

**NEHRU ARTS AND SCIENCE COLLEGE  
(AUTONOMOUS)**

(Affiliated to Bharathiar University Accredited with “A+”Grade by NAAC,  
ISO 9001:2015 (QMS) Certified, Recognized by UGC with 2(f) &12(B),  
Under Star College Scheme by DBT, Govt. of India)  
Nehru Gardens, Thirumalayampalayam, Coimbatore-641105, Tamil Nadu, India.  
E-mail: [nascoffice@nehrucolleges.com](mailto:nascoffice@nehrucolleges.com). WebSite: [www.nehrucolleges.net](http://www.nehrucolleges.net).

**SCHOOL OF COMMERCE**

**B. Com Information Technology**

**CURRICULUM & SYLLABUS**



**EFFECTIVE FROM 2024 –2025**

## Department of Commerce – B.Com (IT)

### Vision Statement of the Department

Is “to develop professionalism in trade and commerce to meet the emerging global trends”

### Mission Statement of the Department

Is to

- ✓ Impart skills to understand and analyze global trends
- ✓ Develop the skills to tap opportunities
- ✓ Imbibe the potentials to meet the global challenges
- ✓ Impart the needed skills to attain professionalism

### Program Educational Objectives (PEOs)

After 3 years of the Programme, the graduates are expected to attain

|             |                                                                                                                                           |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PEO1</b> | Able to pursue higher education in their core areas of commerce, management, social science, or professional courses like CA, CMA, or CS. |
| <b>PEO2</b> | Develop professional skills in all functions areas of Commerce and Management                                                             |
| <b>PEO3</b> | Exhibit team spirit, skills, and values to learn and adapt to change throughout their professional career.                                |
| <b>PEO4</b> | Become a full-fledged Accounting and Finance professional                                                                                 |
| <b>PEO5</b> | Demonstrate professional expertise in financial planning, analysis, control, decision support, and professional ethics with employees     |

### Programme Specific Outcomes (PSOs)

After the successful completion of the Programme, the students are expected to

|             |                                                                                                        |
|-------------|--------------------------------------------------------------------------------------------------------|
| <b>PSO1</b> | Gain knowledge in the areas of commerce and computer technology.                                       |
| <b>PSO2</b> | Eligible to pursue higher education and take-up jobs in the field of commerce and computer technology. |
| <b>PSO3</b> | Develop an attitude to work effectively and efficiently in a business environment.                     |
| <b>PSO4</b> | Prepare students to take up entrepreneurship.                                                          |
| <b>PSO5</b> | Enable students capable of taking decisions at personal as well as at professional level.              |

### Programme Outcomes (POs)

On Successful completion of the Programme, the graduates will have

|            |                                       |                                                                                                                                                                                                                                                                                                                                   |
|------------|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PO1</b> | <b>Critical Thinking</b>              | Develop a systematic, critical approach to problem solving at all levels and apply the domain specific knowledge to form conclusions based on quantitative information to meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations. |
| <b>PO2</b> | <b>Usage of Technology</b>            | Equip students to meet industrial needs by utilizing tools and technologies for peer communication, data interpretation, and problem-solving aspects                                                                                                                                                                              |
| <b>PO3</b> | <b>Effective Communication</b>        | Develop language competence and be proficient in oral and written communication with a focus on LSRW.                                                                                                                                                                                                                             |
| <b>PO4</b> | <b>Environment and Sustainability</b> | Understand the consequential responsibilities to analyze and realize the interactions between social and environmental sustainability procedure sand create processes.                                                                                                                                                            |
| <b>PO5</b> | <b>Individual and Team Work</b>       | Function effectively as an individual and as a member or leader in diverse teams, and in multi disciplinary settings and manifest the best outcomes.                                                                                                                                                                              |
| <b>PO6</b> | <b>Ethics and Values</b>              | Acquire life skills to become a better human being, apply ethical principles, and commit to professional ethics and responsibilities.                                                                                                                                                                                             |
| <b>PO7</b> | <b>Social Interactions</b>            | Participate actively in initiatives that encourage equity and growth for all, and act with informed awareness of local, regional, national, and global needs                                                                                                                                                                      |
| <b>PO8</b> | <b>Life Long Learning</b>             | Engage in lifelong learning and Work on career enhancement and adapt to changing personal, professional and societal needs.                                                                                                                                                                                                       |



