OS design considerations for multiprocessor and multicore, overview of different operating systems Processes: Process Description and Control. **Threads, Concurrency:** Mutual Exclusion and Synchronization. **Concurrency:** Deadlock and Starvation, **Memory:** Memory Management, Virtual Memory.	12
September	**Scheduling:** Uniprocessor Scheduling, Multiprocessor and Real-Time Scheduling **IO and File Management:** I/O Management and Disk Scheduling, File Management **Operating System Security.**	**Scheduling:** Uniprocessor Scheduling, Multiprocessor and Real-Time Scheduling **IO and File Management:** I/O Management and Disk Scheduling, File Management **Operating System Security.**	8

Signature of Coordinator : **Signature of Subject Teacher:**

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Information Technology
Name of teacher	Ms. Manasi Mandal

Class: S.Y. B.Sc. IT **Semester:** III **Subject:** Operating Systems Practical **Subject Code:** USITPE

No. of practicals Allotted per week: 04 (Both Batches)
No. of practicals Covered per Semester: 20
No. Of practicals Allotted per Semester: 40

Month of teaching	Topic Proposed	Topic Covered	No. Of lectures
August	1. Installation and configuration of virtual machines 2. Windows commands 3. Linux commands 4. Working with Linux Desktop and utilities	1. Installation and configuration of virtual machines 2. Windows commands 3. Linux commands 4. Working with Linux Desktop and utilities	10
September	5. Installing utility software on Linux and windows 6. Running C/C++/Python programs on Linux 7. Introduction to Linux Shell Scripting 8. Case study on Server OS, Android OS & Cloud OS	4. Working with Linux Desktop and utilities 5. Installing utility software on Linux and windows 6. Running C/C++/Python programs on Linux 7. Introduction to Linux Shell Scripting 8. Case study on Server OS, Android OS & Cloud OS	10
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUSTS'
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Information Technology
Name of teacher	Mrs. Rohini V. Jagadale

Class : S.Y. B.Sc. IT Semester- III **Subject:** Applied Mathematics **Subject Code:** USIT305

No. of lectures Allotted per week: 05
No. of lectures Covered per Semester : 58
No. of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures
June	Matrices Complex Numbers	Matrices Complex Numbers	8
July	Equation of the first order and of the first degree Differential equation of the higher order & degree other than first Linear differential equations with constant coefficients	Equation of the first order and of the first degree Differential equation of the higher order & degree other than first Linear differential equations with constant coefficients	23
August	The Laplace Transform Inverse Laplace Transform	The Laplace Transform Inverse Laplace Transform	11
September	Multiple Integrals Applications of integration Beta and Gamma Functions Differentiation Under the Integral Sign Error Functions	Multiple Integrals Applications of integration Beta and Gamma Functions Differentiation Under the Integral Sign Error Functions	16

Signature of Coordinator: _____ **Signature of Subject Teacher:** _____

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Information Technology
Name of Teacher	Ms. Manasi Mandal

Class: S.Y. B.Sc. IT Semester- III **Subject:** Mobile Programming Practical **Subject Code:** USITSP5

No. of practicals Allotted per week: 04 (Both Batches)
No. of practicals Covered per Semester: 24
No. Of practicals Allotted per Semester: 80

Month teaching	Topic Proposed	Topic Covered	No. Of lectures
August	Setting up Flutter, PhoneGAP Project and environment. 1. Features of Dart language 2. Mobile app for different widgets 3. Mobile app for different layouts. 4. Mobile app for Gestures. 5. Mobile app for theming and styling. 6. Mobile app for routing.	Setting up Flutter, PhoneGAP Project and environment. 1. Features of Dart language 2. Mobile app for different widgets 3. Mobile app for different layouts. 4. Mobile app for Gestures. 5. Mobile app for theming and styling. 6. Mobile app for routing.	14
September	7. Mobile app for animation. 8. Mobile app for state management. 9. Mobile app with SQLite Database. 10. Mobile app with Firebase.	7. Mobile app for animation. 8. Mobile app for state management. 9. Mobile app with SQLite Database. 10. Mobile app with Firebase.	10

Signature of Coordinator: _____ **Signature of Subject Teacher:** _____

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SHR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and implementation Record (2023-24)

Department	Information Technology
Name of teacher	Ms. Merina Gheewarghese

Class: S.Y.B.Sc.IT Semester: IV
Subject: Core Java
Subject Code: USIT401

No. of lectures Allotted per week : 05
No. of lectures Covered per Semester: 39
No. of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
December	**Introduction:** History, Features of Java, Java Development Kit, Java Application Programming Interface, Java Virtual Machine, Java Program Structure	**Introduction:** History, Features of Java, Java Development Kit, Java Application Programming Interface, Java Virtual Machine, Java Program Structure	Sem -4 classes commence from 26th October 2023 (02) (04)
January	**Classes:** The Class Object and its Attributes, Class Methods, Accessing A Method, Method Overloading, Instantiating Objects from A Class, Constructors, this keyword, super keyword, Types of Classes, Scope Rules, Access Modifier, constants, static members of a class, garbage collection. **Inheritance:** Derived Class Objects, Inheritance and Access Control, Default Base Class Constructors, this and super keywords. Abstract Classes and Interfaces, Abstract Classes, Abstract Methods, Interfaces: What is an Interface? How is an Interface Different from An Abstract Class? Multiple Inheritance, Defining an Interface, Implementing Interfaces. **Exceptions:** Catching Java Exceptions, Catching Run-Time Exceptions, Handling Multiple Exceptions, The finally Clause, The throws Clause, Builtin Exceptions in java	**Classes:** The Class Object and its Attributes, Class Methods, Accessing A Method, Method Overloading, Instantiating Objects from A Class, Constructors, this keyword, super keyword, Types of Classes, Scope Rules, Access Modifier, constants, static members of a class, garbage collection. **Inheritance:** Derived Class Objects, Inheritance and Access Control, Default Base Class Constructors, this and super keywords. Abstract Classes and Interfaces, Abstract Classes, Abstract Methods, Interfaces: What is an Interface? How is an Interface Different from An Abstract Class? Multiple Inheritance, Defining an Interface, Implementing Interfaces. **Exceptions:** Catching Java Exceptions, Catching Run-Time Exceptions, Handling Multiple Exceptions, The finally Clause, The throws Clause, Builtin Exceptions in java	15
February	**Multithreading:** Thread Creations, Thread Life Cycle, Life Cycle Methods, Synchronization,	**Multithreading:** Thread Creations, Thread Life Cycle, Life Cycle Methods, Synchronization,	18

	wait() notify() notify all() methods Packages: Introduction to predefined packages, User Defined Packages, Access specifier, Java Built-in packages, Array Class, String Class	wait() notify() notify all() methods Packages: Introduction to predefined packages, User Defined Packages, Access specifier, Java Built-in packages, Array Class, String Class	
	Introduction to JFC and Swing: Features of the Java Foundation Classes, Swing API Components, JComponent Class, Containers and Panels, Labels, Buttons, RadioButton, Check Boxes, Text Entry Components, Menus Layouts: Flow Layout, Grid Layout, Border Layout Event Handling: Delegation Event Model, Events, Event classes, Event listener interfaces, Using delegation event model, adapter classes	**Introduction to JFC and Swing**: Features of the Java Foundation Classes, Swing API Components, JComponent Class, Containers and Panels, Labels, Buttons, RadioButton, Check Boxes, Text Entry Components, Menus Layouts: Flow Layout, Grid Layout, Border Layout Event Handling: Delegation Event Model, Events, Event classes, Event listener interfaces, Using delegation event model, adapter classes	
March	**Advanced Swing Controls**: JScrollPane, Lists and Combo Boxes, Colors and File Choosers, Tables and Trees, JTabbedPane, JDBC: Introduction, JDBC Architecture, JDBC Drivers, java.sql package, Using Statement, PreparedStatement, CallableStatement, ResultSet	**Advanced Swing Controls**: JScrollPane, Lists and Combo Boxes, Colors and File Choosers, Tables and Trees, JTabbedPane, JDBC: Introduction, JDBC Architecture, JDBC Drivers, java.sql package, Using Statement, PreparedStatement, CallableStatement, ResultSet	06

Signature of Coordinator: _____ Signature of Subject Teacher: _____

LAXMI CHARITABLE TRUST'S
SMT.TH.KAMLA & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Information Technology
Name of teacher	Ms. Meena Ghevaghese

Class: S.Y. B.Sc. IT Semester - IV
Subject: Core Java Practicals
Subject Code: USITAP1

No. of practicals Allotted per week: 02
No. of practicals Covered per Semester: 24
No. of practicals Allotted per Semester: 10

Month of teaching	Topics Proposed	Topic Covered	No. of lectures
January	1. OOPs concepts in Java – 1 a. Write a program to create a class and implement a default, overloaded and copy Constructor. b. Write a program to create a class and implement the concepts of Method Overloading c. Write a program to create a class and implement the concepts of Static methods 2. OOPs concepts in Java – 2 a. Write a program to implement the concepts of Inheritance and Method overriding b. Write a program to implement the concepts of Abstract classes and methods c. Write a program to implement the concept of interfaces 3. Exceptions a. Write a program to raise built-in exceptions and raise them as per the requirements b. Write a program to define user defined exceptions and raise them as per the requirements 4. Multithreading: Write a java application to demonstrate 5 bouncing balls of different colors using threads.	1. OOPs concepts in Java – 1 a. Write a program to create a class and implement a default, overloaded and copy Constructor. b. Write a program to create a class and implement the concepts of Method Overloading c. Write a program to create a class and implement the concepts of Static methods 2. OOPs concepts in Java – 2 a. Write a program to implement the concepts of Inheritance and Method overriding b. Write a program to implement the concepts of Abstract classes and methods c. Write a program to implement the concept of interfaces. 3. Exceptions a. Write a program to raise built-in exceptions and raise them as per the requirements b. Write a program to define user defined exceptions and raise them as per the requirements 4. Multithreading: Write a java application to demonstrate 5 bouncing balls of different colors using threads.	10

February	5. JDBC a. Write a JDBC program that displays the data of a given table in a GUI Table. b. Write a JDBC program to Show the details of a specified product from a given table selected using Combobox. c. Write a GUI application to Navigate forward and reverse result set data. 6. Swing a. Create a swing application that randomly changes color on button click. b. Create a Swing application to demonstrate use of TextArea using scrollpane to show content of text file in textarea selected using file chooser. c. Create a Swing application to demonstrate use of scrollpane to change its color selected using colour chooser 7. Layouts: Write programs for the following layouts: 5.1 a. Flow Layout b. Grid Layout c. Border Layout	5. JDBC a. Write a JDBC program that displays the data of a given table in a GUI Table. b. Write a JDBC program to Show the details of a specified product from a given table selected using Combobox. c. Write a GUI application to Navigate forward and reverse result set data. 6. Swing a. Create a swing application that randomly changes color on button click. b. Create a Swing application to demonstrate use of TextArea using scrollpane to show content of text file in textarea selected using file chooser. c. Create a Swing application to demonstrate use of scrollpane to change its color selected using colour chooser. 7. Layouts: Write programs for the following layouts: 5.1 a. Flow Layout b. Grid Layout c. Border Layout	10
March	8. Events: Write programs to demonstrate the following events: a. ActionEvent b. MouseEvent c. KeyEvent d. SelectionEvent e. FocusEvent 9. Demonstrate the use of Adapter Class in Event Handling 10. Demonstrate the use of Anonymous Inner Class in Event Handling	8. Events: Write programs to demonstrate the following events: a. ActionEvent b. MouseEvent c. KeyEvent d. SelectionEvent e. FocusEvent 9. Demonstrate the use of Adapter Class in Event Handling 10. Demonstrate the use of Anonymous Inner Class in Event Handling	04
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Information Technology
Name of teacher	Mrs. Sneha Gokarnkar

Class : S. Y. B.Sc.IT Semester – IV
Subject: Introduction to Embedded Systems
Subject Code: USITS02

No. of lectures Allotted per week: 05
No. Of lectures Covered per Semester: 85
No. Of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
November	**I. Introduction:** Embedded Systems and general purpose computer systems, history, classifications, applications and purpose of embedded systems	**I. Introduction:** Embedded Systems and general purpose computer systems, history classifications, applications and purpose of embedded systems	02
December	**Core of embedded systems:** microprocessors and microcontrollers, RISC and CISC controllers, Big endian and Little endian processors, Application specific ICs, Programmable logic devices, COTS, sensors and actuators, communication interface, embedded firmware, other system components. **Characteristics and quality attributes of embedded systems:** Characteristics, operational and non-operational quality attributes. **II. Embedded Systems – Application and Domain Specific:** Application specific washing machine, domain specific – automotive **Embedded Hardware:** Memory map, I/o map, interrupt map, processor family, external peripherals, memory – RAM , ROM, types of RAM and ROM, memory testing, CRC ,Flash memory	**Core of embedded systems:** microprocessors and microcontrollers, RISC and CISC controllers, Big endian and Little endian processors, Application specific ICs, Programmable logic devices, COTS, sensors and actuators, communication interface, embedded firmware, other system components. **Characteristics and quality attributes of embedded systems:** Characteristics, operational and non-operational quality attributes. **II. Embedded Systems – Application and Domain Specific:** Application specific washing machine, domain specific – automotive **Embedded Hardware:** Memory map, I/o map, interrupt map, processor family, external peripherals, memory – RAM , ROM, types of RAM and ROM, memory testing, CRC ,Flash memory	14

January	**Peripherals**: Control and Status Registers, Device Driver, Timer Driver - Watchdog Timers. **III. The 8051 Microcontrollers:** Microcontrollers and Embedded processors, Overview of 8051 family, 8051 Microcontroller hardware, input/output pins, Ports, and Circuits, External Memory. **8051 Programming in C:** Data Types and time delay in 8051 C, I/O Programming, Logic operations, Data conversion Programs. **IV. Designing Embedded System with 8051 Microcontroller:** Factors to be considered in selecting a controller, why 8051 Microcontroller, Designing with 8051. **Programming embedded systems:** structure of embedded program, infinite loop, compiling, linking and debugging.	**Peripherals**: Control and Status Registers, Device Driver, Timer Driver - Watchdog Timers. **III. The 8051 Microcontrollers:** Microcontrollers and Embedded processors, Overview of 8051 family, 8051 Microcontroller hardware, input/output pins, Ports, and Circuits, External Memory. **8051 Programming in C:** Data Types and time delay in 8051 C, I/O Programming, Logic operations, Data conversion Programs. **IV. Designing Embedded System with 8051 Microcontroller:** Factors to be considered in selecting a controller, why 8051 Microcontroller, Designing with 8051. **Programming embedded systems:** structure of embedded program, infinite loop, compiling, linking and debugging.	20
February	**V. Real Time Operating System (RTOS):** Operating system basics, types of operating systems, Real-Time Characteristics, Selection Process of an RTOS. **Design and Development:** Embedded system development Environment – IDE, types of file generated on cross compilation, disassembler/ de-compiler, simulator, emulator and debugging, embedded product development life-cycle, trends in embedded industry.	**V. Real Time Operating System (RTOS):** Operating system basics, types of operating systems, Real-Time Characteristics, Selection Process of an RTOS. **Design and Development:** Embedded system development Environment – IDE, types of file generated on cross compilation, disassembler/ de-compiler, simulator, emulator and debugging, embedded product development life-cycle, trends in embedded industry.	8

Signature of Coordinator: _____ Signature of Subject Teacher: _____

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Information Technology
Name of teacher	Mrs. Sneha Gokarnkar

Class : S. Y. B.Sc. IT Semester- IV
Subject: Introduction to Embedded Systems Practical
Subject Code: USIT4P2

No. of practicals Allotted per week: 04
No. of practicals Covered per Semester: 40
No. of practicals Allotted per Semester: 40

Month of teaching	Topic Proposed	Topic Covered	No. of Practicals per topic
December	1. Design and develop a reprogrammable embedded computer using 8051 microcontrollers and to show the following aspects: a. Programming b. Execution c. Debugging 2. A Configure timer control registers of 8051 and develop a program to generate given time delay B To demonstrate use of general purpose port i.e. input/ output port of two controllers for data transfer between them.	1. Design and develop a reprogrammable embedded computer using 8051 microcontrollers and to show the following aspects: a. Programming b. Execution c. Debugging 2. A Configure timer control registers of 8051 and develop a program to generate given time delay. B To demonstrate use of general purpose port i.e. input/ output port of two controllers for data transfer between them.	8
January	3. A Port I / O: Use one of the four ports of 8051 for O/P interfaced to eight LED's. Simulate binary counter (8 bit) on LED's B To interface 8 LEDs at input-output port and create different patterns. C To demonstrate timer working in timer mode and blink LED without using any loop delay routine 4. A Serial I / O: Configure 8051 serial port for asynchronous serial communication with serial port of PC exchange text messages to PC and display on PC screen. Signify end of message by carriage return.	3. A Port I / O: Use one of the four ports of 8051 for O/P interfaced to eight LED's. Simulate binary counter (8 bit) on LED's B To interface 8 LEDs at input-output port and create different patterns. C To demonstrate timer working in timer mode and blink LED without using any loop delay routine. 4. A Serial I / O: Configure 8051 serial port for asynchronous serial communication with serial port of PC exchange text messages to PC and display on PC screen. Signify end of message by carriage return.	18

	4. To demonstrate interfacing of seven-segment LED display and generate counting from 0 to 99 with fixed time delay. C Interface 8051 with D/A converter and generate square wave of given frequency on oscilloscope. 5. A Interface 8051 with D/A converter and generate triangular wave of given frequency on oscilloscope. 6 Using D/A converter generate sine wave on oscilloscope with the help of lookup table stored in data area of 8051.	4. To demonstrate interfacing of seven-segment LED display and generate counting from 0 to 99 with fixed time delay. C Interface 8051 with D/A converter and generate square wave of given frequency on oscilloscope. 5. A Interface 8051 with D/A converter and generate triangular wave of given frequency on oscilloscope. 6 Using D/A converter generate sine wave on oscilloscope with the help of lookup table stored in data area of 8051.	
February	6. Interface stepper motor with 8051 and write a program to move the motor through a given angle in clock wise or counter clock wise direction. 7. Generate traffic signal. 8. Implement Temperature controller. 10. Using FlashMagic A To demonstrate the procedure for flash programming for reprogrammable embedded system board using FlashMagic	6. Interface stepper motor with 8051 and write a program to move the motor through a given angle in clock wise or counter clock wise direction. 7. Generate traffic signal. 8. Implement Temperature controller. 10. Using FlashMagic A To demonstrate the procedure for flash programming for reprogrammable embedded system board using FlashMagic	14
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Information Technology
Name of teacher	Mrs. Rohini V. Jagadale

Class: S.Y. B.Sc. IT Semester- IV
Subject: Computer Oriented Statistical Techniques
Subject Code: USIT403

No. of lectures Allotted per week:05
No. of lectures Covered per Semester: 37
No. of lectures Allotted per Semester: 60