| Semester | Part | Sub. Code                                                | Name of the Subject                                                                     | Instruction hours/ | Duration of Examination | Examination Marks |     |       | Credits |
|----------|------|----------------------------------------------------------|-----------------------------------------------------------------------------------------|--------------------|-------------------------|-------------------|-----|-------|---------|
|          |      |                                                          |                                                                                         |                    |                         | CIA               | ESE | Total |         |
| I        | I    | 23U1TAM101/<br>24U1HIN101 /<br>24U1MAL101/<br>24U1FRN101 | Elanthamizh<br>Rachnatmak Hindi<br>Katha, Samskaram, Vivarthanam<br>Français general- I | 4                  | 3                       | 20                | 55  | 75    | 3       |
|          | II   | 24U2ENG101                                               | Professional English I                                                                  | 4                  | 3                       | 20                | 55  | 75    | 3       |
|          | III  | 23U3ACC101                                               | Core Paper–I Principles of Accountancy                                                  | 5                  | 3                       | 25                | 75  | 100   | 4       |
|          |      | 23U3CIC102                                               | Core Paper–II Information Technology                                                    | 5                  | 3                       | 25                | 75  | 100   | 4       |
|          |      | 24U3ACP103                                               | Core Paper–III MS Office and Google Applications Practical                              | 4                  | 3                       | 20                | 30  | 50    | 2       |
|          |      | 23U3MAA101                                               | Allied Paper–I Mathematics for Business                                                 | 5                  | 3                       | 25                | 75  | 100   | 4       |
|          | IV   | 21U4ENV101                                               | *@ Ability Enhancement Compulsory Course Environmental Studies                          | 2                  | 3                       | 50                | -   | 50    | 2       |
|          |      | 23U4HVV201                                               | @ Value Education : Human Values and Yoga Practice                                      | 1                  | -                       | -                 | -   | -     | -       |
|          |      |                                                          |                                                                                         | 30                 | -                       | -                 | -   | 550   | 22      |
| II       | I    | 23U1TAM202/<br>24U1HIN202/<br>23U1MAL202/<br>24U1FRN202  | Pynthamizh<br>Sanchar Hindi<br>Novalum Bhashaapadanavum<br>Français general- II         | 4                  | 3                       | 20                | 55  | 75    | 3       |
|          | II   | 24U2ENG202                                               | Professional English II                                                                 | 4                  | 3                       | 20                | 55  | 75    | 3       |
|          | III  | 23U3ACC204                                               | Core Paper– IV Financial Accounting                                                     | 6                  | 3                       | 25                | 75  | 100   | 4       |
|          |      | 24U3ACP205                                               | Core Paper–V Accounting Software                                                        | 4                  | 3                       | 20                | 30  | 50    | 2       |
|          |      | 23U3ACC206                                               | Core Paper–VI Executive Business Communication                                          | 3                  | 3                       | 20                | 55  | 75    | 3       |
|          |      | 23U3MAA202                                               | Allied Paper–II Business statistics                                                     | 6                  | 3                       | 25                | 75  | 100   | 4       |
|          | IV   | 21U4HRC202                                               | *@ Ability Enhancement Compulsory Course Human Rights and Constitution of India         | 2                  | 3                       | 50                | -   | 50    | 2       |
|          |      | 23U4HVV201                                               | @ Value Education : Human Values and Yoga Practice                                      | 2                  | 3                       | 50                | -   | 50    | 2       |
|          |      | 24U4SEC201                                               | Skill Enhancement Course - 1 Career Foundation Skills                                   | 1                  | 2                       | 50                | -   | 50    | 2       |
|          |      |                                                          |                                                                                         | 32                 | -                       | -                 | -   | 625   | 25      |
| III      | I    | 23U1TAM303/<br>24U1HIN303 /<br>24U1MAL303/<br>24U1FRN303 | Arunthamizh<br>Sahityak Hindi<br>Kavithayum Smaranayum<br>Français general - III        | 4                  | 3                       | 20                | 55  | 75    | 3       |
|          | II   | 24U2ENG303                                               | Communicative English Practical - I                                                     | 4                  | 3                       | 30                | 45  | 75    | 3       |
|          | III  | 23U3ACC307                                               | Core Paper–VII Corporate Accounting                                                     | 5                  | 3                       | 25                | 75  | 100   | 4       |
|          |      | 23U3CIC308                                               | Core Paper – VIII Introduction to Python Programming                                    | 4                  | 3                       | 20                | 55  | 75    | 3       |
|          |      | 23U3CIP309                                               | Core Paper – IX Python Programming Practical                                            | 3                  | 3                       | 20                | 30  | 50    | 2       |

|    |     |                                                                        |                                                                                                                   |    |   |       |       |     |    |
|----|-----|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|----|---|-------|-------|-----|----|
|    | III | 24U3ACA303                                                             | Allied paper - III Indian Knowledge System and Economic Principles                                                | 3  | 3 | 20    | 55    | 75  | 3  |
|    | IV  | 23U4ACS301/<br>23U4ACZ302/<br>24U4ACZ303                               | Skill Enhancement Course II                                                                                       | 3  | 3 | 20/30 | 55/45 | 75  | 3  |
|    |     | 22U4NM3BT1/<br>22U4NM3AT1/<br>22U4NM3CAF/<br>22U4NM3GST/<br>22U4NM3WRT | # @Basic Tamil - I<br>/##Advanced Tamil-I/<br>* NME: Consumer Affairs<br>/Gender Sensitization<br>/Women's Rights | 2  | 2 | 50    |       | 50  | 2  |
|    |     | SBOEC                                                                  | Skill Enhancement Course III - Extra Departmental Elective Course                                                 | 2  | 3 | -     | 50    | 50  | 2  |
|    |     | 24U4SE302                                                              | Skill Enhancement Course IV – Employment enhancement Training                                                     | 2  | 2 | 25    | -     | 25  | 1  |
|    |     |                                                                        |                                                                                                                   | 32 | - | -     | -     | 650 | 26 |
| IV | I   | 23U1TAM404/<br>24U1HIN404 /<br>24U1MAL404/<br>24U1FRN404/              | Muthamizh<br>Prayogik Hindi<br>Drisyakalaa Saahithyam<br>Français general - IV                                    | 4  | 3 | 20    | 55    | 75  | 3  |
|    | II  | 24U2ENG404                                                             | Communicative English Practical - II                                                                              | 4  | 3 | 30    | 45    | 75  | 3  |
|    | III | 23U3ACC410                                                             | Core Paper– X Cost Accounting                                                                                     | 5  | 3 | 25    | 75    | 100 | 4  |
|    |     | 23U3CIC411                                                             | Core Paper– XI Java programming                                                                                   | 4  | 3 | 20    | 55    | 75  | 3  |
|    |     | 23U3CIP412                                                             | Core Paper –XII Java Programming Practical                                                                        | 3  | 3 | 30    | 45    | 75  | 3  |
|    |     | 23U3ACA404                                                             | Allied Paper – IV Company Law and Secretarial Practice                                                            | 3  | 3 | 20    | 55    | 75  | 3  |
|    | IV  | 23U4ACS404/<br>23U4ACZ405/<br>23U4ACS406                               | Skill Enhancement Course V                                                                                        | 3  | 3 | 20/30 | 55/45 | 75  | 3  |
|    |     | 22U4NM4BT2/<br>22U4NM4AT2/<br>22U4NM4GEN                               | #@Basic Tamil-II /<br>##Advanced Tamil-II/<br>General Awareness                                                   | 2  | 2 | 50    |       | 50  | 2  |
|    |     | VBOE                                                                   | Value Based Open Elective Courses – Intra School Course                                                           | 2  | 3 | -     | 50    | 50  | 2  |
|    |     | 24U4CIVALC                                                             | Skill Enhancement Course VI - Add on Course – Institute Industry Linkage                                          | 4  | - | 50    | -     | 50  | 2  |
|    |     |                                                                        |                                                                                                                   | 34 | - | -     | -     | 700 | 28 |
| V  | III | 23U3ACC513                                                             | Core Paper–XIII Management Accounting                                                                             | 5  | 3 | 25    | 75    | 100 | 4  |
|    |     | 23U3CIC514                                                             | Core Paper–XIV VB.NET Programming                                                                                 | 6  | 3 | 20    | 55    | 75  | 3  |
|    |     | 23U3CIP515                                                             | Core Paper–XV VB.NET Practical                                                                                    | 4  | 3 | 30    | 45    | 75  | 3  |
|    |     | 24U3ACC516                                                             | Core Paper–XVI Direct Tax                                                                                         | 6  | 3 | 20    | 55    | 75  | 3  |
|    |     | 23U3CIE501/<br>23U3ACE502/<br>24U3ACE503                               | Discipline Specific Elective Paper -I                                                                             | 5  | 3 | 25    | 75    | 100 | 4  |
|    | IV  | 23U4ACS507/<br>23U4ACZ508/<br>23U4ACZ509                               | Skill Enhancement Course VII                                                                                      | 4  | 3 | 20/30 | 55/45 | 75  | 3  |
|    |     | 24U4SEC503                                                             | Skill Enhancement Course VIII – Campus to Corporate                                                               | 2  | 2 | 25    | -     | 25  | 1  |
|    |     | 24U3CIT501                                                             | Internship                                                                                                        | -  | 3 | 50    | -     | 50  | 2  |
|    |     | 24U4SEC504                                                             | Skill Enhancement Course IX – Industrial exploration                                                              | 2  | 2 | 25    | -     | 25  | 1  |
|    |     |                                                                        |                                                                                                                   | 34 | - | -     | -     | 600 | 24 |