Month of teaching	Topics Proposed	Topic Covered	No. of lectures
December	Introduction to R: Basic syntax, data types, variables, operators, control statements, R-functions, R –Vectors, R – lists, R Arrays. The Mean, Median, Mode, and Other Measures of Central Tendency: Index, or Subscript, Notation, Summation Notation, Averages, or Measures of Central Tendency ,The Arithmetic Mean , The Weighted Arithmetic Mean ,Properties of the Arithmetic Mean ,The Arithmetic Mean Computed from Grouped Data ,The Median ,The Mode, The Empirical Relation Between the Mean, Median, and Mode, The Geometric Mean G, The Harmonic Mean H ,The Relation Between the Arithmetic, Geometric, and Harmonic Means, The Root Mean Square, Quartiles, Deciles, and Percentiles, Software and Measures of Central Tendency. The Standard Deviation and Other Measures of Dispersion: Dispersion, or Variation, The Range, The Mean Deviation, The Semi Inter quartile Range, The 10–90 Percentile Range, The Standard Deviation, The Variance, Short Methods for Computing the Standard Deviation, Properties of the Standard Deviation, Charlie's Check, Sheppard's	Introduction to R: Basic syntax, data types, variables, operators, control statements, R-functions, R –Vectors, R – lists, R Arrays. The Mean, Median, Mode, and Other Measures of Central Tendency: Index, or Subscript, Notation, Summation Notation, Averages, or Measures of Central Tendency ,The Arithmetic Mean , The Weighted Arithmetic Mean ,Properties of the Arithmetic Mean ,The Arithmetic Mean Computed from Grouped Data ,The Median ,The Mode, The Empirical Relation Between the Mean, Median, and Mode, The Geometric Mean G, The Harmonic Mean H ,The Relation Between the Arithmetic, Geometric, and Harmonic Means, The Root Mean Square, Quartiles, Deciles, and Percentiles, Software and Measures of Central Tendency. The Standard Deviation and Other Measures of Dispersion: Dispersion, or Variation, The Range, The Mean Deviation, The Semi Inter quartile Range, The 10–90 Percentile Range, The Standard Deviation, The Variance, Short Methods for Computing the Standard Deviation, Properties of the Standard Deviation, Charlie's Check, Sheppard's	10

	Correction for Variance, Empirical Relations Between Measures of Dispersion, Absolute and Relative Dispersion, Coefficient of Variation, Standardized Variable; Standard Scores, Software and Measures of Dispersion Moments, Skewness, and Kurtosis : Moments , Moments for Grouped Data ,Relations Between Moments , Computation of Moments for Grouped Data, Charlie's Check and Sheppard's Corrections, Moments in Dimensionless Form, Skewness, Kurtosis, Population Moments, Skewness, and Kurtosis, Software Computation of Skewness and Kurtosis. Elementary Probability Theory: Definitions of Probability, Conditional Probability; Independent and Dependent Events, Mutually Exclusive Events, Probability Distributions, Mathematical Expectation, Relation Between Population, Sample Mean, and Variance, Combinatorial Analysis, Combinations, Stirling's Approximation to n!, Relation of Probability to Point Set Theory, Euler or Venn Diagrams and Probability. Elementary Sampling Theory : Sampling Theory, Random Samples and Random Numbers, Sampling With and Without Replacement, Sampling Distributions, Sampling Distribution of Means, Sampling Distribution of Proportions, Sampling Distributions of Differences and Sums, Standard Errors, Software Demonstration of Elementary Sampling Theory.	Correction for Variance, Empirical Relations Between Measures of Dispersion, Absolute and Relative Dispersion, Coefficient of Variation, Standardized Variable, Standard Scores, Software and Measures of Dispersion Moments, Skewness, and Kurtosis : Moments , Moments for Grouped Data ,Relations Between Moments , Computation of Moments for Grouped Data, Charlie's Check and Sheppard's Corrections, Moments in Dimensionless Form, Skewness, Kurtosis, Population Moments, Skewness, and Kurtosis, Software Computation of Skewness and Kurtosis. Elementary Probability Theory: Definitions of Probability, Conditional Probability; Independent and Dependent Events, Mutually Exclusive Events, Probability Distributions, Mathematical Expectation, Relation Between Population, Sample Mean, and Variance, Combinatorial Analysis, Combinations, Stirling's Approximation to n!, Relation of Probability to Point Set Theory, Euler or Venn Diagrams and Probability. Elementary Sampling Theory : Sampling Theory, Random Samples and Random Numbers, Sampling With and Without Replacement, Sampling Distributions, Sampling Distribution of Means, Sampling Distribution of Proportions, Sampling Distributions of Differences and Sums, Standard Errors, Software Demonstration of Elementary Sampling Theory.	
January	Statistical Estimation Theory: Estimation of Parameters, Unbiased Estimates, Efficient Estimates; Point Estimates and Interval Estimates; Their Reliability, Confidence-Interval Estimates of Population Parameters, Probable Error.	Statistical Estimation Theory: Estimation of Parameters, Unbiased Estimates, Efficient Estimates; Point Estimates and Interval Estimates; Their Reliability, Confidence-Interval Estimates of Population Parameters, Probable Error.	9
January	Statistical Decision Theory: Statistical Decisions, Statistical Hypotheses, Tests of Hypotheses and Significance, or Decision Rules, Type I and Type II Errors, Level of Significance, Tests Involving Normal Distributions, Two-Tailed and One-Tailed	Statistical Decision Theory: Statistical Decisions, Statistical Hypotheses, Tests of Hypotheses and Significance, or Decision Rules, Type I and Type II Errors, Level of Significance, Tests Involving Normal Distributions, Two-Tailed and One-Tailed	

	Tests, Special Tests, Operating-Characteristic Curves; the Power of a Test, p-Values for Hypothesis Tests, Control Charts, Tests Involving Sample Differences, Tests Involving Binomial Distributions. Statistics in R: mean, median, mode, Normal Distribution, Binomial Distribution, Frequency Distribution in R. Small Sampling Theory: Small Samples, Student's t Distribution, Confidence Intervals, Tests of Hypotheses and Significance, The Chi-Square Distribution, Confidence Intervals for Sigma , Degrees of Freedom, The F Distribution.	Tests, Special Tests, Operating-Characteristic Curves; the Power of a Test, p-Values for Hypothesis Tests, Control Charts, Tests Involving Sample Differences, Tests Involving Binomial Distributions, Statistics in R: mean, median, mode, Normal Distribution, Binomial Distribution, Frequency Distribution in R. Small Sampling Theory: Small Samples, Student's t Distribution, Confidence Intervals, Tests of Hypotheses and Significance, The Chi-Square Distribution, Confidence Intervals for Sigma , Degrees of Freedom, The F Distribution.	
February	The Chi-Square Test: Observed and Theoretical Frequencies, Definition of chi-square, Significance Tests, The Chi-Square Test for Goodness of Fit, Contingency Tables, Yates' Correction for Continuity, Simple Formulas for Computing chi-square, Coefficient of Contingency, Correlation of Attributes, Additive Property of chi square Curve Fitting and the Method of Least Squares, Relationship Between Variables, Curve Fitting, Equations of Approximating Curves, Freehand Method of Curve Fitting, The Straight Line, The Method of Least Squares, The Least-Squares Line, Nonlinear Relationships, The Least-Squares Parabola, Regression, Applications to Time Series, Problems Involving More Than Two Variables. Correlation Theory: Correlation and Regression, Linear Correlation, Measures of Correlation, The Least-Squares Regression Lines, Standard Error of Estimate, Explained and Unexplained Variation, Coefficient of Correlation, Remarks Concerning the Correlation Coefficient, Product-Moment Formula for the Linear Correlation Coefficient, Short Computational Formulas, Regression Lines and the Linear Correlation Coefficient, Correlation of Time Series, Correlation of Attributes, Sampling Theory of Correlation, Sampling Theory of Regression.	The Chi-Square Test: Observed and Theoretical Frequencies, Definition of chi-square, Significance Tests, The Chi-Square Test for Goodness of Fit, Contingency Tables, Yates' Correction for Continuity, Simple Formulas for Computing chi-square, Coefficient of Contingency, Correlation of Attributes, Additive Property of chi square Curve Fitting and the Method of Least Squares, Relationship Between Variables, Curve Fitting, Equations of Approximating Curves, Freehand Method of Curve Fitting, The Straight Line, The Method of Least Squares, The Least-Squares Line, Nonlinear Relationships, The Least-Squares Parabola, Regression, Applications to Time Series, Problems Involving More Than Two Variables. Correlation Theory: Correlation and Regression, Linear Correlation, Measures of Correlation, The Least-Squares Regression Lines, Standard Error of Estimate, Explained and Unexplained Variation, Coefficient of Correlation, Remarks Concerning the Correlation Coefficient, Product-Moment Formula for the Linear Correlation Coefficient, Short Computational Formulas, Regression Lines and the Linear Correlation Coefficient, Correlation of Time Series, Correlation of Attributes, Sampling Theory of Correlation, Sampling Theory of Regression.	18

Signature of Coordinator: _____ **Signature of Subject Teacher:** _____

LADHI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Information Technology
Name of teacher	Mrs. Rohini V. Jagadale

Class: S.Y. B.Sc. IT Semester: IV
Subject: Computer Oriented Statistical Techniques Practical
Subject Code: USITAP8

No. of practicals Allotted per week: 02
No. of practicals Covered per Semester: 24
No. of practicals Allotted per Semester: 30

Month of teaching	Topics Proposed	Topic Covered	No. of lectures
January	1. Using R execute the basic commands, array, list and frames. 2. Create a Matrix using R and Perform the operations addition, inverse, transpose and multiplication operations. 3. Using R Execute the statistical functions: mean, median, mode, quartiles, range, inter quartile range histogram 4. Using R import the data from Excel / CSV file and Perform the above functions. 5. Using R import the data from Excel / CSV file and Calculate the standard deviation, variance, co-variance.	1. Using R execute the basic commands, array, list and frames. 2. Create a Matrix using R and Perform the operations addition, inverse, transpose and multiplication operations. 3. Using R Execute the statistical functions: mean, median, mode, quartiles, range, inter quartile range histogram 4. Using R import the data from Excel / CSV file and Perform the above functions. 5. Using R import the data from Excel / CSV file and Calculate the standard deviation, variance, co-variance	10
February	6. Using R import the data from Excel / CSV file and draw the skewness. 7. Import the data from Excel / CSV and perform the hypothetical testing. 8. Import the data from Excel / CSV and perform the Chi-squared Test. 9. Using R perform the binomial and normal distribution on the data.	6. Using R import the data from Excel / CSV file and draw the skewness. 7. Import the data from Excel / CSV and perform the hypothetical testing. 8. Import the data from Excel / CSV and perform the Chi-squared Test. 9. Using R perform the binomial and normal distribution on the data.	14

Signature of Coordinator: _____ **Signature of Subject Teacher:** _____

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record [2023-24]

Department	Information Technology
Name of teacher	Ms. Anusha P

Class: S.Y. B.Sc. IT Semester- IV
Subject: Software Engineering
Subject Code: USIT404

No. of lectures Allotted per week: 04
No. of lectures Covered per Semester: 39
No. of lectures Allotted per Semester: 45

Month of teaching	Topics Proposed	Topic Covered	No. of lectures
December	Introduction: What is software engineering? Software Development Life Cycle, Requirements Analysis, Software Design, Coding, Testing, Maintenance etc. Software Requirements: Functional and Non-functional requirements, User Requirements, System Requirements, Interface Specification, Documentation of the software requirements. Software Processes: Process and Project, Component Software Processes. Software Development Process Models. • Waterfall Model. • Prototyping. • Iterative Development. • Rational Unified Process. • The RAD Model • Time boxing Model. Agile software development: Agile methods, Plan-driven and agile development, Extreme programming, Agile project management, Scaling agile methods.	Introduction: What is software engineering? Software Development Life Cycle, Requirements Analysis, Software Design, Coding, Testing, Maintenance etc. Software Requirements: Functional and Non-functional requirements, User Requirements, System Requirements, Interface Specification, Documentation of the software requirements. Software Processes: Process and Project, Component Software Processes. Software Development Process Models. • Waterfall Model. • Prototyping. • Iterative Development. • Rational Unified Process. • The RAD Model • Time boxing Model. Agile software development: Agile methods, Plan-driven and agile development, Extreme programming, Agile project management, Scaling agile methods.	3
January	Socio-technical system: Essential characteristics of socio technical systems. Emergent System Properties. Systems Engineering. Components of system such as organization, people and computers, Dealing Legacy Systems. Critical system: Types of	Socio-technical system: Essential characteristics of socio technical systems. Emergent System Properties. Systems Engineering. Components of system such as organization, people and computers, Dealing Legacy Systems. Critical system: Types of	

	critical system, A simple safety critical system, Dependability of a system, Availability and Reliability, Safety and Security of Software systems. Requirements Engineering Processes: Feasibility study, Requirements elicitation and analysis, Requirements Validations, Requirements Management: System Models: Models and its types, Context Models, Behavioural Models, Data Models, Object Models, Structured Methods. Architectural Design: Architectural Design Decisions, System Organisation, Modular Decomposition Styles, Control Styles, Reference Architectures. User Interface Design: Need of UI design, Design issues, The UI design Process, User analysis, User Interface Prototyping, Interface Evaluation Project Management Software Project Management, Management activities, Project Planning, Project Scheduling, Risk Management. Quality Management: Process and Product Quality, Quality assurance and Standards, Quality Planning, Quality Control, Software Measurement and Metrics	critical system, A simple safety critical system, Dependability of a system, Availability and Reliability, Safety and Security of Software systems. Requirements Engineering Processes: Feasibility study, Requirements elicitation and analysis, Requirements Validations, Requirements Management: System Models: Models and its types, Context Models, Behavioural Models, Data Models, Object Models, Structured Methods. Architectural Design: Architectural Design Decisions, System Organisation, Modular Decomposition Styles, Control Styles, Reference Architectures. User Interface Design: Need of UI design, Design issues, The UI design Process, User analysis, User Interface Prototyping, Interface Evaluation Project Management Software Project Management, Management activities, Project Planning, Project Scheduling, Risk Management. Quality Management: Process and Product Quality, Quality assurance and Standards, Quality Planning, Quality Control, Software Measurement and Metrics	10
February	Verification and Validation: Planning Verification and Validation, Software Inspections, Automated Static Analysis, Verification and Formal Methods. Software Testing: System Testing, Component Testing, Test Case Design, Test Automation. Software Measurement: Size-Oriented Metrics, Function-Oriented Metrics, Extended Function Point Metrics Software Cost Estimation: Software Productivity, Estimation Techniques, Algorithmic Cost Modelling, Project Duration and Staffing Software Cost Estimation: Software Productivity, Estimation Techniques, Algorithmic Cost Modelling, Project Duration and Staffing Process Improvement: Process and product quality, Process Classification, Process Measurement, Process Analysis and Modeling, Process Change, The CMMI Process Improvement Framework.	Verification and Validation: Planning Verification and Validation, Software Inspections, Automated Static Analysis, Verification and Formal Methods. Software Testing: System Testing, Component Testing, Test Case Design, Test Automation. Software Measurement: Size-Oriented Metrics, Function-Oriented Metrics, Extended Function Point Metrics Software Cost Estimation: Software Productivity, Estimation Techniques, Algorithmic Cost Modelling, Project Duration and Staffing Software Cost Estimation: Software Productivity, Estimation Techniques, Algorithmic Cost Modelling, Project Duration and Staffing Process Improvement: Process and product quality, Process Classification, Process Measurement, Process Analysis and Modeling, Process Change, The CMMI Process Improvement Framework.	18

March	Service Oriented Software Engineering: Services as reusable components, Service Engineering, Software Development with Services. Software reuse: The reuse landscape, Application frameworks, Software product lines, COTS product reuse. Distributed software engineering: Distributed systems issues, Client- server computing, Architectural patterns for distributed systems, Software as a service	Service Oriented Software Engineering: Services as reusable components, Service Engineering, Software Development with Services. Software reuse: The reuse landscape, Application frameworks, Software product lines, COTS product reuse. Distributed software engineering: Distributed systems issues, Client- server computing, Architectural patterns for distributed systems, Software as a service	8

Signature of Coordinator: _____ **Signature of Subject Teacher:** _____

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Information Technology
Name of teacher	Ms. Marina Gheevarghese

Class: S.Y. B.Sc. IT Semester- IV
Subject: Software Engineering Practical
Subject Code: USIT4P4

No. of practicals Allotted per week: 02
No. of Ipracticals Covered per Semester: 20
No. of practicals Allotted per Semester: 20

Month of teaching	Topics Proposed	Topic Covered	No. of lectures
January	1. Study and implementation of class diagrams. 2. Study and implementation of Use Case Diagrams	1. Study and implementation of class diagrams. 2. Study and implementation of Use Case Diagrams	6
February	3. Study and implementation of Entity Relationship Diagrams. 4. Study and implementation of Sequence Diagrams. 5. Study and implementation of State Transition Diagrams. 6. Study and implementation of Data Flow Diagrams. 7. Study and implementation of Collaboration Diagrams. 8. Study and implementation of Activity Diagrams.	3. Study and implementation of Entity Relationship Diagrams. 4. Study and implementation of Sequence Diagrams. 5. Study and implementation of State Transition Diagrams. 6. Study and implementation of Data Flow Diagrams. 7. Study and implementation of Collaboration Diagrams. 8. Study and implementation of Activity Diagrams.	12

March	9. Study and implementation of Component Diagrams. 10. Study and implementation of Deployment Diagrams.	9. Study and implementation of Component Diagrams. 10. Study and implementation of Deployment Diagrams.	2
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SMETH L.U.J. & SMT M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Information Technology
Name of teacher	Mr. Sumit Tripathi

Class: S.Y. B.Sc. (I Semester)- IV
Subject: Computer Graphics & Animation
Subject Code: USITR05

No. of lectures Allotted per week: 05
No. of lectures Covered per Semester: 58
No. of lectures Allotted per Semester: 60