|                              |     |                                          |                                            |    |                |    |    |      |      |
|------------------------------|-----|------------------------------------------|--------------------------------------------|----|----------------|----|----|------|------|
| VI                           | III | 23U3ACC617                               | Core Paper–XVII Internet and Web Designing | 6  | 3              | 25 | 75 | 100  | 4    |
|                              |     | 23U3ACP618                               | Core Paper –XVIII Web Designing Practical  | 4  | 3              | 40 | 60 | 100  | 4    |
|                              |     | 23U3ACV619                               | Core Paper– XIX Project and Viva Voce      | 6  | 3              | 40 | 60 | 100  | 4    |
|                              |     | 23U3CIE604/<br>24U3ACE605/<br>23U3CIE606 | Discipline Specific Elective Paper II      | 5  | 3              | 25 | 75 | 100  | 4    |
|                              |     | 23U3ACE607/<br>23U3CIE608/<br>23U3CIE609 | Discipline Specific Elective Paper III     | 5  | 3              | 25 | 75 | 100  | 4    |
|                              | IV  | 23U4ACS610/<br>23U4ACZ611/<br>23U4CIZ612 | Skill Enhancement Course X                 | 4  | 3              | 20 | 55 | 75   | 3    |
|                              | V   | 22U5EXT601                               | Extension Activities                       | -  | -              | 50 | -  | 50   | 2    |
|                              |     |                                          |                                            | 30 | -              | -  | -  | 625  | 25   |
| Total                        |     |                                          |                                            |    |                |    |    | 3750 | 150  |
| Additional Credit (Optional) |     |                                          |                                            |    | Semester II-VI |    |    |      | 10\$ |

#Basic Tamil - Students who have not studied Tamil up to 12th standard.

##Advanced Tamil – Students who have studied Tamil language upto 12th standard and chosen other languages under part I of the programme but would like to advance their Tamil language skills.

\*NME–Student shall choose any one course out of three courses.

@No End Semester Examinations. Only Continuous Internal Assessment (CIA)

\$-Not included in Total marks & CGPA Calculation

**List of Skill Enhancement Courses Offered by the Department (Choose any one of the Paper)**

| Skill Enhancement Course     | Course Code |   | Name of the Course                                  |
|------------------------------|-------------|---|-----------------------------------------------------|
| Skill Enhancement Course II  | 23U4ACS301  | A | Human Resource Management                           |
|                              | 23U4ACZ302  | B | Photoshop - Practical                               |
|                              | 24U4ACZ303  | C | Digital Payment System - Practical                  |
| Skill Enhancement Course V   | 23U4ACS404  | A | Advertising and Sales Promotion                     |
|                              | 24U4ACZ405  | B | Finance Modelling Through Spreadsheet - Practical   |
|                              | 24U4ACS406  | C | Artificial Intelligence                             |
| Skill Enhancement Course VII | 24U4ACS507  | A | Enterprise Resource Planning                        |
|                              | 23U4ACZ508  | B | Financial Statement Analysis-Practical              |
|                              | 23U4ACZ509  | C | Statistical Package for Social Sciences - Practical |
| Skill Enhancement Course X   | 23U4ACS610  | A | Cyber Security and Law                              |
|                              | 23U4ACZ611  | B | Instrumental Enhancement in Banking - Practical     |
|                              | 24U4CIZ612  | C | Oracle-Practical                                    |