Month of teaching	Topics Proposed	Topic Covered	No. of lectures
October	Introduction to Computer Graphics: Overview of Computer Graphics, Computer Graphics Application and Software, Description of some graphics devices, Input Devices for Operator Interaction,	Introduction to Computer Graphics, Overview of Computer Graphics, Computer Graphics Application and Software, Description of some graphics devices, Input Devices for Operator Interaction,	3
November	Active and Passive Graphics Devices, Display Technologies, Storage Tube Graphics Displays, Calligraphic Refresh Graphics Displays, Raster Refresh (Raster-Scan) Graphics Displays, Cathode Ray Tube Basics, Color CRT Raster Scan Basics, Video Basics, The Video Controller, Random-Scan Display Processor, LCD displays, Scan conversion – Digital Differential Analyzer (DDA) algorithm, Bresenhams' Line drawing algorithm, Bresenhams' method of Circle drawing, Midpoint Circle Algorithm, Midpoint Ellipse Algorithm, Mid-point criteria, Problems of Aliasing, end-point ordering and clipping lines, Scan Converting Circles, Clipping Lines algorithms– Cyrus-Beck, Cohen-Sutherland and Liang-Barsky, Clipping Polygons, problem with multiple components.	Active and Passive Graphics Devices, Display Technologies, Storage Tube Graphics Displays, Calligraphic Refresh Graphics Displays, Raster Refresh (Raster-Scan) Graphics Displays, Cathode Ray Tube Basics, Color CRT Raster Scan Basics, Video Basics, The Video Controller, Random-Scan Display Processor, LCD displays, Scan conversion – Digital Differential Analyzer (DDA) algorithm, Bresenhams' Line drawing algorithm, Bresenhams' method of Circle drawing, Midpoint Circle Algorithm, Midpoint Ellipse Algorithm, Mid-point criteria, Problems of Aliasing, end-point ordering and clipping lines, Scan Converting Circles, Clipping Lines algorithms– Cyrus-Beck, Cohen-Sutherland and Liang-Barsky, Clipping Polygons, problem with multiple components	11

December	Two Dimensional Transformations: Transformations and Matrices, Transformation Conventions, 2D Transformations, Homogeneous Coordinates and Matrix Representation of 2D Transformations, Translations and Homogeneous Coordinates, Rotation, Reflection, Scaling, Combined Transformation, Transformation of Points, Transformation of The Unit Square, Solid Body Transformations, Rotation About an Arbitrary Point, Reflection through an Arbitrary Line, A Geometric Interpretation of Homogeneous Coordinates, The Window-to-Viewport Transformations, Three-Dimensional Transformations: Three-Dimensional Scaling, Three-Dimensional Shearing, Three Dimensional Rotation, Three-Dimensional Reflection, Three Dimensional Translation, Multiple Transformation, Rotation about an Arbitrary Axis in Space, Reflection through an Arbitrary Plane, Matrix Representation of 3D Transformations, Composition of 3D Transformations, Affine and Perspective Geometry, Perspective Transformations, Techniques for Generating Perspective Views, Vanishing Points, the Perspective Geometry and camera models, Orthographic Projections, Axonometric Projections, Oblique Projections, View volumes for projections.	Two Dimensional Transformations: Transformations and Matrices, Transformation Conventions, 2D Transformations, Homogeneous Coordinates and Matrix Representation of 2D Transformations, Translations and Homogeneous Coordinates, Rotation, Reflection, Scaling, Combined Transformation, Transformation of Points, Transformation of The Unit Square, Solid Body Transformations, Rotation About an Arbitrary Point, Reflection through an Arbitrary Line, A Geometric Interpretation of Homogeneous Coordinates, The Window-to-Viewport Transformations, Three Dimensional Transformations: Three Dimensional Scaling, Three-Dimensional Shearing, Three Dimensional Rotation, Three Dimensional Reflection, Three Dimensional Translation, Multiple Transformation, Rotation about an Arbitrary Axis in Space, Reflection through an Arbitrary Plane, Matrix Representation of 3D Transformations, Composition of 3D Transformations, Affine and Perspective Geometry, Perspective Transformations, Techniques for Generating Perspective Views, Vanishing Points, the Perspective Geometry and camera models, Orthographic Projections, Axonometric Projections, Oblique Projections, View volumes for projections	17
January	Viewing in 3D Stages in 3D viewing, Canonical View Volume (CVV), Specifying an Arbitrary 3D View, Examples of 3D Viewing, The Mathematics of Planar Geometric Projections, Combined transformation matrices for projections and viewing, Coordinate Systems and matrices, camera model and viewing pyramid, Light: Radiometry, Transport, Equation, Photometry Color: Colorimetry, Color Spaces, Chromatic Adaptation, Color Appearance	Viewing in 3D Stages in 3D viewing, Canonical View Volume (CVV), Specifying an Arbitrary 3D View, Examples of 3D Viewing, The Mathematics of Planar Geometric Projections, Combined transformation matrices for projections and viewing, Coordinate Systems and matrices, camera model and viewing pyramid, Light: Radiometry, Transport, Equation, Photometry Color: Colorimetry, Color Spaces, Chromatic Adaptation, Color Appearance	12

February	Visible Surface Determination: Techniques for efficient Visible Surface Algorithms, Categories of algorithms, Back face removal, The z-Buffer Algorithm, Scan-line method, Painter's algorithms (depth sorting), Area sub-division method, BSP trees, Visible Surface Ray Tracing, comparison of the methods. Plane Curves and Surfaces: Curve Representation, Nonparametric Curves, Parametric Curves, Parametric Representation of a Circle, Parametric Representation of an Ellipse, Parametric Representation of a Parabola, Parametric Representation of a Hyperbola, Representation of Space Curves, Cubic Splines, , Bezier Curves, B-spline Curves, B-spline Curve Fit, B-spline Curve Subdivision, Parametric Cubic Curves, Quadric Surfaces, Bezier Surfaces. Computer Animation: Principles of Animation, Key framing, Deformations, Character Animation, Physics-Based Animation, Procedural Techniques, Groups of Objects.	Visible Surface Determination: Techniques for efficient Visible Surface Algorithms, Categories of algorithms, Back face removal, The z-Buffer Algorithm, Scan-line method, Painter's algorithms (depth sorting), Area sub-division method, BSP trees, Visible Surface Ray Tracing, comparison of the methods. Plane Curves and Surfaces: Curve Representation, Nonparametric Curves, Parametric Curves, Parametric Representation of a Circle, Parametric Representation of an Ellipse, Parametric Representation of a Parabola, Parametric Representation of a Hyperbola, Representation of Space Curves, Cubic Splines, , Bezier Curves, B-spline Curves, B-spline Curve Fit, B-spline Curve Subdivision, Parametric Cubic Curves, Quadric Surfaces, Bezier Surfaces. Computer Animation: Principles of Animation, Key framing, Deformations, Character Animation, Physics-Based Animation, Procedural Techniques, Groups of Objects.	18
March	Image Manipulation and Storage: What is an image? Digital image file formats, Image compression standard – JPEG, Image Processing - Digital image enhancement, contrast stretching, Histogram Equalization, smoothing and median Filtering.	Image Manipulation and Storage: What is an image? Digital image file formats, Image compression standard – JPEG, Image Processing - Digital image enhancement, contrast stretching, Histogram Equalization, smoothing and median Filtering.	4
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	Information Technology
Name of teacher	Mr. Sumit Tripathi

Class: S.Y. B.Sc. IT Semester- IV
Subject: Computer Graphics and Animation Practical
Subject Code: USIT4PS

No. of practicals Allotted per week:02
No. of practicals Covered per Semester: 23
No. of prarticals Allotted per Semester: 30

Month of teaching	Topics Proposed	Topic Covered	No. of lectures
December	1 a. Study and enlist the basic functions used for graphics in C / C++ / Python language. Give an example for each of them. b. Draw a co-ordinate axis at the center of the screen.	1 a. Study and enlist the basic functions used for graphics in C / C++ / Python language. Give an example for each of them. b. Draw a co-ordinate axis at the center of the screen.	4
January	2 a. Divide your screen into four region, draw circle, rectangle, ellipse and half ellipse in each region with appropriate message. b. Draw a simple hut on the screen. 3. Draw the following basic shapes in the center of the screen : i. Circle ii. Rectangle iii. Square iv. Concentric Circles v. Ellipse vi. Line 4 a. Develop the program for DDA Line drawing algorithm 4 b. Develop the program for Bresenham's Line drawing algorithm.	2 a. Divide your screen into four region, draw circle, rectangle, ellipse and half ellipse in each region with appropriate message. b. Draw a simple hut on the screen. 3. Draw the following basic shapes in the center of the screen : i. Circle ii. Rectangle iii. Square iv. Concentric Circles v. Ellipse vi. Line 4 a. Develop the program for DDA Line drawing algorithm 4 b. Develop the program for Bresenham's Line drawing algorithm.	10

February	5 a. Develop the program for the mid-point circle drawing algorithm. b. Develop the program for the mid-point ellipse drawing algorithm. 6 a. Write a program to implument 2D scaling. b. Write a program to perform 2D translation 7 a. Perform 2D Rotation on a given object. b. Program to create a house like figure and perform the following operations. i. Scaling about the origin followed by translation. ii. Scaling with reference to an arbitrary point. iii. Reflect about the line y = mx + c.	5 a. Develop the program for the mid-point circle drawing algorithm. b. Develop the program for the mid-point ellipse drawing algorithm. 6 a. Write a program to implement 2D scaling. b. Write a program to perform 2D translation 7 a. Perform 2D Rotation on a given object. b. Program to create a house like figure and perform the following operations. i. Scaling about the origin followed by translation. ii. Scaling with reference to an arbitrary point. iii. Reflect about the line y = mx + c.	8
March	8 a. Write a program to implement Cohen-Sutherland clipping.	8 a. Write a program to implement Cohen-Sutherland clipping.	2
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. Information Technology
Name of teacher	Ms. Mirina Ghevarghese

Class: F.Y. B.Sc. IT Semester: V
Subject: Software Project Management
Subject Code: USMT501

No.of lectures Allotted per week:05
No. Of lectures Covered per Semester: 55
No. Of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Un-Covered with reason	No. of lectures
July	**Introduction to Software Project Management:** Introduction, Why is Software Project Management Important? What is a Project? Software Projects versus Other Types of Project, Contract Management and Technical Project Management, Activities Covered by Software Project Management, Plans, Methods and Methodologies, Some Ways of Categorising Software Projects, Project Charter, Stakeholders, Setting Objectives, The Business Case, Project Success and Failure, What is Management? Management Control, Project Management Life Cycle, Traditional versus Modern Project Management Practices.	**Introduction to Software Project Management:** Introduction, Why is Software Project Management Important? What is a Project? Software Projects versus Other Types of Project, Contract Management and Technical Project Management, Activities Covered by Software Project Management, Plans, Methods and Methodologies, Some Ways of Categorising Software Projects, Project Charter, Stakeholders, Setting Objectives, The Business Case, Project Success and Failure, What is Management? Management Control, Project Management Life Cycle, Traditional versus Modern Project Management Practices.	Ending 7th June 2024.
	Project Evaluation and Programme Management : Introduction, Business Case, Project Portfolio Management, Evaluation of Individual Projects, Cost-benefit Evaluation Techniques, Risk Evaluation, Programme Management, Managing the Allocation of Resources within Programmes, Strategic Programme Management, Creating a Programme, Aids to Programme Management, Some Reservations about Programme Management, Benefits Management. **An Overview of Project Planning :** Introduction to Step Wise Project Planning, Step 0: Select Project, Step 1: Identify Project Scope and Objectives, Step 2: Identify Project	**Project Evaluation and Programme Management :** Introduction, Business Case, Project Portfolio Management, Evaluation of Individual Projects, Cost-benefit Evaluation Techniques, Risk Evaluation, Programme Management, Managing the Allocation of Resources within Programmes, Strategic Programme Management, Creating a Programme, Aids to Programme Management, Some Reservations about Programme Management, Benefits Management. **An Overview of Project Planning :** Introduction to Step Wise Project Planning, Step 0: Select Project, Step 1: Identify	14

	infrastructure, Step 5: Analyse Project Characteristics, Step 6: Identify Project Products and Activities, Step 7: Estimate Effort for Each Activity, Step 8: Identify Activity Risks, Step 9: Allocate Resources, Step 10: Review/Publicize Plan, Steps 9 and 10: Execute Plan/Lower Levels of Planning **Selection of an Appropriate Project Approach**: Introduction, Build or Buy? Choosing Methodologies and Technologies, Software Processes and Process Models, Choice of Process Models, Structure versus Speed of Delivery, The Waterfall Model, The Spiral Model, Software Prototyping, Other Ways of Categorizing Prototypes, Incremental Delivery, Atern/Dynamic Systems Development Method, Rapid Application Development, Agile Methods, Extreme Programming (XP), Scrum, Lean Software Development, Managing Iterative Processes, Selecting the Most Appropriate Process Model	Project Scope and Objectives, Step 2: Identify Project Infrastructure, Step 3: Analyse Project Characteristics, Step 4: Identify Project Products and Activities, Step 5: Estimate Effort for Each Activity, Step 6: Identify Activity Risks, Step 7: Allocate Resources, Step 8: Review/Publicize Plan, Steps 9 and 10: Execute Plan/Lower Levels of Planning **Selection of an Appropriate Project Approach**: Introduction, Build or Buy? Choosing Methodologies and Technologies, Software Processes and Process Models, Choice of Process Models, Structure versus Speed of Delivery, The Waterfall Model, The Spiral Model, Software Prototyping, Other Ways of Categorizing Prototypes, Incremental Delivery, Atern/Dynamic Systems Development Method, Rapid Application Development, Agile Methods, Extreme Programming (XP), Scrum, Lean Software Development, Managing Iterative Processes, Selecting the Most Appropriate Process Model. (History runs)	
Aug	**Software Effort Estimation**: Introduction, Where are the Estimates Done? Problems with Over- and Under-Estimates, The Basis for Software Estimating, Software Effort Estimation Techniques, Bottom-up Estimating, The Top-down Approach and Parametric Models, 12 Expert Judgement, Estimating by Analogy, Albrecht Function Point Analysis, Function Points Mark II, COSMIC Full Function Points, COCOMO II: A Parametric Productivity Model, Cost Estimation, Staffing Pattern, Effect of Schedule Compression, Capers Jones Estimating Rules of Thumb Setting Up a Samba File Server, Samba Advanced Authentication Options, Accessing Samba Shares, Offering FTP Services. **Activity Planning** : Introduction, Objectives of Activity Planning, When to Plan, Project Schedules, Projects and Activities, Sequencing and Scheduling Activities, Network Planning Models, Formulating a Network Model, Adding the Time Dimension, The Forward Pass, Backward Pass, Identifying the Critical Path, Activity Float, Shortening the Project Duration, Identifying Critical Activities, Activity-on-Arrow Networks	**Software Effort Estimation**: Introduction, Where are the Estimates Done? Problems with Over- and Under-Estimates, The Basis for Software Estimating, Software Effort Estimation Techniques, Bottom-up Estimating, The Top-down Approach and Parametric Models, 12 Expert Judgement, Estimating by Analogy, Albrecht Function Point Analysis, Function Points Mark II, COSMIC Full Function Points, COCOMO II: A Parametric Productivity Model, Cost Estimation, Staffing Pattern, Effect of Schedule Compression, Capers Jones Estimating Rules of Thumb Setting Up a Samba File Server, Samba Advanced Authentication Options, Accessing Samba Shares, Offering FTP Services. **Activity Planning** : Introduction, Objectives of Activity Planning, When to Plan, Project Schedules, Projects and Activities, Sequencing and Scheduling Activities, Network Planning Models, Formulating a Network Model, Adding the Time Dimension, The Forward Pass, Backward Pass, Identifying the Critical Path, ActivityFloat, Shortening the Project Duration, Identifying Critical Activities, Activity-on-Arrow Networks	23

Sept	**Risk Management**: Introduction, Risk, Categories of Risk, Risk Management Approaches, A Framework for Dealing with Risk, Risk Identification, Risk Assessment, Risk Planning, Risk Management, Evaluating Risks to the Schedule, Boehm's Top 10 Risks and Counter Measures, Applying the PERT Technique, Monte Carlo Simulation, Critical Chain Concepts. **Resource Allocation**: Introduction, Nature of Resources, Identifying Resource Requirements, Scheduling Resources, Creating Critical Paths, Counting the Cost, Being Specific, Publishing the Resource Schedule, Cost Schedules, Scheduling Sequence. **Monitoring and Control**: Introduction, Creating the Framework, Collecting the Data, Review, Visualizing Progress, Cost Monitoring, Earned Value Analysis, Prioritizing Monitoring, Getting the Project Back to Target, Change Control, Software Configuration Management (SCM). **Managing Contracts**: Introduction, Types of Contract, Stages in Contract Placement, Typical Terms of a Contract, Contract Management, Acceptance. **Managing People in Software Environments**: Introduction, Understanding Behaviour, Organizational Behaviour: A Background, Selecting the Right Person for the Job, Instruction in the Best Methods, Motivation, The Oldham-Hackman Job Characteristics Model, Stress, Stress Management, Health and Safety, Some Ethical and Professional Concerns.	**Risk Management**: Introduction, Risk, Categories of Risk, Risk Management Approaches, A Framework for Dealing with Risk, Risk Identification, Risk Assessment, Risk Planning, Risk Management, Evaluating Risks to the Schedule, Boehm's Top 10 Risks and Counter Measures, Applying the PERT Technique, Monte Carlo Simulation, Critical Chain Concepts. **Resource Allocation**: Introduction, Nature of Resources, Identifying Resource Requirements, Scheduling Resources, Creating Critical Paths, Counting the Cost, Being Specific, Publishing the Resource Schedule, Cost Schedules, Scheduling Sequence. **Monitoring and Control**: Introduction, Creating the Framework, Collecting the Data, Review, Visualizing Progress, Cost Monitoring, Earned Value Analysis, Prioritizing Monitoring, Getting the Project Back to Target, Change Control, Software Configuration Management (SCM).	10
Oct	**Working in Teams**: Introduction, Assuming a Team, Decision Making, Organization and Team Structures, Coordination Dependencies, Dispersed and Virtual Teams, Communication Genres, Communication Plans, Leadership.	**Working in Teams**: Introduction, Assuming a Team, Decision Making, Organization and Team Structures, Coordination Dependencies, Dispersed and Virtual Teams, Communication Genres, Communication Plans, Leadership.	
	Software Quality : Introduction, The Place of Software Quality in Project Planning, Importance of Software Quality, Defining Software Quality, Software Quality Models, ISO 9126, Product and Process Metrics, Product versus Process Quality Management, Quality Management Systems, Process Capability Models, Techniques to Help Enhance Software Quality, Testing, Software Reliability, Quality Plans.	**Software Quality** : Introduction, The Place of Software Quality in Project Planning, Importance of Software Quality, Defining Software Quality, Software Quality Models, ISO 9126, Product and Process Metrics, Product versus Process Quality Management, Quality Management Systems, Process Capability Models, Techniques to Help Enhance Software Quality, Testing, Software Reliability, Quality Plans.	07

NOV	**Project Closeout:** Introduction, Reasons for Project Closure, Project Closure Process, Performing a Financial Closure, Project Closeout Report	**Project Closeout:** Introduction, Reasons for Project Closure, Project Closure Process, Performing a Financial Closure, Project Closeout Report	02
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
MRITHULA U.J & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. IT
Name of teacher	Mrs. Sudha Gokarekar

Class: T. Y B.Sc. IT Semester- 05
Subject: Internet of Things
Subject Code: USIT502