**List of Discipline Specific Elective Papers offered by the Department (Choose any one of the Paper)**

| Elective                         | Course Code |   | Name of the Course          |
|----------------------------------|-------------|---|-----------------------------|
| Discipline Specific Elective- I  | 23U3CIE501  | A | Banking Law                 |
|                                  | 23U3ACE502  | B | Goods and Service Tax       |
|                                  | 24U3ACE503  | C | Consumer Affairs            |
| Discipline Specific Elective-II  | 23U3CIE604  | A | Networking Management       |
|                                  | 24U3ACE605  | B | Entrepreneurial Development |
|                                  | 23U3CIE606  | C | Cloud Computing             |
| Discipline Specific Elective-III | 23U3ACE607  | A | Investment Management       |
|                                  | 23U3CIE608  | B | Software Project Management |
|                                  | 23U3CIE609  | C | Auditing                    |

Extra Departmental Course Offered by the Department to other Department Students

| S.No | Course Code | Name of the Course            |
|------|-------------|-------------------------------|
| 1    | 24U4AC3ED1  | Accounting Practical          |
| 2    | 24U4AC3ED2  | Taxation Services - Practical |

**Students need to opt a Course other than the Course Offered by their Department**

**Intra School Course offered by the Department to other Department Students (within the School)**

| S.No. | Subject Code | Name of the Subject                                |
|-------|--------------|----------------------------------------------------|
| 1.    | 22U4VBOE01   | Design Ecosystem                                   |
| 2.    | 22U4VBOE02   | Design Thinking                                    |
| 3.    | 22U4VBOE03   | Disaster Management                                |
| 4.    | 22U4VBOE04   | Environmental Pollution and Waste Management (EMS) |
| 5.    | 22U4VBOE05   | History of Ancient India                           |
| 6.    | 22U4VBOE06   | Indian Knowledge System                            |
| 7.    | 22U4VBOE07   | Principles of IPR                                  |
| 8.    | 22U4VBOE08   | Science, Society and Culture                       |
| 9.    | 22U4VBOE09   | Community Engagement                               |
| 10.   | 22U4VBOE10   | Emotional Intelligence                             |
| 11.   | 22U4VBOE11   | Fundamentals of Tourism                            |
| 12.   | 22U4VBOE12   | Health Education                                   |
| 13.   | 22U4VBOE13   | Media and Politics                                 |
| 14.   | 22U4VBOE14   | Positive Psychology and Work Life                  |
| 15.   | 22U4VBOE15   | Professional Ethics                                |
| 16.   | 22U4VBOE16   | The Science of Happiness                           |
| 17.   | NCC          |                                                    |

- Students shall opt any course within their Schools.
- NCC – Students who qualify NCC B Certificate Examination need not appear for these open Electives. The Credits shall be transferred.

**Self-Study Paper offered by School of Commerce**

| S. No. | Semester      | Course code | Course Title                   |
|--------|---------------|-------------|--------------------------------|
| 1      | Semester II-V | 22UACSS01   | Capital Market Operations      |
| 2      |               | 22UACSS02   | Personal Investment Management |

**Chairman**  
**Board of Studies in Commerce**  
**Nehru Arts and Science College**  
**Coimbatore**

| Course Code                                 | Title                                                                                                                                                                                                                                                                                                               |                                |                    |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------|
| 23U3CIC102                                  | Core Paper – II Information Technology                                                                                                                                                                                                                                                                              |                                |                    |
| Semester: I                                 | Credits: 4                                                                                                                                                                                                                                                                                                          | CIA: 25 Marks                  | ESE: 75 Marks      |
| Course Objective                            | Enable students acquire thorough knowledge on the concepts and principles of information technology.                                                                                                                                                                                                                |                                |                    |
| Course Category                             | Employability                                                                                                                                                                                                                                                                                                       |                                |                    |
| Development Needs                           | Global                                                                                                                                                                                                                                                                                                              |                                |                    |
| Course Description                          | This course is designed to provide students with a working knowledge of computer concepts and essential skills necessary for work and Communication in today's society.                                                                                                                                             |                                |                    |
| Course Outcomes                             |                                                                                                                                                                                                                                                                                                                     | Teaching Methods               | Assessment Methods |
| CO 1                                        | Able to understand the concepts of Information Management System                                                                                                                                                                                                                                                    | Student Centric                | Assignment         |
| CO 2                                        | Gain Knowledge about various Computing Applications                                                                                                                                                                                                                                                                 | Flipped Teaching               | Quiz               |
| CO 3                                        | Create Awareness on Communication technology and networks                                                                                                                                                                                                                                                           | Team-based Teaching            | Seminar            |
| CO 4                                        | Able to understand on Various Management Concepts                                                                                                                                                                                                                                                                   | Flipped Teaching               | Assignment         |
| CO 5                                        | Insight of IT Management and Planning                                                                                                                                                                                                                                                                               | Flipped Teaching               | Seminar            |
| Offered by                                  | Information Technology                                                                                                                                                                                                                                                                                              |                                |                    |
| Course Content                              |                                                                                                                                                                                                                                                                                                                     | Instructional Hours / Week : 4 |                    |
| Unit                                        | Description                                                                                                                                                                                                                                                                                                         | Text Book                      | Chapters           |
| I                                           | Introduction: Managing in Information Age. Evolution Information Technology Management – Types of Information Systems – Internet Based Business Systems. Value Chain Reconstruction for E Business – IT Management Challenges and issues - Critical success - Factors for IT Managers                               | 1                              | 1,2                |
| Instructional Hours                         |                                                                                                                                                                                                                                                                                                                     |                                | 12                 |
| Suggested Learning Methods : Article Review |                                                                                                                                                                                                                                                                                                                     |                                |                    |
| II                                          | Hardware Software And Communication: Computing Hierarchy - Input - Output Technologies – Hardware Issues – System Architecture -Operating Systems – Network Operating Systems. Grid Computing -Mobile Computing Ubiquitous Computing – Application Programming – Programming Language – Compilers and Interpreters. | 2                              | 3, 4               |
| Instructional Hours                         |                                                                                                                                                                                                                                                                                                                     |                                | 12                 |
| Suggested Learning Methods : Demonstration  |                                                                                                                                                                                                                                                                                                                     |                                |                    |
| III                                         | Communication Technology: Communication Technology –WWW – Intranets – Extranets – Voice Networks Data. Communication Networks – Last Mile – Wireless System – Web Hosting – Application Service Providers                                                                                                           | 1                              | 5, 6               |
| Instructional Hours                         |                                                                                                                                                                                                                                                                                                                     |                                | 12                 |