No .of lectures Allotted per week:05
No. Of lectures Covered per Semester: 59
No. Of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
June	**I.The Internet of Things: An Overview**: The Flavour of the Internet of Things, The "Internet" of "Things", The Technology of the Internet of Things, Enchanted Objects, Who is Making the Internet of Things? **Design Principles for Connected Devices:** Calm and Ambient Technology, Magic as Metaphor, Privacy, Keeping Secrets, Whose Data Is It Anyway? Web Thinking for Connected Devices, Small Pieces, Loosely Joined, First-Class Citizens on The Internet, Graceful Degradation, Affordances	**I.The Internet of Things: An Overview**: The Flavour of the Internet of Things, The "Internet" of "Things", The Technology of the Internet of Things, Enchanted Objects, Who is Making the Internet of Things? **Design Principles for Connected Devices:** Calm and Ambient Technology, Magic as Metaphor, Privacy, Keeping Secrets, Whose Data Is It Anyway? Web Thinking for Connected Devices, Small Pieces, Loosely Joined, First-Class Citizens on The Internet, Graceful Degradation, Affordances	14
July	**Internet Principles**: Internet Communications: An Overview, IP, TCP, The IP Protocol Suite (TCP/IP), UDP, IP Addresses, DNS, Static IP Address Assignment, Dynamic IP Address Assignment, IPv6, MAC Addresses, TCP and UDP Ports, An Example: HTTP Ports, Other Common Ports, Application Layer Protocols, HTTP.	**Internet Principles**: Internet Communications: An Overview, IP, TCP, The IP Protocol Suite (TCP/IP), UDP, IP Addresses, DNS, Static IP Address Assignment, Dynamic IP Address Assignment, IPv6, MAC Addresses, TCP and UDP Ports, An Example: HTTP Ports, Other Common Ports, Application Layer Protocols, HTTP, HTTPS: Encrypted HTTP, Other Application Layer Protocols **II.Thinking About Prototyping:** Sketching, Familiarity, Costs versus Ease of Prototyping, Prototypes and Production, Changing	15 (Half taken time of last week as lecture was conducted Andhe-

	HTTPS: Encrypted HTTP, Other Application Layer Protocols. **II.Thinking About Prototyping:** Sketching, Familiarity, Costs versus Ease of Prototyping, Prototypes and Production, Changing Embedded Platform, Physical Prototypes and Mass Personalisation, climbing into the Cloud, Open Source versus Closed Source, Why Closed? Why Open? Mixing Open and Closed Source, Closed Source for Mass Market Projects, Tapping into the Community. **Prototyping Embedded Devices:** Electronics, Sensors, Actuators, Scaling Up the Electronics, Embedded Computing Basics, Microcontrollers, System-on-Chips, Choosing Your Platform, **Arduino**, developing on the Arduino, Some Notes on the Hardware, Openness. **Raspberry Pi**, Cases and Extension Boards, Developing on the Raspberry Pi, Some Notes on the Hardware, Openness.	Embedded Platform, Physical Prototypes and Mass Personalisation, climbing into the Cloud, Open Source versus Closed Source, Why Closed? Why Open? Mixing Open and Closed Source, Closed Source for Mass Market Projects, Tapping into the Community. **Prototyping Embedded Devices:** Electronics, Sensors, Actuators, Scaling Up the Electronics, Embedded Computing Basics, Microcontrollers, System-on-Chips, Choosing Your Platform	and Exam [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
August	**III.Prototyping the Physical Design:** Preparation, Sketch, Iterate, and Explore, Nondigital Methods, Laser Cutting, Choosing a Laser Cutter, Software, Hinges and Joints, 3D Printing, Types of 3D Printing, Software, CNC Milling, Repurposing/Recycling. **Prototyping Online Components:** Getting Started with an API, Mashing Up APIs, Scraping, Legalities, writing a New API, Clickodillo, Security, implementing the API, Using Curl to Test, Going Further, Real-Time Reactions, Polling, Comet, Other Protocols, MQ Telemetry Transport, Extensible Messaging and Presence Protocol, Constrained Application Protocol. **IV.Techniques for Writing Embedded Code:** Memory Management, Types of Memory,	**Arduino**, developing on the Arduino, Some Notes on the Hardware, Openness. **Raspberry Pi**, Cases and Extension Boards, Developing on the Raspberry Pi, Some Notes on the Hardware, Openness. **III.Prototyping the Physical Design:** Preparation, Sketch, Iterate, and Explore, Nondigital Methods, Laser Cutting, Choosing a Laser Cutter, Software, Hinges and Joints, 3D Printing, Types of 3D Printing, Software, CNC Milling, Repurposing/Recycling. **Prototyping Online Components:** Getting Started with an API, Mashing Up APIs, Scraping, Legalities, writing a New API, Clickodillo, Security, implementing the API, Using Curl to Test, Going Further, Real-Time Reactions, Polling, Comet, Other Protocols, MQ Telemetry Transport, Extensible Messaging and Presence Protocol, Constrained Application Protocol. **IV.Techniques for Writing Embedded Code:** Memory Management, Types of Memory, Making the Most of Your RAM, Performance and Battery Life, Libraries, Debugging.	16

	Making the Most of Your RAM, Performance and Battery Life, Libraries, Debugging. **Business Models**: A Short History of Business Models, Space and Time, From Craft to Mass Production, The Long Tail of the Internet, Learning from History, The Business Model Canvas, Who Is the Business Model For? Models, Make Thing, Sell Thing, Subscriptions, Customization, be a Key Resource, Provide Infrastructure: Sensor Networks, take a Percentage, Funding an Internet of Things Startup, Hobby Projects and Open Source, Venture Capital, Government Funding, Crowdfunding, Lean Startups.	**Business Models**: A Short History of Business Models, Space and Time, From Craft to Mass Production, The Long Tail of the Internet, Learning from History, The Business Model Canvas, Who Is the Business Model For? Models, Make Thing, Sell Thing, Subscriptions, Customization, be a Key Resource, Provide Infrastructure: Sensor Networks, take a Percentage, Funding an Internet of Things Startup, Hobby Projects and Open Source, Venture Capital, Government Funding, Crowdfunding, Lean Startups. **(UNIT TEST Taken. Assignment Given)**	
September	**V.Moving to Manufacture:** What Are You Producing? Designing Kits, Designing Printed circuit boards, Software Choices, The Design Process, Manufacturing Printed Circuit Boards, Etching Boards, Milling Boards, Assembly, Testing, Mass-Producing the Case and Other Fixtures, Certification, Costs, Scaling Up Software, Deployment, Correctness and Maintainability, Security, Performance, User Community, **Ethics:** Characterizing the Internet of Things, Privacy, Control, Dumping Control, Crowdsourcing, Environment, Physical Thing, Electronics, Internet Service, Solutions, The Internet of Things as Part of the Solution, Cautious Optimism, The Open Internet of Things Definition.	**V.Moving to Manufacture:** What Are You Producing? Designing Kits, Designing Printed circuit boards, Software Choices, The Design Process, Manufacturing Printed Circuit Boards, Etching Boards, Milling Boards, Assembly, Testing, Mass-Producing the Case and Other Fixtures, Certification, Costs, Scaling Up Software, Deployment, Correctness and Maintainability, Security, Performance, User Community, **Ethics:** Characterizing the Internet of Things, Privacy, Control, Dumping Control, Crowdsourcing, Environment, Physical Thing, Electronics, Internet Service, Solutions, The Internet of Things as Part of the Solution, Cautious Optimism, The Open Internet of Things Definition. (Syllabus Done)	10
October	Revision Lectures. Solving previous years question papers.	Revision Lectures Done. Solved previous years question papers.	04
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SMT. CHANDA R. & SHRI M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. Information Technology
Name of Teacher	Mrs. Sneha G. Kapsikar

Class: F.Y.B.Sc. IT Semester: 04
Subject: Internet of Things Practical
Subject Code: USITSP2

No. of Practicals Allotted per week:02
No. Of Practicals Covered per Semester: 24 (4 Extra Sessions)
No. Of Practicals Allotted per Semester: 20

Month of teaching	Topic Proposed	Topic Covered	No. of Practical's per topic
July	1. Starting Raspbian OS, Familiarizing with Raspberry Pi Components and interface, Connecting to ethernet, Monitor, USB. 2. Controlling 4 LED's using Telegram app and Raspberry Pi 3.Displaying different LED patterns with Raspberry Pi. 4. Create a Raspberry Pi telegram bot and share files and text.	1. Starting Raspbian OS, Familiarizing with Raspberry Pi Components and interface, Connecting to ethernet, Monitor, USB. 2. Controlling 4 LED's using Telegram app and Raspberry Pi 3.Displaying different LED patterns with Raspberry Pi 4. Create a Raspberry Pi telegram bot and share files and text.	8
August	5.Controlling single LED's using Telegram app and Raspberry Pi. 6.Displaying Time over 4-Digit 7-Segment Display using Raspberry Pi. 7. Raspberry Pi Based Oscilloscope	5.Controlling single LED's using Telegram app and Raspberry Pi 6.Displaying Time over 4-Digit 7-Segment Display using Raspberry Pi. 7. Raspberry Pi Based Oscilloscope	6
October	Revision Practical	4 extra sessions on revision practicals conducted.	4
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SIES(T) L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. Information Technology
Name of teacher	Mr. Sunil Tripathi

Class: T.Y. B.Sc. IT Semester: V
Subject: Advanced Web Programming
Subject Code: USFT504

No. of lectures Allotted per week:02
No. Of lectures Covered per Semester: 87 (27 Extra Sessions)
No. Of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Un-Covered with reason	No. of lectures
June	**Introducing .NET**: The .NET Framework, C#, VB, and the .NET Languages, The Common Language Runtime, The .NET Class Library, The C# Language: C# Language Basics, Variables and Data Types, Variable Operations, Object-Based Manipulation, Conditional Logic, Loops, Methods, Types, Objects, and Namespaces: The Basics About Classes, Building a Basic Class, Value Types and Reference Types, Understanding Namespaces and Assemblies, Advanced Class Programming.	**Introducing .NET**: The .NET Framework, C#, VB, and the .NET Languages, The Common Language Runtime, The .NET Class Library, The C# Language: C# Language Basics, Variables and Data Types, Variable Operations, Object-Based Manipulation, Conditional Logic, Loops, Methods, Types, Objects, and Namespaces: The Basics About Classes, Building a Basic Class, Value Types and Reference Types, Understanding Namespaces and Assemblies, Advanced Class Programming.	16
July	**Web Form Fundamentals**: Writing Code, Using the Code-Behind Class, Adding Event Handlers, Understanding the Anatomy of an ASP.NET Application, Introducing Server Controls, Using the Page Class, Using Application Events, Configuring an ASP.NET Application. **Form Controls**: Stepping Up to Web Controls, Web Control Classes, List Controls, Table Controls, Web Control Events and AutoPostBack, Validation, Understanding Validation, Using the Validation Controls, Rich Controls, The	**Web Form Fundamentals**: Writing Code, Using the Code-Behind Class, Adding Event Handlers, Understanding the Anatomy of an ASP.NET Application, Introducing Server Controls, Using the Page Class, Using Application Events, Configuring an ASP.NET Application. **Form Controls**: Stepping Up to Web Controls, Web Control Classes, List Controls, Table Controls, Web Control Events and	28

	Calendar, The AdRotator, Pages with Multiple Views, User Controls and Graphics, Chart Controls, Dynamic Graphics, The Chart Control, Website Navigation: Site Maps, URL Mapping and Routing, The SiteMapPath Control, The TreeView Control, The Menu Control **Error Handling, Logging, and Tracing:** Avoiding Common Errors, Understanding Exception Handling, Handling Exceptions, Throwing Your Own Exceptions, Using Page Tracing	AutoPostBack, Validation, Understanding Validation, Using the Validation Controls, Rich Controls, The Calendar, The AdRotator, Pages with Multiple Views, User Controls and Graphics, User Controls, Dynamic Graphics, The Chart Control, Website Navigation: Site Maps, URL Mapping and Routing, The SiteMapPath Control, The TreeView Control, The Menu Control **Error Handling, Logging, and Tracing:** Avoiding Common Errors, Understanding Exception Handling, Handling Exceptions, Throwing Your Own Exceptions, Using Page Tracing	
Aug	**State Management:** Understanding the Problem of State, Using View State, Transferring Information Between Pages, Using Cookies, Managing Session State, Configuring Session State, Using Application State, Comparing State Management Options Styles, Themes, and Master Pages: Styles, Themes, Master Page Basics, Advanced Master Pages.	**State Management:** Understanding the Problem of State, Using View State, Transferring Information Between Pages, Using Cookies, Managing Session State, Configuring Session State, Using Application State, Comparing State Management Options Styles, Themes, and Master Pages: Styles, Themes, Master Page Basics, Advanced Master Pages.	20
Sept	**ADO.NET Fundamentals:** Understanding Databases, Configuring Your Database, Understanding SQL Basics, Understanding the Data Provider Model, Using Direct Data Access, Using Disconnected Data Access, Data Binding: Introducing Data Binding, Using Single-Value Data Binding, Using Repeated-Value Data Binding, Working with Data Source Controls, 12 11 The Data Controls: The GridView, Formatting the GridView, selecting a GridView Row, Editing with the GridView, Sorting and Paging the GridView, Using GridView Templates, The DetailsView and FormView	**ADO.NET Fundamentals:** Understanding Databases, Configuring Your Database, Understanding SQL Basics, Understanding the Data Provider Model, Using Direct Data Access, Using Disconnected Data Access, Data Binding: Introducing Data Binding, Using Single-Value Data Binding, Using Repeated-Value Data Binding, Working with Data Source Controls, 12 11 The Data Controls: The GridView, Formatting the GridView, selecting a GridView Row, Editing with the GridView, Sorting and Paging the GridView, Using GridView Templates, The DetailsView and FormView	19

Oct/Nov 07	**XML:** XML Explained, The XML Classes, XML Validation, XML Display and Transforms. Security Fundamentals: Understanding Security Requirements, Authentication and Authorization, Forms Authentication, Windows Authentication. ASP.NET AJAX: Understanding Ajax, Using Partial Refreshes, Using Progress Notification, Implementing Timed Refreshes, Working with the ASP.NET AJAX Control Toolkit.	**XML:** XML Explained, The XML Classes, XML Validation, XML Display and Transforms. Security Fundamentals: Understanding Security Requirements, Authentication and Authorization, Forms Authentication, Windows Authentication. ASP.NET AJAX: Understanding Ajax, Using Partial Refreshes, Using Progress Notification, Implementing Timed Refreshes, Working with the ASP.NET AJAX Control Toolkit.	7
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SHE M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. Information Technology
Name of Teacher	Mr Jitendra Tripathi

Class: F.Y.B.Sc. IT Semester- 05
Subject: Advanced Web Programming
Subject Code: USITSP2

No. of Practicals Allotted per week:02
No. Of Practicals Covered per Semester: 23 (3 Extra Session)
No. Of Practicals Allotted per Semester: 28

Month of teaching	Topic Proposed	Topic Covered	No. of Practicals per topic
July	**1. Working with basic C# and ASP .NET** a. Create an application that obtains four int values from the user and displays the product. b. Create an application to demonstrate string operations. c. Create an application that receives the (Student Id, Student Name, Course Name, Date of Birth) information from a set of students. The application should also display the information of all the students once the data entered. d. Create an application to demonstrate following operations i. Generate Fibonacci series. ii. Test for prime numbers iii. Test for vowels. iv. Use of foreach loop with arrays v. Reverse a number and find sum of digits of a number **2. Working with Object Oriented C# and ASP .NET** a. Create simple application to perform following operations i. Finding factorial Value ii. Money Conversion iii. Quadratic Equation iv. Temperature Conversion b. Create simple application to demonstrate use of following concepts i. Function Overloading ii. Inheritance (all types)	**1. Working with basic C# and ASP .NET** a. Create an application that obtains four int values from the user and displays the product. b. Create an application to demonstrate string operations. c. Create an application that receives the (Student Id, Student Name, Course Name, Date of Birth) information from a set of students. The application should also display the information of all the students once the data entered. d. Create an application to demonstrate following operations i. Generate Fibonacci series. ii. Test for prime numbers iii. Test for vowels. iv. Use of foreach loop with arrays v. Reverse a number and find sum of digits of a number **2. Working with Object Oriented C# and ASP .NET** a. Create simple application to perform following operations i. Finding factorial Value ii. Money Conversion iii. Quadratic Equation iv. Temperature Conversion b. Create simple application to demonstrate use of following concepts i. Function Overloading ii. Inheritance (all types)	12

	iii. Constructor overloading iv. Interfaces c. Create simple application to demonstrate use of following concepts i. Using Delegates and events ii. Exception handling **J. Working with Web Forms and Controls** a. Create a simple web page with various server controls to demonstrate setting and use of their properties. (Example AutoPostBack) b. Demonstrate the use of Calendar control to perform following operations. a) Display messages in a calendar control b) Display vacation in a calendar control	iii. Constructor overloading iv. Interfaces c. Create simple application to demonstrate use of following concepts i. Using Delegates and events ii. Exception handling **J. Working with Web Forms and Controls** a. Create a simple web page with various server controls to demonstrate setting and use of their properties. (Example AutoPostBack) b. Demonstrate the use of Calendar control to perform following operations. a) Display messages in a calendar control b) Display vacation in a calendar control	
August	c) Selected day in a calendar control using style d) Difference between two calendar dates c. Demonstrate the use of Treeview control perform following operations. a) Treeview control and datalist by Treeview operations **4. Working with Form Controls** a. Create a Registration form to demonstrate use of various Validation controls. b. Create Web Form to demonstrate use of Adrotator Control. c. Create Web Form to demonstrate use User Controls.	c) Selected day in a calendar control using style d) Difference between two calendar dates c. Demonstrate the use of Treeview control perform following operations. a) Treeview control and datalist by Treeview operations **4. Working with Form Controls** a. Create a Registration form to demonstrate use of various Validation controls. b. Create Web Form to demonstrate use of Adrotator Control. c. Create Web Form to demonstrate use User Controls.	4
September	**5. Working with Navigation, Beautification and Master page.** a. Create Web Form to demonstrate use of Website Navigation controls and Site Map. b. Create a web application to demonstrate use of Master Page with applying Styles and Themes for page beautification. c. Create a web application to demonstrate various states of ASP.NET Pages.	**5. Working with Navigation, Beautification and Master page.** a. Create Web Form to demonstrate use of Website Navigation controls and Site Map. b. Create a web application to demonstrate use of Master Page with applying Styles and Themes for page beautification. c. Create a web application to demonstrate various states of ASP.NET Pages.	2
October	**6. Working with Database** a. Create a web application bind data in a multiline textbox by querying in another textbox.	**6. Working with Database** a. Create a web application bind data in a multiline textbox by querying in another textbox.	

	b. Create a web application to display records by using database. c. Demonstrate the use of DataList link control. **7. Working with Database** a. Create a web application to display Databinding using dropdownlist control. b. Create a web application for to display the phone no of an author using database. c. Create a web application for inserting and deleting record from a database. (Using Execute-Non Query) **8. Programs to create and use DLL**	b. Create a web application to display records by using database. c. Demonstrate the use of Datalist link control. **7. Working with Database** a. Create a web application to display Databinding using dropdownlist control. b. Create a web application for to display the phone no of an author using database. c. Create a web application for inserting and deleting record from a database. (Using Execute-Non Query) **8. Programs to create and use DLL**	
Signatory of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E) MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. Information Technology
Name of teacher	Mrs. Rohini V. Jagadale

Class: T.Y. B.Sc. IT Semester- V
Subject: Linux System Administration
Subject Code: USFT505

No. of lectures Allotted per week:05
No. of lectures Covered per Semester:62
No. of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures
June	**Introduction to Red Hat Enterprise Linux**: Linux, Open Source and Red Hat, Origins of Linux, Distributions, Duties of Linux System Administrator. **Command Line**: Working with the Bash Shell, Getting the Best of Bash, Useful Bash Key Sequences, Working with Bash History, Performing Basic File System Management Tasks, Working with Directories, Piping and Redirection, Finding Files. **System Administration Tasks**: Performing Job Management Tasks, System and Process Monitoring and Management, Managing Processes with ps, Sending Signals to Processes with the kill Command, using top to Show Current System Activity, Managing Process Niceness, Scheduling Jobs, Mounting Devices, Working with Links, Creating Backups, Managing Printers, Setting Up System Logging, Setting Up Rsyslog, Common Log Files, Setting Up Logrotate. **Managing Software**: Understanding RPM, Understanding Meta Package Handlers, Creating Your Own Repositories, Managing Repositories, Installing Software with Yum, Querying Software, Extracting Files from RPM Packages. **Configuring and Managing Storage**: Understanding Partitions and Logical Volumes, Creating Partitions, Creating File Systems, File Systems Overview, Creating	**Introduction to Red Hat Enterprise Linux**: Linux, Open Source and Red Hat, Origins of Linux, Distributions, Duties of Linux System Administrator. **Command Line**: Working with the Bash Shell, Getting the Best of Bash, Useful Bash Key Sequences, Working with Bash History, Performing Basic File System Management Tasks, Working with Directories, Piping and Redirection, Finding Files. **System Administration Tasks**: Performing Job Management Tasks, System and Process Monitoring and Management, Managing Processes with ps, Sending Signals to Processes with the kill Command, using top to Show Current System Activity, Managing Process Niceness, Scheduling Jobs, Mounting Devices, Working with Links, Creating Backups, Managing Printers, Setting Up System Logging, Setting Up Rsyslog, Common Log Files, Setting Up Logrotate. **Managing Software**: Understanding RPM, Understanding Meta Package Handlers, Creating Your Own Repositories, Managing Repositories, Installing Software	18

	File Systems, Changing File System Properties, Checking the File System Integrity, Mounting File Systems Automatically Through fstab, Working with Logical Volumes, Creating Logical Volumes, Resizing Logical Volumes, Working with Snapshots, Replacing Failing Storage Devices, Creating Swap Space, Working with Encrypted Volumes	with Yum, Querying Software, Extracting Files from RPM Packages, **Configuring and Managing Storage**: Understanding Partitions and Logical Volumes, Creating Partitions, Creating File Systems, File Systems Overview, Creating File Systems, Changing File System Properties, Checking the File System Integrity, Mounting File Systems Automatically Through fstab, Working with Logical Volumes, Creating Logical Volumes, Resizing Logical Volumes, Working with Snapshots, Replacing Failing Storage Devices, Creating Swap Space, Working with Encrypted Volumes	
July	**Connecting to the Network**: Understanding NetworkManager, Working with Services and Runlevels, Configuring the Network with NetworkManager, Working with system-config-network, NetworkManager Configuration Files, Network Service Scripts, Networking from the Command Line, Troubleshooting Networking, Setting Up IPv6, Configuring SSH, Enabling the SSH Server, Using the SSH Client, Using PuTTY on Windows Machines, Configuring Key-Based SSH Authentication, Using Graphical Applications with SSH, Using SSH Port Forwarding, Configuring VNC Server Access	**Connecting to the Network**: Understanding NetworkManager, Working with Services and Runlevels, Configuring the Network with NetworkManager, Working with system-config-network, NetworkManager Configuration Files, Network Service Scripts, Networking from the Command Line, Troubleshooting Networking, Setting Up IPv6, Configuring SSH, Enabling the SSH Server, Using the SSH Client, Using PuTTY on Windows Machines, Configuring Key-Based SSH Authentication, Using Graphical Applications with SSH, Using SSH Port Forwarding, Configuring VNC Server Access	8
Aug ust	**Working with Users, Groups, and Permissions**: Managing Users and Groups, Commands for User Management, Managing Passwords, Modifying and Deleting User Accounts, Configuration Files, Creating Groups, Using Graphical Tools for User, and Group Management, Using External Authentication Sources, the Authentication Process, rsid, nsswitch, Pluggable Authentication Modules, Managing Permissions, the Role of Ownership, Basic Permissions: Read, Write, and Execute, Advanced Permissions, Working with Access Control	**Working with Users, Groups, and Permissions**: Managing Users and Groups, Commands for User Management, Managing Passwords, Modifying and Deleting User Accounts, Configuration Files, Creating Groups, Using Graphical Tools for User, and Group Management, Using External Authentication Sources, the Authentication Process, rsid, nsswitch, Pluggable Authentication Modules, Managing Permissions, the Role	11

	Lists, Setting Default Permissions with umask, Working with Attributes **Securing Server with iptables**: Understanding Firewalls, Setting Up a Firewall with system-config-firewall, Allowing Services, Trusted Interfaces, Masquerading, Configuration Files, Setting Up a Firewall with iptables, Tables, Chains, and Rules, Composition of Rule, Configuration Example, Advanced iptables Configuration, Configuring Logging, The Limit Module, Configuring NAT **Setting Up Cryptographic Services**: Introducing SSL, Proof of Authenticity: The Certificate Authority, Managing Certificates with openssl, Creating a Signing Request, Working with GNU Privacy Guard, Creating GPG Keys, Key Transfer, Managing GPG Keys, Encrypting Files with GPG, GPG Signing, Signing RPM Files **Configuring Server for File Sharing**: What is NFS? Advantages and Disadvantages of NFS, Configuring NFS4, Setting Up NFSv4, Mounting an NFS Share, Making NFS Mounts Persistent, Configuring Automount, Configuring Samba, Setting Up a Samba File Server, Samba Advanced Authentication Options, Accessing Samba Shares, Offering FTP Services.	of Ownership, Basic Permissions Read, Write, and Execute, Advanced Permissions, Working with Access Control Lists, Setting Default Permissions with umask, Working with Attributes. **Securing Server with iptables**: Understanding Firewalls, Setting Up a Firewall with system-config-firewall, Allowing Services, Trusted Interfaces, Masquerading, Configuration Files, Setting Up a Firewall with iptables, Tables, Chains, and Rules, Composition of Rule, Configuration Example, Advanced iptables Configuration, Configuring Logging, The Limit Module, Configuring NAT. **Configuring Server for File Sharing**: What is NFS? Advantages and Disadvantages of NFS, Configuring NFS4, Setting Up NFSv4, Mounting an NFS Share, Making NFS Mounts Persistent, Configuring Automount, Configuring Samba, Setting Up a Samba File Server, Samba Advanced Authentication Options, Accessing Samba Shares, Offering FTP Services. **Setting Up Cryptographic Services**: Introducing SSL, Proof of Authenticity: The Certificate Authority, Managing Certificates with openssl, Creating a Signing Request, Working with GNU Privacy Guard, Creating GPG Keys, Key Transfer, Managing GPG Keys, Encrypting Files with GPG, GPG Signing, Signing RPM Files.	
Sept	**Configuring DNS and DHCP**: Introduction to DNS, The DNS Hierarchy, DNS Server Types, The DNS Lookup Process, DNS Zone Types, Setting Up a DNS Server, Setting Up a Cache-Only Name Server, Setting Up a Primary Name Server, Setting Up a Secondary Name Server, Understanding DHCP, Setting Up a DHCP Server **Setting Up a Mail Server**: Using the Message Transfer Agent, the Mail Delivery Agent, the Mail User Agent, Setting Up Postfix as an SMTP Server, Working with Mail, Basic Configuration,	**Configuring DNS and DHCP**: Introduction to DNS, The DNS Hierarchy, DNS Server Types, The DNS Lookup Process, DNS Zone Types, Setting Up a DNS Server, Setting Up a Cache-Only Name Server, Setting Up a Primary Name Server, Setting Up a Secondary Name Server, Understanding DHCP, Setting Up a DHCP Server. **Setting Up a Mail Server**: Using the Message Transfer Agent, the Mail Delivery Agent, the Mail	12

	Internet Configuration, Configuring Domains for POP and IMAP. **Configuring Apache on Red Hat Enterprise Linux**: Configuring the Apache Web Server, creating a Basic Website, Understanding the Apache Configuration Files, Apache Log Files, Working with Virtual Hosts, Securing the Web Server with TLS Certificates, Configuring Authentication, Setting Up Authentication with Mpasswd, Configuring LDAP Authentication, Setting Up MySQL. Securing the Web Server with TLS Certificates, Configuring Authentication, Setting Up Authentication with Mpasswd, Configuring LDAP Authentication, Setting Up MySQL. **High-Availability Clustering**: High-Availability Clustering, The Workings of High Availability, High-Availability Requirements, Red Hat High-Availability Add-on Software Components, Configuring Cluster-Based Services, Setting Up Bonding, Setting Up Shared Storage, Installing the Red Hat High Availability Add-On, Building the Initial State of the Cluster, Configuring Additional Cluster Properties, Configuring a Quorum Disk, Setting Up Fencing, Creating Resources and Services, Troubleshooting a Nonoperational Cluster, Configuring GFS2 File	User Agent, Setting Up Postfix as an SMTP Server, Working with Mutt, Basic Configuration, Internet Configuration, Configuring Domains for POP and IMAP. **Configuring Apache on Red Hat Enterprise Linux**: Configuring the Apache Web Server, creating a Basic Website, Understanding the Apache Configuration Files, Apache Log Files, Working with Virtual Hosts, Securing the Web Server with TLS Certificates, Configuring Authentication, Setting Up Authentication with Mpasswd, Configuring LDAP Authentication, Setting Up MySQL. Securing the Web Server with TLS Certificates, Configuring Authentication, Setting Up Authentication with Mpasswd, Configuring LDAP Authentication, Setting Up MySQL. **High-Availability Clustering**: High-Availability Clustering, The Workings of High Availability, High-Availability Requirements, Red Hat High-Availability Add-on Software Components, Configuring Cluster-Based Services, Setting Up Bonding, Setting Up Shared Storage, Installing the Red Hat High Availability Add-On, Building the Initial State of the Cluster, Configuring Additional Cluster Properties, Configuring a Quorum Disk, Setting Up Fencing, Creating Resources and Services, Troubleshooting a Nonoperational Cluster, Configuring GFS2 File	
Octobar	**Systems Setting Up an Installation Server**: Configuring a Network Server as an Installation Server, Setting Up a TFTP and DHCP Server for PXE Boot, Installing the TFTP Server, Configuring DHCP for PXE Boot, Creating the TFTP PXE Server Content, creating a Kickstart File, Using a Kickstart File to Perform an Automated Installation, Modifying the Kickstart File with system-config-kickstart, Making Manual Modifications to the Kickstart File	**Systems Setting Up an Installation Server**: Configuring a Network Server as an Installation Server, Setting Up a TFTP and DHCP Server for PXE Boot, Installing the TFTP Server, Configuring DHCP for PXE Boot, Creating the TFTP PXE Server Content, creating a Kickstart File, Using a Kickstart File to Perform an Automated Installation.	7

	Introducing Bash Shell Scripting Introduction, Elements of a Good Shell Script, Executing the Script, Working with Variables and Input, Understanding Variables, Variables, Subshells, and Sourcing, Working with Script Arguments, Asking for Input, Using Command Substitution, Substitution Operators, Changing Variable Content with Pattern Matching, Performing Calculations, Using Control Structures, Using if...then...else, Using case, Using while, Using until, Using for, Configuring booting with GRUB	Modifying the Kickstart File with, system-config-kickstart, Making Manual Modifications to the Kickstart File **Introducing Bash Shell Scripting**: Introduction, Elements of a Good Shell Script, Executing the Script, Working with Variables and Input, Understanding Variables, Variables, Subshells, and Sourcing, Working with Script Arguments, Asking for Input, Using Command Substitution, Substitution Operators, Changing Variable Content with Pattern Matching, Performing Calculations, Using Control Structures, Using if...then...else, Using case, Using while, Using until, Using for, Configuring booting with GRUB	
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. Information Technology
Name of teacher	Mrs. Rohini V. Jagadale

Class: T.Y. B.Sc. IT Semester- V
Subject: Linux System Administration Practical
Subject Code: USIT 5P5

No. of lectures Allotted per week:02
No. of lectures Covered per Semester: 16
No. of lectures Allotted per Semester: 30

Month of teaching	Topic Proposed	Topic Covered	No. of lectures
July	0 : Installation of RHEL 6.X 1 : Graphical User Interface and Command Line Interface and Processes a) Exploring the Graphical Desktop b) The Command Line Interface c) Managing Processes 2 : Storage Devices and Links, Backup and Repository a) Working with Storage Devices and Links b) Making a Backup c) Creating a Repository 3 : Working with RPM Storage and Networking a) Using Query Options b) Extracting Files From RPMs c) Configuring and Managing Storage d) Connecting to the Network 4 : Working with Users, Groups, and Permissions 5 : Configuring Server for File Sharing a) Configuring NFS Server and Client	0 : Installation of RHEL 6.X 1 : Graphical User Interface and Command Line Interface and Processes a) Exploring the Graphical Desktop b) The Command Line Interface c) Managing Process 2 : Storage Devices and Links, Backup and Repository a) Working with Storage Devices and Links b) Making a Backup c) Creating a Repository 3 : Working with RPM Storage and Networking a) Using Query Options b) Extracting Files From RPMs c) Configuring and Managing Storage d) Connecting to the Network 4 : Working with Users, Groups, and Permissions 5 : Configuring Server for File Sharing a) Configuring NFS Server and Client	10
August	b) Configuring Samba c) Configuring FTP	b) Configuring Samba c) Configuring FTP	4
Sept	7 : Web Server a) Configuring Apache on Red Hat Enterprise Linux b) Writing a Script to Monitor Activity on the Apache Web Server	7 : Web Server a) Configuring Apache on Red Hat Enterprise Linux	2

	c) Using the select Command 8 : Shell Scripts and High Availability Clustering a) Writing Shell Scripts b) Configuring Booting with GRUB 9 : Firewall and Cryptographic services a) Securing Server with iptables b) Setting Up Cryptographic Services 9. Shell Scripts and High-Availability Clustering a Writing Shell Scripts b Configuring Booting with GRUB c Configuring High Availability Clustering 10. Setting Up an Installation Server a Configuring Network Server as an Installation Server b Setting Up a TFTP and DHCP Server for PXE Boot	b) Writing a Script to Monitor Activity on the Apache Web Server c) Using the select Command 8 : Shell Scripts and High-Availability Clustering a) Writing Shell Scripts b) Configuring Booting with GRUB 9 : Firewall and Cryptographic services a) Securing Server with iptables b) Setting Up Cryptographic Services 9. Shell Scripts and High-Availability Clustering a Writing Shell Scripts b Configuring Booting with GRUB	
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI—400 069

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. Information Technology
Name of teacher	Ms. Meena Gheevarghese

Class: T.Y. B.Sc. IT Semester: V
Subject: Enterprise Java
Subject Code: USEP506

No. of lectures Allotted per week: 05
No. Of lectures Covered per Semester: 73 (13 extra sessions)
No. Of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Un-Covered with reason	No. of lectures
JUNE (20 minutes)	**Understanding Java EE:** What is an Enterprise Application? What is java enterprise edition? Java EE Technologies, Java EE evolution, Glassfish server **Java EE Architecture, Server and Container:** Types of System Architecture, Java EE Server, Java EE Containers, Introduction to Java Servlets, The Need for Dynamic Content, Java Servlet Technology, Why Servlets?	**Understanding Java EE:** What is an Enterprise Application? What is java enterprise edition? Java EE Technologies, Java EE evolution, Glassfish server **Java EE Architecture, Server and Container:** Types of System Architecture, Java EE Server, Java EE Containers, Introduction to Java Servlets, The Need for Dynamic Content, Java Servlet Technology, Why Servlets?	14
JULY	What can Servlets do? Servlet API and Lifecycle: Java Servlet API, The Servlet Skeleton, The Servlet Life Cycle, A Simple Welcome Servlet, Working With Servlets: Getting Started, Using Annotations Instead of Deployment Descriptor. **Working with Databases:** What is JDBC? JDBC Architecture, Accessing Database, The Servlet GUI and Database Example, Request Dispatcher: RequestDispatcher Interface, Methods of RequestDispatcher, RequestDispatcher Application. **COOKIES:** Kinds Of Cookies, Where Cookies Are Used? Creating Cookies Using Servlet, Dynamically Changing The Colors Of A Page **SESSION:** What Are Sessions? Lifecycle Of Http Session, Session	What can Servlets do? Servlet API and Lifecycle: Java Servlet API, The Servlet Skeleton, The Servlet Life Cycle, A Simple Welcome Servlet Working With Servlets: Getting Started, Using Annotations Instead of Deployment Descriptor. **Working with Databases:** What is JDBC? JDBC Architecture, Accessing Database, The Servlet GUI and Database Example Request Dispatcher: RequestDispatcher Interface, Methods of RequestDispatcher, RequestDispatcher Application. **COOKIES:** Kinds Of Cookies, Where Cookies Are Used? Creating Cookies Using Servlet, Dynamically Changing The Colors Of A Page **SESSION:**	14