|                                           |                                                                                                                                                                                                                                                                                                                                                                                                      |         |               |         |      |       |                 |     |      |      |      |      |      |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------|---------|------|-------|-----------------|-----|------|------|------|------|------|
| IV                                        | Information Technology Applications: Database Processing: Data Vs. Information – Database Management Systems: Meaning – Components – Uses – Limitations – Types. Enterprise Resource Planning – Enterprise System - Data Warehousing– Data Mining. Customer Relationship Management System -Supply Chain Management Systems– Knowledge Management- E-Business Expectations and Customer Satisfaction | 21      | 5, 11, 9 & 10 |         |      |       |                 |     |      |      |      |      |      |
| Instructional Hours                       |                                                                                                                                                                                                                                                                                                                                                                                                      |         | 12            |         |      |       |                 |     |      |      |      |      |      |
| Suggested Learning Methods : Illustration |                                                                                                                                                                                                                                                                                                                                                                                                      |         |               |         |      |       |                 |     |      |      |      |      |      |
| V                                         | IT Management & Planning: Nature and Scope of Management process – Scientific Management - Managerial functions and Roles – The evolution of Management Theory. Planning: meaning and purpose of planning - steps in planning – types of planning. Objectives and Policies - Decision making: Process of Decision making - types of Decisions.                                                       | 3       | 1, 2, 3 & 6   |         |      |       |                 |     |      |      |      |      |      |
| Instructional Hours                       |                                                                                                                                                                                                                                                                                                                                                                                                      |         | 12            |         |      |       |                 |     |      |      |      |      |      |
| Total Hours                               |                                                                                                                                                                                                                                                                                                                                                                                                      |         | 60 Hrs        |         |      |       |                 |     |      |      |      |      |      |
| Text Books                                | 1. Garroll W. FrenzelJohne. Frenzel, Management of Information Technology, Thomson Course Technology, Boston, 2004.<br>2. Efraim Turban, R. Kelly Rainer Jr, Richard E. Potter, Introduction to Information Technology, John Wiley & Sons, (Asia) Pvt. Ltd. Singapore, 2004.<br>3. T.Ramasamy, Principles of Management, Himalaya Publishing House, Mumbai, 2004.                                    |         |               |         |      |       |                 |     |      |      |      |      |      |
| Reference Books                           | 4. Henry C.Lucas, Information technology for management, John Wiley & Sons (Asia) Pvt. Ltd., 2014.<br>5. V. Rajaram, Introduction to Information Technology, PHI Learning Pvt. Ltd., 2013.                                                                                                                                                                                                           |         |               |         |      |       |                 |     |      |      |      |      |      |
| Web. URLs                                 | 6. <a href="https://ictsolved.github.io/csit/first-semester/introduction-to-information-technology/">https://ictsolved.github.io/csit/first-semester/introduction-to-information-technology/</a><br>7. <a href="http://gpnanakpur.ac.in/wp-content/uploads/2019/04/computerfundamentals-e-notes.pdf">http://gpnanakpur.ac.in/wp-content/uploads/2019/04/computerfundamentals-e-notes.pdf</a>         |         |               |         |      |       |                 |     |      |      |      |      |      |
| Tools for Assessment (25 Marks)           |                                                                                                                                                                                                                                                                                                                                                                                                      |         |               |         |      |       |                 |     |      |      |      |      |      |
| CIA I                                     | CIA II                                                                                                                                                                                                                                                                                                                                                                                               | CIA III | Assignment    | Seminar | Quiz | Total |                 |     |      |      |      |      |      |
| 5                                         | 5                                                                                                                                                                                                                                                                                                                                                                                                    | 6       | 3             | 3       | 3    | 25    |                 |     |      |      |      |      |      |
| Mapping                                   |                                                                                                                                                                                                                                                                                                                                                                                                      |         |               |         |      |       |                 |     |      |      |      |      |      |
| CO \ PO                                   | PO1                                                                                                                                                                                                                                                                                                                                                                                                  | PO2     | PO3           | PO4     | PO5  | PO6   | PO7             | PO8 | PSO1 | PSO2 | PSO3 | PSO4 | PSO5 |
| CO1                                       | M                                                                                                                                                                                                                                                                                                                                                                                                    | M       | H             | M       | H    | H     | M               | H   | H    | M    | H    | H    | H    |
| CO2                                       | M                                                                                                                                                                                                                                                                                                                                                                                                    | M       | H             | M       | H    | H     | L               | H   | H    | H    | H    | H    | H    |
| CO3                                       | M                                                                                                                                                                                                                                                                                                                                                                                                    | L       | H             | M       | H    | H     | M               | H   | H    | H    | H    | H    | H    |
| CO4                                       | M                                                                                                                                                                                                                                                                                                                                                                                                    | M       | H             | M       | H    | H     | M               | M   | H    | M    | H    | H    | M    |
| CO5                                       | L                                                                                                                                                                                                                                                                                                                                                                                                    | M       | H             | M       | H    | M     | M               | H   | M    | H    | H    | M    | H    |
| H-High; M-Medium; L-Low                   |                                                                                                                                                                                                                                                                                                                                                                                                      |         |               |         |      |       |                 |     |      |      |      |      |      |
| Course designed by                        |                                                                                                                                                                                                                                                                                                                                                                                                      |         |               |         |      |       | Verified by     |     |      |      |      |      |      |
| Dr.S.Joyce                                |                                                                                                                                                                                                                                                                                                                                                                                                      |         |               |         |      |       | Dr. R. Mahadevi |     |      |      |      |      |      |

| Course Code                                  | Title                                                                                                                                                                                                                                                                                                                                                                                                        |                                |                    |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------|
| 23U3CIC308                                   | Core Paper-VIII Introduction to Python Programming                                                                                                                                                                                                                                                                                                                                                           |                                |                    |
| Semester: III                                | Credits: 3                                                                                                                                                                                                                                                                                                                                                                                                   | CIA: 20 Marks                  | ESE: 55 Marks      |
| Course Objective                             | The course is designed to provide Basic knowledge of Python                                                                                                                                                                                                                                                                                                                                                  |                                |                    |
| Course Category                              | Skill Development, Employability                                                                                                                                                                                                                                                                                                                                                                             |                                |                    |
| Development Needs                            | Global                                                                                                                                                                                                                                                                                                                                                                                                       |                                |                    |
| Course Description                           | This course will provide an introduction to the Python programming language. Python is a powerful, versatile cross-platform programming language that has a strong presence in diverse software engineering disciplines including web development, information security, network scripting, data science, and embedded systems.                                                                              |                                |                    |
| Course Outcomes                              |                                                                                                                                                                                                                                                                                                                                                                                                              | Teaching Methods               | Assessment Methods |
| CO 1                                         | Understand the knowledge of Python program                                                                                                                                                                                                                                                                                                                                                                   | Student Centric                | Assignment         |
| CO 2                                         | Examining the Decision controls                                                                                                                                                                                                                                                                                                                                                                              | Flipped Teaching               | Quiz               |
| CO 3                                         | Apply the functions and modules                                                                                                                                                                                                                                                                                                                                                                              | Making Connections             | Poster Making      |
| CO 4                                         | Describe the concept of strings                                                                                                                                                                                                                                                                                                                                                                              | Flipped Teaching               | Assignment         |
| CO 5                                         | Experimenting the files operations and exception handling                                                                                                                                                                                                                                                                                                                                                    | Case-Based Learning            | Seminar            |
| Offered by                                   | Commerce                                                                                                                                                                                                                                                                                                                                                                                                     |                                |                    |
| Course Content                               |                                                                                                                                                                                                                                                                                                                                                                                                              | Instructional Hours / Week : 4 |                    |
| Unit                                         | Description                                                                                                                                                                                                                                                                                                                                                                                                  | Text Book                      | Chapters           |
| I                                            | <b>BASICS OF PYTHON PROGRAMMING:</b> Features of Python – History of Python – Literal constants – Variable and Identifiers – Data types – Input operation – Comments – Reserved Words – Indentation – Operators and Expressions – Expression in Python – Operations on Strings – Other Data Types – Type Conversion                                                                                          | 1                              | 3                  |
| Instructional Hours                          |                                                                                                                                                                                                                                                                                                                                                                                                              |                                | 12                 |
| Suggested Learning Methods : Mind Mapping    |                                                                                                                                                                                                                                                                                                                                                                                                              |                                |                    |
| II                                           | <b>DECISION CONTROL STATEMENTS:</b> Introduction to Decision Control Statements – Selection / Conditional Branching – Basic Loop Structure / Iterative Statements – Nested Loops – The break Statement – The Continue Statement – The Pass Statement – The else Statement used with Loops                                                                                                                    | 1                              | 4                  |
| Instructional Hours                          |                                                                                                                                                                                                                                                                                                                                                                                                              |                                | 12                 |
| Suggested Learning Methods : Concept Mapping |                                                                                                                                                                                                                                                                                                                                                                                                              |                                |                    |
| III                                          | <b>FUNCTIONS AND MODULES:</b> Introduction – Function Definition – Function Call – Variable Scope and Lifetime – The return Statement – More on Defining Functions – Lambda Function Or Anonymous function – Documentation Strings Good Programming Practices – Recursive Functions – Modules – Packages In Python – Standard Library Modules – Globals( ), Locals( ), and Reload( ) – Function Redefinition | 1                              | 5                  |
| Instructional Hours                          |                                                                                                                                                                                                                                                                                                                                                                                                              |                                | 12                 |
| Suggested Learning Methods : Peer Learning   |                                                                                                                                                                                                                                                                                                                                                                                                              |                                |                    |