	Tracking With Servlet API, A Servlet Session Example **Working With Files:** Uploading Files, Creating an Upload File Application, Downloading Files, Creating a Download File Application.	What Are Sessions? Lifecycle Of Http Session, Session Tracking With Servlet API, A Servlet Session Example **Working With Files:** Uploading Files, Creating an Upload File Application, Downloading Files, Creating a Download File Application.	
AUG	**Working With Non-Blocking I/O:** Creating a Non-Blocking Read Application, Creating The Web Application, Creating Java Class, Creating Servlets, Retrieving The File, Creating index.jsp Introduction To Java Server Pages: Why use Java Server Pages? Disadvantages Of JSP, JSP v/s Servlets, Life Cycle of a JSP Page, How does a JSP function? How does JSP execute? About Java Server Pages **Getting Started With Java Server Pages:** Comments, JSP Directives, JSP Elements, JSP GUI Example **Action Elements:** Including other Files, Forwarding JSP Page to Another Page, Passing Parameters for other Actions, Loading a Javabean, Implicit Objects, Scope And EL Expressions: Implicit Objects, Character Quoting Conventions, Unified Expression Language (Unified EL), Expression Language. **Java Server Pages Standard Tag Libraries:** What is wrong in using JSP Scriptlet Tags? How JSTL Fixes JSP Scriptlet's Shortcomings? Disadvantages Of JSTL, Tag Libraries.	**Working With Non-Blocking I/O:** Creating a Non-Blocking Read Application, Creating The Web Application, Creating Java Class, Creating Servlets, Retrieving The File, Creating index.jsp Introduction To Java Server Pages: Why use Java Server Pages? Disadvantages Of JSP, JSP v/s Servlets, Life Cycle of a JSP Page, How does a JSP function? How does JSP execute? About Java Server Pages **Getting Started With Java Server Pages:** Comments, JSP Directives, JSP Elements, JSP GUI Example **Action Elements:** Including other Files, Forwarding JSP Page to Another Page, Passing Parameters for other Actions, Loading a Javabean, Implicit Objects, Scope And EL Expressions: Implicit Objects, Character Quoting Conventions, Unified Expression Language (Unified EL), Expression Language. **Java Server Pages Standard Tag Libraries:** What is wrong in using JSP Scriptlet Tags? How JSTL Fixes JSP Scriptlet's Shortcomings? Disadvantages Of JSTL, Tag Libraries.	18
SEPT	**Introduction To Enterprise Javabeans:** Enterprise Bean Architecture, Benefits of Enterprise Bean, Types of Enterprise Bean, Accessing Enterprise Beans, Enterprise Bean Application, Packaging Enterprise Beans **Getting started with Enterprise Javabeans:** Creating a Web Application, Creating an Enterprise Bean, Creating a Web Client	**Introduction To Enterprise Javabeans:** Enterprise Bean Architecture, Benefits of Enterprise Bean, Types of Enterprise Bean, Accessing Enterprise Beans, Enterprise Bean Application, Packaging Enterprise Beans **Getting started with Enterprise Javabeans:** Creating a Web Application, Creating an	15

	Servlet], Creating a JSP File, Build the Web Application, Running the Web Application **Working With Session Beans**: When to use Session Beans? Types of Session Beans, Remote and Local Interfaces, Accessing Interfaces, Lifecycle of Enterprise Beans, Packaging Enterprise Beans, Example of Stateful Session Bean, Example of Stateless Session Bean, Example of Singleton Session Beans. Working with Message Driven Beans: Lifecycle of a Message Driven Bean, Uses of Message Driven Beans, The Message Driven Beans Example	Enterprise Bean], Creating a Web Client [Servlet], Creating a JSP File, Build the Web Application, Running the Web Application **Working With Session Beans**: When to use Session Beans? Types of Session Beans, Remote and Local Interfaces, Accessing Interfaces, Lifecycle of Enterprise Beans, Packaging Enterprise Beans, Example of Stateful Session Bean, Example of Stateless Session Bean, Example of Singleton Session Beans. Working with Message Driven Beans: Lifecycle of a Message Driven Bean, Uses of Message Driven Beans, The Message Driven Beans Example	
	INTERCEPTORS: Request And Interceptor, Defining An Interceptor, Aroundinvoke Method, Applying Interceptor, Adding An Interceptor To An Enterprise Bean, Build and Run the Web Application. **Persistence, Object/Relational Mapping And JPA**: What is Persistence? Persistence in Java, Current Persistence Standards in Java, Why another Persistence Standards? Object/Relational Mapping, Introduction to Java **Persistence API**: The Java Persistence API, JPA, ORM, Database and the Application, Architecture of JPA, How JPA Works? JPA Specifications	**INTERCEPTORS**: Request And Interceptor, Defining An Interceptor, Aroundinvoke Method, Applying Interceptor, Adding An Interceptor To An Enterprise Bean, Build and Run the Web Application. **Persistence, Object/Relational Mapping And JPA**: What is Persistence? Persistence in Java, Current Persistence Standards in Java, Why another Persistence Standards? Object/Relational Mapping, Introduction to Java **Persistence API**: The Java Persistence API, JPA, ORM, Database and the Application, Architecture of JPA, How JPA Works? JPA Specifications	
OCT	**Writing JPA Application**: Application Requirement Specifications, Software Requirements, The Application Development Approach, Creating Database And Tables in Mysql, Creating a Web Application, Adding the Required Library Files, Creating a Javabean Class, Creating Persistence Unit [Persistence.Xml], Creating JSPS, The JPA Application Structure, Running The JPA Application. **Introduction to Hibernate**: What is Hibernate? Why Hibernate? Hibernate, Database and The Application, Components of	**Writing JPA Application**: Application Requirement Specifications, Software Requirements, The Application Development Approach, Creating Database And Tables in Mysql, Creating a Web Application, Adding the Required Library Files, Creating a Javabean Class, Creating Persistence Unit [Persistence.Xml], Creating JSPS, The JPA Application Structure, Running The JPA Application. **Introduction to Hibernate**: What is Hibernate? Why Hibernate? Hibernate, Database and The	06

	Hibernate, Architecture of Hibernate, How Hibernate Works? **Writing Hibernate Application:** Application Requirement Specifications, Software Requirements, The Application Development Approach, Creating Database and Tables in Mysql, Creating a Web Application, Adding The Required Library Files, Creating a Javabean Class, Creating Hibernate Configuration File, Adding a Mapping Class, Creating JSPS, Running The Hibernate Application	Application, Components of Hibernate, Architecture of Hibernate, How Hibernate Works? **Writing Hibernate Application:** Application Requirement Specifications, Software Requirements, The Application Development Approach, Creating Database and Tables in Mysql, Creating a Web Application, Adding The Required Library Files, Creating a Javabean Class, Creating Hibernate Configuration File, Adding a Mapping Class, Creating JSPS, Running The Hibernate Application.	
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
MRIDUL G.J. & SHRI M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. Information Technology
Name of Teacher	Ms.Merin Gheevarghese
Class:B.Sc. IT Semester- III **Subject Code: USIT5P6**	**Subject: Enterprise Java Practical**

No. of Practicals Allotted per week:02
No. Of Practicals Covered per Semester: 18
No. Of Practicals Allotted per Semester: 28

Month of teaching	Topic Proposed	Topic Covered	No. of Practicals per topic
July	**1. Implement the following Simple Servlet applications.** a. Create a simple calculator application using servlet. b. Create a servlet for a login page. If the username and password are correct then it says message "Hello <username>" else a message "login failed" c. Create a registration servlet in Java using JDBC. Accept the details such as Username, Password, Email, and Country from the user using HTML Form and store the registration details in the database. **2. Implement the following Servlet applications with Cookies and Sessions.** a. Using Request Dispatcher Interface create a Servlet which will validate the password entered by the user, if the user has entered "Servlet" as password, then he will be forwarded to Welcome Servlet else the user will stay on the index.html page and an error message will be displayed. b. Create a servlet that uses Cookies to store the number of times a user has visited servlet. c. Create a servlet demonstrating the use of session creation and destruction. Also check whether the user has visited this page first time or has visited earlier also using sessions.	**1. Implement the following Simple Servlet applications.** a. Create a simple calculator application using servlet. b. Create a servlet for a login page. If the username and password are correct then it says message "Hello <username>" else a message "login failed" c. Create a registration servlet in Java using JDBC. Accept the details such as Username, Password, Email, and Country from the user using HTML Form and store the registration details in the database. **2. Implement the following Servlet applications with Cookies and Sessions.** a. Using Request Dispatcher Interface create a Servlet which will validate the password entered by the user, if the user has entered "Servlet" as password, then he will be forwarded to Welcome Servlet else the user will stay on the index.html page and an error message will be displayed. b. Create a servlet that uses Cookies to store the number of times a user has visited servlet. c. Create a servlet demonstrating the use of session creation and destruction. Also check	18

	3. Implement the Servlet IO and File applications. a. Create a Servlet application to upload and download a file b. Develop Simple Servlet Question Answer Application using Database c. Create simple Servlet application to demonstrate Non-Blocking Read Operation	whether the user has visited this page first time or has visited earlier also using sessions **3. Implement the Servlet IO and File applications.** a. Create a Servlet application to upload and download a file b. Develop Simple Servlet Question Answer Application using Database c. Create simple Servlet application to demonstrate Non-Blocking Read Operation	
August	**4. Implement the following JSP applications.** a. Develop a simple JSP application to display values obtained from the use of implicit objects of various types. b. Develop a simple JSP application to pass values from one page to another with validations. (Name-txt, age-txt, hobbies-checkbox, email-txt, gender-radio button). c. Create a registration and login JSP application to register and authenticate the user based on username and password using JDBC. **5. Implement the following JSP JSTL and EL Applications.** a. Create an html page with fields, emp. name, age, desig, salary. Now on submit this data to a JSP page which will update the employee table of database with matching emp. b. Create a JSP page to demonstrate the use of Expression language. c. Create a JSP application to demonstrate the use of JSTL.	**4. Implement the following JSP applications.** a. Develop a simple JSP application to display values obtained from the use of implicit objects of various types. b. Develop a simple JSP application to pass values from one page to another with validations. (Name-txt, age-txt, hobbies-checkbox, email-txt, gender-radio button). c. Create a registration and login JSP application to register and authenticate the user based on username and password using JDBC. **5. Implement the following JSP JSTL and EL Applications.** a. Create an html page with fields, emp. name, age, desig, salary. Now on submit this data to a JSP page which will update the employee table of database with matching emp. b. Create a JSP page to demonstrate the use of Expression language. c. Create a JSP application to demonstrate the use of JSTL.	8a
September	**6. Implement the following EJB Applications.** a. Create a Currency Converter application using EJB. **7. Implement the following EJB applications with different types of Beans.** a. Develop simple EJB application to demonstrate Servlet Hit count using Stateless Session Beans.	**6. Implement the following EJB Applications.** a. Create a Currency Converter application using EJB. **7. Implement the following EJB applications with different types of Beans.** a. Develop simple EJB application to demonstrate Servlet Hit count using Stateless Session Beans.	8b

	b. Develop simple visitor Statistics application using Message Driven Bean [Stateless Session Bean].	b. Develop simple visitor Statistics application using Message Driven Bean [Stateless Session Bean]	
	8. Implement the following JPA applications. a. Develop a simple Inventory Application Using JPA. b. Develop a Guestbook Application Using JPA c. Create simple JPA application to store and retrieve Book details	**8. Implement the following JPA applications.** a. Develop a simple Inventory Application Using JPA. b. Develop a Guestbook Application Using JPA. c. Create simple JPA application to store and retrieve Book details	
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUSTS'S
SHETHU U.J. & SOB M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. Information Technology
Name of Teacher	Mrs. Sneha Gokarnakar, Mrs. Rohini V. Jagadale, Ms. Marina Ghevarghese, Mr. Somit Tripathi
Class: T.Y.B.Sc. IT Semester- 05 **Subject Code: USITSP1**	**Subject: Project Dissertation 15**

No. of Practicals Allotted per week:02
No. Of Practicals Covered per Semester: 15
No. Of Practicals Allotted per Semester: 28

Month of teaching	Topic Proposed	Topic Covered	No. of Practicals per topic
June	**1.1 PROJECT REPORT:** Title Page Original Copy of the Approved Proforma of the Project Proposal Certificate of Authenticated work Role and Responsibility Form Abstract Acknowledgement Table of Contents Table of Figures	**1.1 PROJECT REPORT:** Title Page Original Copy of the Approved Proforma of the Project Proposal Certificate of Authenticated work Role and Responsibility Form Abstract Acknowledgement Table of Contents Table of Figures	4
July	**CHAPTER 1: INTRODUCTION** 1.1 Background 1.2 Objectives 1.3 Purpose, Scope, and Applicability 1.3.1 Purpose 1.3.2 Scope 1.3.3 Applicability 1.4 Achievements 1.5 Organization of Report **CHAPTER 2: SURVEY OF TECHNOLOGIES**	**CHAPTER 1: INTRODUCTION** 1.1 Background 1.2 Objectives 1.3 Purpose, Scope, and Applicability 1.3.1 Purpose 1.3.2 Scope 1.3.3 Applicability 1.4 Achievements 1.5 Organization of Report **CHAPTER 2: SURVEY OF TECHNOLOGIES**	6
August	**CHAPTER 3: REQUIREMENTS AND ANALYSIS** 3.1 Problem Definition 3.2 Requirements Specification 3.3 Planning and Scheduling 3.4 Software and Hardware Requirements 3.5 Preliminary Product Description 3.6 Conceptual Models	**CHAPTER 3: REQUIREMENTS AND ANALYSIS** 3.1 Problem Definition 3.2 Requirements Specification 3.3 Planning and Scheduling 3.4 Software and Hardware Requirements 3.5 Preliminary Product Description	2

		3.6 Conceptual Models	
September	4.2.2 Data Integrity and Constraints 4.3 Procedural Design 4.3.1 Logic Diagrams 4.3.2 Data Structures 4.3.3 Algorithms Design 4.4 User interface design 4.5 Security Issues 4.6 Test Cases Design The documentation should use tools like star UML, Visual for windows, Rational Rose for design as part of Software Project Management Practical Course. The documentation should be spiral bound for semester V	4.2.2 Data Integrity and Constraints 4.3 Procedural Design 4.3.1 Logic Diagrams 4.3.2 Data Structures 4.3.3 Algorithms Design 4.4 User interface design 4.5 Security Issues 4.6 Test Cases Design The documentation should use tools like star UML, Visual for windows, Rational Rose for design as part of Software Project Management Practical Course. The documentation should be spiral bound for semester V	3
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SIR TH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. IT
Name of teacher	Ms. Merita Gheewalhot

Class: I Y.B.Sc. IT **Semester:** III
Subject: Software Quality Assurance
Subject Code: USFT601
No.of lectures Allotted per week: 04
No. Of lectures Covered per Semester: 35
No. Of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
December	**Introduction to Quality:** Historical Perspective of Quality, What is Quality? (Is it a fact or perception?), Definitions of Quality, Core Components of Quality, Quality View, Financial Aspect of Quality, Customers, Suppliers and Processes, Total Quality Management (TQM), Quality Principles of Total Quality Management, Quality Management Through Statistical Process Control, Quality Management Through Cultural Changes, Continual (Continuous) Improvement Cycle, Quality in Different Areas, Benchmarking and Metrics, Problem Solving Techniques, Problem Solving Software Tools, Software Quality Introduction, Constraints of Software Product Quality Assessment, Customer is a King, Quality and Productivity Relationship, Requirements of a Product, Organisation Culture, Characteristics of Software, Software Development Process. Types of Products, Schemes of Criticality Definitions, Problematic Areas of Software Development Life Cycle, Software Quality Management, Why Software Has Defects? Processes Related to Software Quality, Quality Management System Structure, Pillars of Quality Management System, Important Aspects of Quality Management.	**Introduction to Quality:** Historical Perspective of Quality, What is Quality? (Is it a fact or perception?), Definitions of Quality, Core Components of Quality, Quality View, Financial Aspect of Quality, Customers, Suppliers and Processes, Total Quality Management (TQM), Quality Principles of Total Quality Management, Quality Management Through Statistical Process Control, Quality Management Through Cultural Changes, Continual (Continuous) Improvement Cycle, Quality in Different Areas, Benchmarking and Metrics, Problem Solving Techniques, Problem Solving Software Tools, Software Quality Introduction, Constraints of Software Product Quality Assessment, Customer is a King, Quality and Productivity Relationship, Requirements of a Product, Organisation Culture, Characteristics of Software, Software Development Process.	Sem-6 lectures commenced from 14th Dec. 2023 06
January	**Fundamentals of testing**: Introduction, Necessity of testing, What is testing? Fundamental test process, The psychology of testing, Historical	Types of Products, Schemes of Criticality Definitions, Problematic Areas of Software Development Life Cycle, Software Quality Management, Why	13

	Perspective of Testing, Definitions of Testing, Approaches to Testing, Testing During Development Life Cycle, Requirement Traceability Matrix, Essentials of Software Testing, WorkBench, Important Features of Testing Process, Misconceptions About Testing, Principles of Software Testing, Salient Features of Good Testing, Test Policy, Test Strategy or Test Approach, Test Planning, Testing Process and Number of Defects Found in Testing, Test Team Efficiency, Mutation Testing, Challenges in Testing, Test Team Approach, Process Problems Faced by Testing, Cost Aspect of Testing, Establishing Testing Policy, Methods, Structured Approach to Testing, Categories of Defect, Defect, Error, or Mistake in Software, Developing Test Strategy, Developing Testing Methodologies (Test Plan), Testing Process, Attitude Towards Testing (Common People Issues), Test Methodologies/ Approaches, People Challenges in Software Testing, Raising Management Awareness for Testing, Skills Required by Tester Testing throughout the software life cycle, Software development models, Test levels, Test types, the targets of testing, Maintenance testing	Software Has Defects? Processes Related to Software Quality, Quality Management System Structure, Pillars of Quality Management System, Important Aspects of Quality Management **Fundamentals of testing**: Introduction, Necessity of testing, What is testing? Fundamental test process, The psychology of testing, Historical Perspective of Testing, Definitions of Testing, Approaches to Testing, Testing During Development Life Cycle, Requirement Traceability Matrix, Essentials of Software Testing, Workbench, Important Features of Testing Process, Misconceptions About Testing, Principles of Software Testing, Salient Features of Good Testing, Test Policy, Test Strategy or Test Approach, Test Planning, Testing Process and Number of Defects Found in Testing, Test Team Efficiency, Mutation Testing, Challenges in Testing, Test Team Approach, Process Problems Faced by Testing, Cost Aspect of Testing, Establishing Testing Policy, Methods, Structured Approach to Testing, Categories of Defect, Defect, Error, or Mistake in Software, Developing Test Strategy, Developing Testing Methodologies (Test Plan), Testing Process, Attitude Towards Testing (Common People Issues), Test Methodologies/ Approaches, People Challenges in Software Testing, Raising Management Awareness for Testing, Skills Required by Tester, Testing throughout the software life cycle, Software development models, Test levels, Test types, the targets of testing, Maintenance testing	
February	**Unit Testing: Boundary Value Testing:** Normal Boundary Value Testing, Robust Boundary Value Testing, Worst-Case Boundary Value Testing, Special Value Testing, Examples, Random Testing, Guidelines for Boundary Value Testing, Equivalence Class Testing: Equivalence Classes, Traditional Equivalency Class Testing, Improved Equivalence Class Testing, Edge Testing, Guidelines and Observations	Unit Testing: Boundary Value Testing Normal Boundary Value Testing, Robust Boundary Value Testing, Worst-Case Boundary Value Testing, Special Value Testing, Examples, Random Testing, Guidelines for Boundary Value Testing, Equivalence Class Testing: Equivalence Classes, Traditional Equivalence Class Testing, Improved Equivalence Class Testing, Edge Testing, Guidelines and Observations Decision Table-Based Testing: Decision Tables, Decision Table Techniques	11