|                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                              |            |                |            |                   |            |                    |             |                      |               |              |             |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------------|------------|-------------------|------------|--------------------|-------------|----------------------|---------------|--------------|-------------|
| IV                                                 | <b>PYTHON STRINGS REVISITED:</b> Introduction – Concatenating, Appending, and Multiplying Strings – Strings are Immutable – String Formatting Operator – Built-in String Methods and Functions – Slice Operation – ord () and chr () Functions – in and not in operators – Comparing Strings – Iterating String – The String Module – Regular Expressions – Meta characters in Regular Expression                                                                                                                                                                                                                                |                                                                                                                                                                                                                                              |            |                |            |                   |            |                    |             |                      | 1             | 6            |             |
| <b>Instructional Hours</b>                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                              |            |                |            |                   |            |                    |             |                      | <b>12</b>     |              |             |
| <b>Suggested Learning Methods : Case Studies</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                              |            |                |            |                   |            |                    |             |                      |               |              |             |
| V                                                  | <b>FILE HANDLING:</b> Introduction – File Path – Types of files – Opening and Closing Files – Reading and Writing Files – File Positions – Renaming and Deleting Files.<br><b>ERROR AND EXCEPTION HANDLING:</b> Introduction to Errors and Exceptions – Handling Exceptions – Multiple Except Blocks – Multiple Exceptions in a Single Block – Except Block Without Exception – The else Clause – Raising Exceptions – Instantiating Exceptions – Handling Exceptions in Invoked Functions – Built- in and User-defined Exceptions – The finally Block – Pre-defined Clean-up Action- Re-raising Exception- Assertions in Python |                                                                                                                                                                                                                                              |            |                |            |                   |            |                    |             |                      | 1,2           | 7,12         |             |
| <b>Instructional Hours</b>                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                              |            |                |            |                   |            |                    |             |                      | <b>12</b>     |              |             |
| <b>Suggested Learning Methods : Group Projects</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                              |            |                |            |                   |            |                    |             |                      |               |              |             |
| <b>Total Hours</b>                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                              |            |                |            |                   |            |                    |             |                      | <b>60 Hrs</b> |              |             |
| <b>Text Books</b>                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1. ReemaThareja, “Python Programming Using Problem Solving Approaches”, Oxford University Press, 2017.                                                                                                                                       |            |                |            |                   |            |                    |             |                      |               |              |             |
| <b>Reference Books</b>                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1.Allen Downey, Jeffrey Elkner, Chris Meyers, “Learning with Python”, Dreamtech Press, First Edition, 2015.<br>2. Jeeva Jose &P.Sojan Lal, “Introduction to Computing &Problem Solving with Python” Khanna Book Publishing Co.(P) Ltd, 2016. |            |                |            |                   |            |                    |             |                      |               |              |             |
| <b>Web. URLs</b>                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1. <a href="https://www.udacity.com/course/introduction-to-python--ud1110">https://www.udacity.com/course/introduction-to-python--ud1110</a><br>2. <a href="https://docs.python.org/3/tutorial">https://docs.python.org/3/tutorial</a>       |            |                |            |                   |            |                    |             |                      |               |              |             |
| <b>Tools for Assessment (20 Marks)</b>             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                              |            |                |            |                   |            |                    |             |                      |               |              |             |
| <b>CIA I</b>                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>CIA II</b>                                                                                                                                                                                                                                |            | <b>CIA III</b> |            | <b>Assignment</b> |            | <b>Seminar</b>     |             | <b>Poster Making</b> |               | <b>Total</b> |             |
| <b>4</b>                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>4</b>                                                                                                                                                                                                                                     |            | <b>5</b>       |            | <b>2</b>          |            | <b>2</b>           |             | <b>3</b>             |               | <b>20</b>    |             |
| <b>Mapping</b>                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                              |            |                |            |                   |            |                    |             |                      |               |              |             |
| <b>CO \ PO</b>                                     | <b>PO1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>PO2</b>                                                                                                                                                                                                                                   | <b>PO3</b> | <b>PO4</b>     | <b>PO5</b> | <b>PO6</b>        | <b>PO7</b> | <b>PO8</b>         | <b>PSO1</b> | <b>PSO2</b>          | <b>PSO3</b>   | <b>PSO4</b>  | <b>PSO5</b> |
| <b>CO1</b>                                         | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | M                                                                                                                                                                                                                                            | H          | M              | H          | H                 | M          | H                  | H           | M                    | H             | H            | H           |
| <b>CO2</b>                                         | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | M                                                                                                                                                                                                                                            | H          | M              | H          | H                 | L          | H                  | H           | H                    | H             | H            | H           |
| <b>CO3</b>                                         | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | L                                                                                                                                                                                                                                            | H          | M              | H          | H                 | M          | H                  | H           | H                    | H             | H            | H           |
| <b>CO4</b>                                         | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | M                                                                                                                                                                                                                                            | H          | M              | H          | H                 | M          | M                  | H           | M                    | H             | H            | M           |
| <b>CO5</b>                                         | L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | M                                                                                                                                                                                                                                            | H          | M              | H          | M                 | M          | H                  | M           | H                    | H             | M            | H           |
| H-High; M-Medium; L-Low                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                              |            |                |            |                   |            |                    |             |                      |               |              |             |
| <b>Course designed by</b>                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                              |            |                |            |                   |            | <b>Verified by</b> |             |                      |               |              |             |
| Dr.S.Joyce                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                              |            |                |            |                   |            | Dr. R. Mahadevi    |             |                      |               |              |             |