	Decision Table-Based Testing: Decision Tables, Decision Table Techniques, Cause-and-Effect Graphing, Guidelines and Observations. Path Testing: Program Graphs, DD-Paths, Test Coverage Matrice, Basis Path Testing, Guidelines and Observations, Data Flow Testing: Define/Use Testing, Slice-Based Testing, Program Slicing Tools. **Software Verification and Validation:** Introduction, Verification, Verification Workbench, Methods of Verification, Types of reviews on the basis of Stage Phase, Entities involved in verification, Reviews in testing life cycle, Coverage in Verification, Concerns of Verification, Validation, Validation Workbench, Levels of Validation, Coverage in Validation, Acceptance Testing, Management of Verification and Validation, Software development verification and validation activities. V-and Model: Introduction, V-model for software, testing during Proposal stage, Testing during requirement stage, Testing during test planning phase, Testing during design phase, Testing during coding, VV Model, Critical Roles and Responsibilities.	Cause-and-Effect Graphing, Guidelines and Observations, Path Testing: Program Graphs, DD-Paths, Test Coverage Matrice, Basis Path Testing, Guidelines and Observations, Data Flow Testing: Define/Use Testing, Slice-Based Testing, Program Slicing Tools, Software Verification and Validation: requirement stage, Testing during test planning phase, Testing Introduction, Verification, Verification Workbench, Methods of Verification, Types of reviews on the basis of Stage Phase, Entities involved in verification, Reviews in testing life cycle, Coverage in Verification, Concerns of Verification, Validation, Validation Workbench, Levels of Validation, Coverage in Validation, Acceptance Testing, Management of Verification and Validation, Software development verification and validation activities, V-and Model: Introduction, V-model for software, testing during Proposal stage, Testing during during design phase, Testing during coding, VV Model, Critical Roles and Responsibilities. Levels of Testing: Introduction, Proposal Testing, Requirement Testing, Design Testing, Code Review, Unit Testing, Module Testing, Integration Testing, Big-Bang Testing, Sandwich Testing, Critical Path First, Sub-System Testing, System Testing, Testing Stages	
March	Special Tests: Introduction, GUI testing, Compatibility Testing, Security Testing, Performance Testing, Volume Testing, Stress Testing, Recovery Testing, Installation Testing, Requirement Testing, Regression Testing, Error Handling Testing, Manual Support Testing, Interrupt Testing, Control Testing, Smoke Testing, Adhoc Testing, Parallel Testing, Execution Testing, Operations Testing, Compliance Testing, Usability Testing, Decision Table Testing, Documentation Testing,	Special Tests: Introduction, GUI testing, Compatibility Testing, Security Testing, Performance Testing, Volume Testing, Stress Testing, Recovery Testing, Installation Testing, Requirement Testing, Regression Testing, Error Handling Testing, Manual Support Testing, Interrupt Testing, Control Testing, Smoke Testing, Adhoc Testing, Parallel Testing, Execution Testing, Operations Testing, Compliance Testing, Usability Testing, Decision Table Testing, Documentation Testing, Looping testing,	85

	Training testing, Rapid Testing, Control flow graph, Generating tests on the basis of Combinatorial Designs. State Graph, Risk Associated with New Technologies, Process maturity level of Technology, Testing Adequacy of Control in New technology usage, Object Oriented Application Testing, Testing of Internal Controls, COTS Testing, Client Server Testing, Web Application Testing, Mobile Application Testing, eBusiness eCommerce Testing, Agile Development Testing, Data Warehousing Testing	Rapid Testing, Control flow graph, Generating tests on the basis of Combinatorial Designs. State Graph, Risk Associated with New Technologies, Process maturity level of Technology, Testing Adequacy of Control in New technology usage, Object Oriented Application Testing, Testing of Internal Controls, COTS Testing, Client Server Testing, Web Application Testing, Mobile Application Testing, eBusiness eCommerce Testing, Agile Development Testing, Data Warehousing Testing	
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SHRI M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069
Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. IT
Name of teacher	Mrs. Robin V. Jagtiani

Class: T.Y. B.Sc. IT Semester- VI
Subject: Security In Computing
Subject Code: USIT602
No.of lectures Allotted per week: 05
No. Of lectures Covered per Semester: 78
No. Of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
December	**Information Security Overview:** The Importance of Information Protection, The Evolution of Information Security, Justifying Security Investment, Security Methodology, How to Build a Security Program, The Impossible Job, The Weakest Link, Strategy and Tactics, Business Processes vs. Technical Controls. **Risk Analysis:** Threat Definition, Types of Attacks, Risk Analysis.	**Information Security Overview:** The Importance of Information Protection, The Evolution of Information Security, Justifying Security Investment, Security Methodology, How to Build a Security Program, The Impossible Job, The Weakest Link, Strategy and Tactics, Business Processes vs. Technical Controls. **Risk Analysis:** Threat Definition, Types of Attacks, Risk Analysis.	3
January	**Secure Design Principles:** The CIA Triad and Other Models, Defense Models, Zones of Trust, Best Practices for Network Defense. **Authentication and Authorization:** Authentication, Authorization. **Encryption:** A Brief History of Encryption, Symmetric-Key Cryptography, Public Key Cryptography, Public Key Infrastructure. **Storage Security:** Storage Security Evolution, Modern Storage Security, Risk Remediation, Best Practices. **Database Security:** General Database Security Concepts, Understanding Database Security Layers, Understanding Database Level Security, Using Application Security, Database Backup and	**Secure Design Principles:** The CIA Triad and Other Models, Defense Models, Zones of Trust, Best Practices for Network Defense. **Authentication and Authorization:** Authentication, Authorization. **Encryption:** A Brief History of Encryption, Symmetric-Key Cryptography, Public Key Cryptography, Public Key Infrastructure. **Storage Security:** Storage Security Evolution, Modern Storage Security, Risk Remediation, Best Practices. **Database Security:** General Database Security Concepts, Understanding Database Security Layers, Understanding Database Level Security, Using Application Security, Database Backup and	16

	Recovery, Keeping Your Servers Up to Date, Database Auditing and Monitoring **Secure Network Design:** Introduction to Secure Network Design, Performance, Availability, Security **Network Device Security:** Switch and Router Basics, Network Hardening	Recovery, Keeping Your Servers Up to Date, Database Auditing and Monitoring **Secure Network Design:** Introduction to Secure Network Design, Performance, Availability, Security **Network Device Security:** Switch and Router Basics, Network Hardening	
February	**Firewalls:** Overview, The Evolution of Firewalls, Core Firewall Functions, Additional Firewall Capabilities, Firewall Design **Wireless Network Security:** Radio Frequency Security Basics, Data Link Layer Wireless Security Features, Flaws, and Threats, Wireless Vulnerabilities and Mitigations, Wireless Network Hardening Practices and Recommendations, Wireless Intrusion Detection and Prevention, Wireless Network Positioning and Secure Gateways **Intrusion Detection and Prevention Systems:** IDS Concepts, IDS Types and Detection Models, IDS Features, IDS Deployment Considerations, Security Information and Event Management (SIEM), **Voice over IP (VoIP) and PBX Security:** Background, VoIP Components, VoIP Vulnerabilities and Countermeasures, PBX, TEM Telecom Expense Management	**Firewalls:** Overview, The Evolution of Firewalls, Core Firewall Functions, Additional Firewall Capabilities, Firewall Design **Wireless Network Security:** Radio Frequency Security Basics, Data Link Layer Wireless Security Features, Flaws, and Threats, Wireless Vulnerabilities and Mitigations, Wireless Network Hardening Practices and Recommendations, Wireless Intrusion Detection and Prevention, Wireless Network Positioning and Secure Gateways **Intrusion Detection and Prevention Systems:** IDS Concepts, IDS Types and Detection Models, IDS Features, IDS Deployment Considerations, Security Information and Event Management (SIEM), **Voice over IP (VoIP) and PBX Security:** Background, VoIP Components, VoIP Vulnerabilities and Countermeasures, PBX, TEM Telecom Expense Management	12
March	**Operating System Security Models:** Operating System Models, Classic Security Models, Reference Monitor, Trustworthy Computing, International Standards for Operating System Security **Virtual Machines and Cloud Computing:** Virtual Machines, Cloud Computing	**Operating System Security Models:** Operating System Models, Classic Security Models, Reference Monitor, Trustworthy Computing, International Standards for Operating System Security **Virtual Machines and Cloud Computing:** Virtual Machines, Cloud Computing	7

	Secure Application Design: Secure Development Lifecycle, Application Security Practices, Web Application Security, Client Application Security, Remote Administration Security. **Physical Security:** Classification of Assets, Physical Vulnerability Assessment, Choosing Site Location for Security, Securing Assets, Locks and Entry Controls, Physical Intrusion Detection.	**Secure Application Design:** Secure Development Lifecycle, Application Security Practices, Web Application Security, Client Application Security, Remote Administration Security. **Physical Security:** Classification of Assets, Physical Vulnerability Assessment, Choosing Site Location for Security, Securing Assets, Locks and Entry Controls, Physical Intrusion Detection.	
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SMT.H.L.U.J. & SR.M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2021-24)

Department	B.Sc. IT
Name of teacher	Mrs. Rubin V. Jagdale

Class: T.Y. B.Sc. IT Semester: VI
Subject: Security In Computing Practical
Subject Code: USITSP2

No.of lectures Allotted per week: 04
No. Of lectures Covered per Semester: 20
No. Of lectures Allotted per Semester: 30

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
January	1 : Configure Routers a) OSPF MD5 authentication. b) NTP c) to log messages to the syslog server. d) to support SSH connections. 2 : Configure AAA Authentication a) Configure a local user account on Router and configure authenticate on the console and vty lines using local AAA b) Verify local AAA authentication from the Router console and the PC-A client 3 : Configuring Extended ACLs a) Configure, Apply and Verify an Extended Numbered ACL	1 : Configure Routers a) OSPF MD5 authentication. b) NTP. c) to log messages to the syslog server. d) to support SSH connections. 2 : Configure AAA Authentication a) Configure a local user account on Router and configure authenticate on the console and vty lines using local AAA b) Verify local AAA authentication from the Router console and the PC-A client 3 : Configuring Extended ACLs a) Configure, Apply and Verify an Extended Numbered ACL	10
February	4 : Configuring a Zone-Based Policy Firewall 5 : Configure IOS Intrusion Prevention System (IPS) Using the CLI a) Enable IOS IPS b) Modify an IPS signature 6 : Layer 2 VLAN Security 7 : Configure and Verify a Site-to-Site IPsec VPN Using CLI 8 : Configure IP ACLs to Mitigate Attacks and IPV6 ACLs a) Verify connectivity among devices before firewall configuration. b) Use ACLs to ensure remote access to the routers is	4 : Configuring a Zone-Based Policy Firewall 5 : Configure IOS Intrusion Prevention System (IPS) Using the CLI a) Enable IOS IPS. b) Modify an IPS signature. 6 : Layer 2 VLAN Security 7 : Configure and Verify a Site-to-Site IPsec VPN Using CLI 8 : Configure IP ACLs to Mitigate Attacks and IPV6 ACLs a) Verify connectivity among devices before firewall configuration. b) Use ACLs to ensure remote access to the routers is	10

	available only from management station PC-C. c) Configure ACLs on to mitigate attacks. d) Configuring IPv6 ACLs	available only from management station PC-C. c) Configure ACLs on to mitigate attacks. d) Configuring IPv6 ACLs	
Signature of Coordinator:		**Signature of Subject Teacher:**	

	available only from management station PC-C. c) Configure ACLs on to mitigate attacks. d) Configuring IPv6 ACLs	available only from management station PC-C. c) Configure ACLs on to mitigate attacks. d) Configuring IPv6 ACLs	
Signature of Coordinator:		**Signature of Subject Teacher:**	

CAMMI CHARITABLE TRUST'S
SHRI LJJ & SHRI MV COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. IT
Name of teacher	Mr. Sumit Tripathi

Class: T.Y.B.Sc. IT Semester- 5th
Subject: Business Intelligence
Subject Code: USCIB01

No.of lectures Allotted per week: 04
No. Of lectures Covered per Semester: 47
No. Of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
December	**Business intelligence**: Effective and timely decisions, Data, information and knowledge, The role of mathematical models, Business intelligence architectures, Ethics and business intelligence, Decision support systems, Definition of system, Representation of the decision-making process, Evolution of information systems, Definition of decision support system, Development of a decision support system	**Business intelligence**: Effective and timely decisions, Data, information and knowledge, The role of mathematical models, Business intelligence architectures, Ethics and business intelligence, Decision support systems, Definition of system, Representation of the decision-making process, Evolution of information systems, Definition of decision support system, Development of a decision support system	1
January	**Mathematical models for decision making**: Structure of mathematical models, Development of a model, Classes of models Data mining: Definition of data mining, Representation of input data , Data mining process, Analysis methodologies Data preparation: Data validation, Data transformation, Data reduction **Classification**: Classification problems, Evaluation of classification models, Bayesian methods, Logistic regression, Neural networks, Support vector machines Clustering: Clustering methods, Partition methods, Hierarchical	**Mathematical models for decision making**: Structure of mathematical models, Development of a model, Classes of models Data mining: Definition of data mining, Representation of input data , Data mining process, Analysis methodologies Data preparation: Data validation, Data transformation, Data reduction Classification: Classification problems, Evaluation of classification models, Bayesian methods, Logistic regression, Neural networks, Support vector machines Clustering: Clustering methods, Partition methods, Hierarchical methods, Evaluation of clustering models	17

LAXMI CHARITABLE TRUST'S
SMT. H.L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E) MUMBAI – 400 069

Teaching Plan and Implementation Report (2023-24)

Department	B.Sc. IT
Name of teacher	Mr. Sanoj Tripathi

Class: F.Y.B.Sc. IT Semester– III
Subject: Business Intelligence
Subject Code: USIT603

No.of lectures Allotted per week: 04
No. Of lectures Covered per Semester: 47
No. Of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
December	**Business intelligence:** Effective and timely decisions, Data, information and knowledge, The role of mathematical models, Business intelligence architectures, Ethics and business intelligence Decision support systems: Definition of system, Representation of the decision-making process, Evolution of information systems, Definition of decision support system, Development of a decision support system	**Business intelligence:** Effective and timely decisions, Data, information and knowledge, The role of mathematical models, Business intelligence architectures, Ethics and business intelligence Decision support systems: Definition of system, Representation of the decision-making process, Evolution of information systems, Definition of decision support system, Development of a decision support system	1
January	**Mathematical models for decision making:** Structure of mathematical models, Development of a model, Classes of models Data mining: Definition of data mining, Representation of input data , Data mining process, Analysis methodologies Data preparation: Data validation, Data transformation, Data reduction **Classification:** Classification problems, Evaluation of classification models, Bayesian methods, Logistic regression, Neural networks, Support vector machines Clustering: Clustering methods, Partition methods, Hierarchical	**Mathematical models for decision making:** Structure of mathematical models, Development of a model, Classes of models Data mining: Definition of data mining, Representation of input data , Data mining process, Analysis methodologies Data preparation: Data validation, Data transformation, Data reduction Classification: Classification problems, Evaluation of classification models, Bayesian methods, Logistic regression, Neural networks, Support vector machines Clustering: Clustering methods, Partition methods, Hierarchical methods, Evaluation of clustering models	17

	methods, Evaluation of clustering models		
February	**Business intelligence applications:** Marketing models, Relational marketing, Sales force management Logistic and production models, Supply chain optimization, Optimization models for logistics planning, Revenue management systems Data envelopment analysis: Efficiency measures, Efficient frontier, The CCR model, Identification of good operating practices	**Business intelligence applications:** **Marketing models**, Relational marketing, Sales force management, Logistic and production models, Supply chain optimization, Optimization models for logistics planning, Revenue management systems Data envelopment analysis: Efficiency measures, Efficient frontier, The CCR model, Identification of good operating practices	19
March	**Knowledge Management:** Introduction to Knowledge Management, Organizational Learning and Transformation, Knowledge Management Activities, Approaches to Knowledge Management, Information Technology (IT) In Knowledge Management, Knowledge Management Systems Implementation, Roles of People in Knowledge Management Artificial Intelligence and Expert Systems Concepts and Definitions of Artificial Intelligence, Artificial Intelligence Versus Natural Intelligence, Basic Concepts of Expert Systems, Applications of Expert Systems, Structure of Expert Systems, Knowledge Engineering, Development of Expert Systems	**Knowledge Management:** Introduction to Knowledge Management, Organizational Learning and Transformation, Knowledge Management Activities, Approaches to Knowledge Management, Information Technology (IT) In Knowledge Management, Knowledge Management Systems Implementation, Roles of People in Knowledge Management Artificial Intelligence and Expert Systems Concepts and Definitions of Artificial Intelligence, Artificial Intelligence Versus Natural Intelligence, Basic Concepts of Expert Systems, Applications of Expert Systems, Structure of Expert Systems, Knowledge Engineering, Development of Expert Systems	19
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SMT. H. L. U. J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2021-24)

Department : B.Sc. IT
Name of teacher : Mr. Sumit Tripathi
Class: T.Y.B.Sc.IT Semester:- 06
Subject:- Business Intelligence Practical
Subject Code: (SITSP)
No.of lectures Allotted per week: 02
No. Of lectures Covered per Semester:- 18
No. Of lectures Allotted per Semester: 20

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
January	1 Import the legacy data from different sources such as (Excel , SqlServer, Oracle etc.) and load in the target system. 1 You can download sample database such as Adventureworks, Northwind, foodmart etc.) 2 Perform the Extraction Transformation and Loading (ETL) process to construct the database in the Sqlserver	1 Import the legacy data from different sources such as (Excel , SqlServer, Oracle etc.) and load in the target system. 1 You can download sample database such as Adventureworks, Northwind, foodmart etc.) 2 Perform the Extraction Transformation and Loading (ETL) process to construct the database in the Sqlserver	4
February	3 a. Create the Data staging area for the selected database. b. Create the cube with suitable dimension and fact tables based on ROLAP, MOLAP and HOLAP model. 4 a.Create the ETL map and setup the schedule for execution. b. Execute the MDX queries to extract the data from the datawarehouse. 5 a. Import the datawarehouse data in Microsoft Excel and create the Pivot table and Pivot Chart. b. Import the cube in Microsoft Excel and create the Pivot table and Pivot Chart to perform data analysis. 6 Apply the what – if Analysis for data visualization. Design and generate necessary reports based on the data warehouse data.	3 a. Create the Data staging area for the selected database. b. Create the cube with suitable dimension and fact tables based on ROLAP, MOLAP and HOLAP model. 4 a.Create the ETL map and setup the schedule for execution. b. Execute the MDX queries to extract the data from the datawarehouse. 5 a. Import the datawarehouse data in Microsoft Excel and create the Pivot table and Pivot Chart. b. Import the cube in Microsoft Excel and create the Pivot table and Pivot Chart to perform data analysis. 6 Apply the what – if Analysis for data visualization. Design and generate necessary reports based on the data warehouse data.	8

March	7 Perform the data classification using classification algorithm. 8 Perform the data clustering using clustering algorithm 9 Perform the Linear regression on the given data warehouse data. 10 Perform the logistic regression on the given data warehouse data	7 Perform the data classification using classification algorithm 8 Perform the data clustering using clustering algorithm. 9 Perform the Linear regression on the given data warehouse data 10 Perform the logistic regression on the given data warehouse data	

Signature of Coordinator:

Signature of Subject Teacher:

LAXMI CHARITABLE TRUST'S
SMT. CHANDA U.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Report (2023-24)

Department: B.Sc. IT
Name of teacher: Mrs. Sapna Gokarekar
Class: B.Sc. IT **Semester:** 06
Subject: Principles of Geographic Information Systems
Subject Code: USIT604
No. of lectures Allotted per week: 03
No. Of lectures Covered per Semester: 30
No. Of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
December	1. A Gentle Introduction to GIS The nature of GIS. Some fundamental observations, Defining GIS, GISystems, GIScience and GIApplications, Spatial data and Geoinformation. The real world and representations of it: Models and modelling. Maps, Databases, Spatial databases and spatial analysis Geographic Information and Spatial Database Models and Representations of the real world Geographic Phenomena Defining geographic phenomena, types of geographic phenomena, Geographic fields, Geographic objects, Boundaries	1. A Gentle Introduction to GIS The nature of GIS. Some fundamental observations, Defining GIS, GISystems, GIScience and GIApplications, Spatial data and Geoinformation. The real world and representations of it: Models and modelling. Maps, Databases, Spatial databases and spatial analysis Geographic Information and Spatial Database Models and Representations of the real world Geographic Phenomena Defining geographic phenomena, types of geographic phenomena, Geographic fields, Geographic objects, Boundaries	7
January	Computer Representations of Geographic information: Regular tessellations, irregular tessellations, Vector representations, Topology and Spatial relationships, Scale and Resolution, Representation of Geographic fields, Representation of Geographic objects Organizing and Managing Spatial Data The Temporal Dimension II. Data Management and Processing Systems Hardware and Software Trends	Complete Representations of Geographic information: Regular tessellations, irregular tessellations, Vector representations, Topology and Spatial relationships, Scale and Resolution, Representation of Geographic fields, Representation of Geographic objects Organizing and Managing Spatial Data The Temporal Dimension II. Data Management and Processing Systems Hardware and Software Trends Geographic Information Systems: GIS Software: GIS	8

	Geographic Information Systems: GIS Software, GIS Architecture and functionality Spatial Data Infrastructure (SDI) Stages of Spatial Data handling: Spatial data handling and preparation, Spatial Data Storage and maintenance, Spatial Query and Analysis, Spatial Data Presentation. Database management Systems: Reasons for using a DBMS, Alternatives for data management, The relational data model, Querying the relational database. GIS and Spatial Database: Linking GIS and DBMS, Spatial database functionality III. Spatial Referencing and Positioning Spatial Referencing: Reference surfaces for mapping, Coordinate Systems, Map Projections, Coordinate Transformations Satellite-based Positioning: Absolute positioning, Errors in absolute positioning, Relative positioning, Network positioning, code versus phase measurements, Positioning technology	Architecture and functionality Spatial Data Infrastructure (SDI) Stages of Spatial Data handling: Spatial data handling and preparation, Spatial Data Storage and maintenance, Spatial Query and Analysis, Spatial Data Presentation, Database management Systems: Reasons for using a DBMS, Alternatives for data management, The relational data model, Querying the relational database. GIS and Spatial Database: Linking GIS and DBMS, Spatial database functionality III. Spatial Referencing and Positioning Spatial Referencing: Reference surfaces for mapping, Coordinate Systems, Map Projections, Coordinate Transformations Satellite-based Positioning: Absolute positioning, Errors in absolute positioning, Relative positioning, Network positioning, code versus phase measurements, Positioning technology	
February	Data Entry and Preparation Spatial Data Input: Direct spatial data capture, Indirect spatial data capture, Obtaining spatial data elsewhere Data Quality: Accuracy and Positioning, Positional accuracy, Attribute accuracy, temporal accuracy, Lineage, Completeness, Logical consistency Data Preparation: Data checks and repairs, Combining data from multiple sources Point Data Transformation: Interpolating discrete	Data Entry and Preparation Spatial Data Input: Direct spatial data capture, Indirect spatial data capture, Obtaining spatial data elsewhere Data Quality: Accuracy and Positioning, Positional accuracy, Attribute accuracy, temporal accuracy, Lineage, Completeness, Logical consistency Data Preparation: Data checks and repairs, Combining data from multiple sources Point Data Transformation: Interpolating discrete	12

	data, Interpolating continuous data IV. Spatial Data Analysis Classification of analytical GIS Capabilities Retrieval, classification and measurement: Measurement, Spatial selection queries, Classification Overlay functions, Vector overlay operators,Raster overlay operators Neighbourhood functions Proximity computations, Computation of diffusion, Flow computation, Raster based surface analysis Analysis: Network analysis, interpolation, terrain modeling	data, Interpolating continuous data. IV. Spatial Data Analysis Classification of analytical GIS Capabilities Retrieval, classification and measurement: Measurement, Spatial selection queries, Classification Overlay functions, Vector overlay operators, Raster overlay operators Neighbourhood functions: Proximity computations, Computation of diffusion, Flow computation, Raster based surface analysis Analysis: Network analysis, interpolation, terrain modeling	
March	GIS and Application models, GPS, Open GIS Standards, GIS Applications and Advances Error Propagation in spatial processing: How Errors propagate, Quantifying error propagation V. Data Visualization GIS and Maps, The Visualization Process Visualization Strategies: Present or explore? The cartographic toolbox What kind of data do I have? How can I map my data? How to map? How to map qualitative data, How to map quantitative data, How to map the terrain elevation, How to map time series Map Cosmetics, Map Documentation	GIS and Applications models GPS, Open GIS Standards, GIS Applications and Advances Error Propagation in spatial processing: How Errors propagate, Quantifying error propagation V. Data Visualization GIS and Maps, The Visualization Process Visualization Strategies: Present or explore? The cartographic toolbox What kind of data do I have? How can I map my data? How to map? How to map qualitative data, How to map quantitative data, How to map the terrain elevation, How to map time series Map Cosmetics, Map Documentation	2

Signature of Coordinator: Signature of Subject Teacher:

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SHE M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. IT
Name of teacher	Mrs. Sneha Gokarnkar

Class: B.Sc. IT **Semester:** 06
Subject: PGIS PRACTICAL
Subject Code: USEIsP4

No.of lectures Allotted per week: 02
No. Of lectures Covered per Semester: 14
No. Of lectures Allotted per Semester: 29

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
January	1. Creating and Managing Vector Data: Adding vector layers, setting properties, formatting, calculating line lengths and statistics 2.Exploring and Managing Raster data: Adding raster layers, raster styling and analysis, raster mosaicking and clipping 3.Making a Map, Working with attributes, importing Spreadsheets + CSV files Using Plugins, Searching and Downloading OpenStreetMap Data	1. Creating and Managing Vector Data: Adding vector layers, setting properties, formatting, calculating line lengths and statistics 2.Exploring and Managing Raster data: Adding raster layers, raster styling and analysis, raster mosaicking and clipping 3.Making a Map, Working with attributes, importing Spreadsheets + CSV files Using Plugins, Searching and Downloading OpenStreetMap Data	8
February	4. Working with attributes, terrain Data 5. Working with projections WMS Data 6. Georeferencing Topo Sheets and Scanned Maps Georeferencing Aerial Imagery Digitizing Map Data 7. Managing Data Tables and Spatial data Sets: Table joins, spatial joins, points in polygon analysis, performing spatial queries	4. Working with attributes, terrain Data 5. Working with projections WMS Data 6. Georeferencing Topo Sheets and Scanned Maps Georeferencing Aerial Imagery Digitizing Map Data 7. Managing Data Tables and Spatial data Sets: Table joins, spatial joins, points in polygon analysis, performing spatial queries	4
March	8. Advanced GIS Operations 1: Nearest Neighbor Analysis, Sampling Raster Data using Points or Polygons, Interpolating Point Data 9. Advance GIS Operations 2: Batch Processing using Processing Framework	8. Advanced GIS Operations 1: Nearest Neighbor Analysis, Sampling Raster Data using Points or Polygons, Interpolating Point Data 9. Advance GIS Operations 2: Batch Processing using Processing Framework	4

	Automating Complex Workflows using Processing Modeler Automating Map Creation with Print Composer Atlas 10 Validating map data	Automating Complex Workflows using Processing Modeler Automating Map Creation with Print Composer Atlas 10 Validating map data	
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SMT. ILU J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI - 400 059

Teaching Plan and Implementation Report (2023-24)

Department	B.Sc. IT
Name of teacher	Mr. Nilesh Shinde

Class: T. Y. B.Sc. IT Semester- VI
Subject: IT Services Management
Subject Code: LSIT606
No.of lectures Allotted per week: 04
No. Of lectures Covered per Semester: 22
No. Of lectures Allotted per Semester: 60

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
January	IT Service Management: Introduction, What is service management? What are services? Business Process. Principles of Service management: Specialization and Coordination, The agency principle, Encapsulation, Principles of systems, The service Life Cycle, Functions and processes across the life cycle. Service Strategy Principles. Value creation, Service Assets, Service Provider Service Structures, Service Strategy Principles. Service Strategy: Define the market, Develop the offerings, Develop Strategic Assets, Prepare for execution. Challenges, Critical Success factors and risks: Complexity, Coordination and Control, Preserving value, Effectiveness in measurement, Risks.	IT Service Management: Introduction, What is service management? What are services? Business Process. Principles of Service management: Specialization and Coordination, The agency principle, Encapsulation, Principles of systems, The service Life Cycle, Functions and processes across the life cycle. Service Strategy Principles. Value creation, Service Assets, Service Provider Service Structures, Service Strategy Principles. Service Strategy: Define the market, Develop the offerings, Develop Strategic Assets, Prepare for execution. Challenges, Critical Success factors and risks: Complexity, Coordination and Control, Preserving value, Effectiveness in measurement, Risks.	6
February	Service Design: Fundamentals, Service Design Principles: Goals, Balanced Design. Identifying Service requirements, identifying and documenting business requirements and drivers, Design activities, Design aspects, Subsequent design activities, Design constraints, Service oriented architecture, Business Service Management, Service Design Models. Service Design Processes: Service Catalogue	Service Design: Fundamentals, Service Design Principles: Goals, Balanced Design. Identifying Service requirements, identifying and documenting business requirements and drivers, Design activities, Design aspects, Subsequent design activities, Design constraints, Service oriented architecture, Business Service Management, Service Design Models. Service Design Processes: Service Catalogue	6

	Management, Service Level Management, Capacity Management, Availability Management, IT Service Continuity Management, Information Security Management, Supplier Management Challenges Critical Success factors and risks: Challenges, Risks Service Transition: Fundamentals, Service Transition Principles: Principles Supporting Service Transition, Policies for Service Transition	Management, Service Level Management, Capacity Management, Availability Management, IT Service Continuity Management, Information Security Management, Supplier Management Challenges Critical Success factors and risks: Challenges, Risks Service Transition: Fundamentals, Service Transition Principles: Principles Supporting Service Transition, Policies for Service Transition	
March	Service Transition Processes: Transition planning and support, Change Management, Service Asset Configuration Management, Service and Deployment Management, Service Validation and Testing, Evaluation, Knowledge Management. Challenges, Critical Success factors and risks: Challenges, Critical Success factors, Risks, Service Transition under difficult Conditions. Service Operation: Fundamentals, Service Operation Principles: Functions, groups, teams, departments and divisions, a achieving balance in service operations, Providing service, Operation staff involvement in service design and service transition, Operational Health, Communication, Documentation, Service Operation Processes: Event Management, Incident Management, Request fulfilment, Problem Management, Access Management, Operational activities of processes covered in other lifecycle phases. Challenges Critical Success factors and risks: Challenges, Critical Success factors, Risks	Service Transition Processes: Transition planning and support, Change Management, Service Asset Configuration Management, Service and Deployment Management, Service Validation and Testing, Evaluation, Knowledge Management. Challenges, Critical Success factors and risks: Challenges, Critical Success factors, Risks, Service Transition under difficult Conditions. Service Operation: Fundamentals, Service Operation Principles: Functions, groups, teams, departments and divisions, a achieving balance in service operations, Providing service, Operation staff involvement in service design and service transition, Operational Health, Communication, Documentation, Service Operation Processes: Event Management, Incident Management, Request fulfilment, Problem Management, Access Management, Operational activities of processes covered in other lifecycle phases. Challenges Critical Success factors and risks: Challenges, Critical Success factors, Risks	19

	Continual Service Improvement(CSI) Principles CSI Approach, CSI and organizational change, Ownership, CSI register, External and Internal drivers, Service level management, Knowledge management, The Deming cycle, Service Measurement, IT governance, Frameworks, models, standards and quality Systems, CSI inputs and outputs, CSI Process: The seven-step improvement process, CSI Methods and Techniques: Methods and techniques, Assessments, benchmarking, Service Measurement, Metrics, Return on Investment, Service reporting, CSI and other service management processes, Organising for CSI: Organisational development, Functions, roles, Customer Engagement, Responsibility model - RACI, Competence and training, Technology considerations: Tools to support CSI activities, Implementing CSI, Critical Considerations for implementing CSI, The start, Governance, CSI and organizational change, Communication Strategy and Plan	Continual Service Improvement(CSI) Principles CSI Approach, CSI and organizational change, Ownership, CSI register, External and Internal drivers, Service level management, Knowledge management, The Deming cycle, Service Measurement, IT governance, Frameworks, models, standards and quality Systems, CSI inputs and outputs, CSI Process: The seven-step improvement process, CSI Methods and Techniques: Methods and techniques, Assessments, benchmarking, Service Measurement, Metrics, Return on Investment, Service reporting, CSI and other service management processes, Organising for CSI: Organisational development, Functions, roles, Customer Engagement, Responsibility model - RACI, Competence and training, Technology considerations: Tools to support CSI activities, Implementing CSI, Critical Considerations for implementing CSI, The start, Governance, CSI and organizational change, Communication Strategy and Plan	
Signature of Coordinator:		Signature of Subject Teacher:	

LAXMI CHARITABLE TRUST'S
SMT. H. L. U. L. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069
Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. IT
Name of teacher	Mr. Akash Nair

Class: T.Y. B.Sc. IT Semester-VI
Subject: Advanced Mobile Programming Practical
Subject Code: USUT09
No.of lectures Allotted per week: 02
No. Of lectures Covered per Semester: 24
No. Of lectures Allotted per Semester: 30

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
January	1 : Introduction to Android, Introduction to Android Studio IDE, Application Fundamentals: Creating a Project, Android Components, Activities, Services, Content Providers, Broadcast Receivers, Interface overview, Creating Android Virtual device, USB debugging mode, Android Application Overview, Simple "Hello World" program	1 : Introduction to Android, Introduction to Android Studio IDE, Application Fundamentals: Creating a Project, Android Components, Activities, Services, Content Providers, Broadcast Receivers, Interface overview, Creating Android Virtual device, USB debugging mode, Android Application Overview, Simple "Hello World" program.	2
February	2 : Programming Resources Android Resources (Color, Theme, String, Drawable, Dimension, Image). 3 : Programming Activities and fragments Activity Life Cycle, Activity methods, Multiple Activities, Life Cycle of fragments and multiple fragments. 4 : Programs related to different Layouts Coordinate, Linear, Relative, Table, Absolute, Frame, List View, Grid View. 5 : Programming UI elements Applbar, Fragments, UI Components 6 : Programming menus, dialog, dialog fragments. 7 : Programs on Intents, Events, Listeners and Adapters The Android Intent Class, Using Events and Event Listeners	2 : Programming Resources Android Resources (Color, Theme, String, Drawable, Dimension, Image). 3 : Programming Activities and fragments Activity Life Cycle, Activity methods, Multiple Activities, Life Cycle of fragments and multiple fragments. 4 : Programs related to different Layouts Coordinate, Linear, Relative, Table, Absolute, Frame, List View, Grid View. 5 : Programming UI elements Applbar, Fragments, UI Components 6 : Programming menus, dialog, dialog fragments. 7 : Programs on Intents, Events, Listeners and Adapters The Android Intent Class, Using Events and Event Listeners.	10

March	8 : Programs on Services, notification and broadcast receivers 9 : Database Programming with SQLite	8 : Programs on Services, notification and broadcast receivers 9 : Database Programming with SQLite	6
April	10 : Programming threads, handles and asynchronous programs 11 : Programming Media API and Telephony API	10 : Programming threads, handles and asynchronous programs 11 : Programming Media API and Telephony API	6
Signature of Coordinator:		**Signature of Subject Teacher:**	

LAXMI CHARITABLE TRUST'S
SHETH L.U.J. & SIR M.V. COLLEGE OF ARTS, SCIENCE & COMMERCE
DR. S. RADHAKRISHNAN MARG, ANDHERI (E), MUMBAI – 400 069

Teaching Plan and Implementation Record (2023-24)

Department	B.Sc. IT
Name of teacher	Mrs. Sneha Gosavarakar, Mrs. Manjna Gnyewarghese, Mrs. Ruhee V. Jagtap, Mr. Sunil Tripathi

Class: T.Y. B.Sc. IT Semester- VI
Subject: Project Implementation
Subject Code: USITIP1

No.of lectures Allotted per week: 02
No. Of lectures Covered per Semester: 14
No. Of lectures Allotted per Semester: 28

Month of teaching	Topic Proposed	Topic Covered	No. of lectures per topic
January	CHAPTER 5: IMPLEMENTATION AND TESTING 5.1 Implementation Approaches 5.2 Coding Details and Code Efficiency 5.2.1 Code Efficiency 5.3 Testing Approach 5.3.1 Unit Testing 5.3.2 Integrated Testing 5.3.3 Beta Testing 5.4 Modifications and Improvements 5.5 Test Cases	CHAPTER 5: IMPLEMENTATION AND TESTING 5.1 Implementation Approaches 5.2 Coding Details and Code Efficiency 5.2.1 Code Efficiency 5.3 Testing Approach 5.3.1 Unit Testing 5.3.2 Integrated Testing 5.3.3 Beta Testing 5.4 Modifications and Improvements 5.5 Test Cases	6
February	CHAPTER 6: RESULTS AND DISCUSSION 6.1 Test Reports 6.2 User Documentation	CHAPTER 6: RESULTS AND DISCUSSION 6.1 Test Reports 6.2 User Documentation	4
March	CHAPTER 7: CONCLUSIONS 7.1 Conclusion 7.1.1 Significance of the System 7.2 Limitations of the System 7.3 Future Scope of the Project REFERENCES GLOSSARY APPENDIX A APPENDIX B	CHAPTER 7: CONCLUSIONS 7.1 Conclusion 7.1.1 Significance of the System 7.2 Limitations of the System 7.3 Future Scope of the Project REFERENCES GLOSSARY APPENDIX A APPENDIX B	4

Signature of Coordinator: **Signature of Subject Teacher:**