| Course Code        |                                                         | Title                                                                                                                                                                                                       |                                |                    |
|--------------------|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------|
| 23U3CIP309         |                                                         | Core Paper – IX Python Programming Practical                                                                                                                                                                |                                |                    |
| Semester: III      |                                                         | Credits:2                                                                                                                                                                                                   | CIA:20 Marks                   | ESE:30 Marks       |
| Course Objective   |                                                         | The course enable the students to design and program Python applications                                                                                                                                    |                                |                    |
| Course Category    |                                                         | Employability, Skill Development                                                                                                                                                                            |                                |                    |
| Development Needs  |                                                         | Global                                                                                                                                                                                                      |                                |                    |
| Course Description |                                                         | In this course, you will be able to learn to write programs in Python using loops, conditional statements, etc. You will also understand the other building blocks of programs such as functions or methods |                                |                    |
| Course Outcomes    |                                                         |                                                                                                                                                                                                             | Teaching Methods               | Assessment Methods |
| CO 1               | Design basic Python Applications                        |                                                                                                                                                                                                             | Hands on Training              | Models             |
| CO 2               | Implement the control structure and loops.              |                                                                                                                                                                                                             | Creative Thinking              | Demonstration      |
| CO 3               | Use functions for structuring Python programs.          |                                                                                                                                                                                                             | Logical Analysis               | Report             |
| CO 4               | Apply Python lists, tuples, and dictionaries.           |                                                                                                                                                                                                             | Applications process           | Demonstration      |
| CO 5               | Managing files in Python                                |                                                                                                                                                                                                             | Complexity Analyze             | Models             |
| Offered by         |                                                         | Commerce                                                                                                                                                                                                    |                                |                    |
| Course Content     |                                                         |                                                                                                                                                                                                             | Instructional Hours / Week : 3 |                    |
| S.No.              | Description                                             |                                                                                                                                                                                                             |                                |                    |
| 1                  | First n prime numbers                                   |                                                                                                                                                                                                             |                                |                    |
| 2                  | Programs that take command line arguments (word count)  |                                                                                                                                                                                                             |                                |                    |
| 3                  | Find the square root of a number (Newton’s method)      |                                                                                                                                                                                                             |                                |                    |
| 4                  | Find the most frequent words in a text read from a file |                                                                                                                                                                                                             |                                |                    |
| 5                  | String Type Functions                                   |                                                                                                                                                                                                             |                                |                    |
| 6                  | Dictionary Type Methods                                 |                                                                                                                                                                                                             |                                |                    |
| 7                  | Compute the GCD of two numbers                          |                                                                                                                                                                                                             |                                |                    |
| 8                  | Stacks with python lists                                |                                                                                                                                                                                                             |                                |                    |
| 9                  | Simulate bouncing ball using Python                     |                                                                                                                                                                                                             |                                |                    |
| 10                 | Find the maximum of a list of number                    |                                                                                                                                                                                                             |                                |                    |
| Total Hours        |                                                         |                                                                                                                                                                                                             |                                | 45 Hrs             |

### Tools for Assessment (20 Marks)

| Creative Thinking | Lab Performance | Report | Test 1 | Test 2 | Observation Note | Total |
|-------------------|-----------------|--------|--------|--------|------------------|-------|
| 4                 | 4               | 3      | 3      | 3      | 3                | 20    |

### Mapping

| CO \ PO | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PSO1 | PSO2 | PSO3 | PSO4 | PSO5 |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|
| CO1     | M   | M   | H   | M   | H   | H   | M   | H   | M    | M    | M    | M    | M    |
| CO2     | L   | M   | H   | M   | H   | H   | L   | H   | H    | H    | H    | H    | H    |
| CO3     | M   | L   | H   | L   | H   | H   | M   | H   | H    | M    | L    | M    | M    |
| CO4     | M   | M   | H   | M   | H   | H   | M   | M   | H    | H    | M    | H    | M    |
| CO5     | L   | M   | H   | M   | H   | M   | M   | H   | M    | H    | M    | M    | H    |

H-High; M-Medium; L-Low

| Course designed by | Verified by     |
|--------------------|-----------------|
| Dr.S.Joyce         | Dr. R. Mahadevi |

| Course Code                                 | Title                                                                                                                                                                                                                                                                                                                                                    |                                |                    |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------|
| 23U3CIC411                                  | Core Paper - XI Java Programming                                                                                                                                                                                                                                                                                                                         |                                |                    |
| Semester: IV                                | Credits: 3                                                                                                                                                                                                                                                                                                                                               | CIA: 20 Marks                  | ESE: 55 Marks      |
| Course Objective                            | To enable the students to get the knowledge about the operators, applets, threads and syntaxes used in Java                                                                                                                                                                                                                                              |                                |                    |
| Course Category                             | Employability, Skill Development                                                                                                                                                                                                                                                                                                                         |                                |                    |
| Development Needs                           | Global                                                                                                                                                                                                                                                                                                                                                   |                                |                    |
| Course Description                          | Describe the meaning of the object-oriented paradigm and create class hierarchies using the object-oriented design process. Design and implement java programs for complex problems, making good use of the features such as classes, inheritance and templates.                                                                                         |                                |                    |
| Course Outcomes                             |                                                                                                                                                                                                                                                                                                                                                          | Teaching Methods               | Assessment Methods |
| CO 1                                        | To define the OOPS concepts                                                                                                                                                                                                                                                                                                                              | Student Centric                | Assignment         |
| CO 2                                        | To explain the concept of flow control and Classes                                                                                                                                                                                                                                                                                                       | Flipped Teaching               | Poster Making      |
| CO 3                                        | To describe the concept of Arrays and Packages.                                                                                                                                                                                                                                                                                                          | Making Connections             | Seminar            |
| CO 4                                        | Demonstrate Exception handling and Multithreading programming.                                                                                                                                                                                                                                                                                           | Flipped Teaching               | Assignment         |
| CO 5                                        | To apply the concept of file streams and JAVA applet.                                                                                                                                                                                                                                                                                                    | Case-Based Learning            | Poster Making      |
| Offered by                                  | Information Technology                                                                                                                                                                                                                                                                                                                                   |                                |                    |
| Course Content                              |                                                                                                                                                                                                                                                                                                                                                          | Instructional Hours / Week : 4 |                    |
| Unit                                        | Description                                                                                                                                                                                                                                                                                                                                              | Text Book                      | Chapters           |
| I                                           | Basic Concepts of Object-Oriented Programming – Benefits and Application of OOP<br>Introduction to Java: Features of Java –Simple Java Program – Java Program Structure – Implementing a Java Program – JVM, Constants – Variables – Data types, Operators.                                                                                              | 1                              | 1, 2               |
| Instructional Hours                         |                                                                                                                                                                                                                                                                                                                                                          |                                | 12                 |
| Suggested Learning Methods : Mind Mapping   |                                                                                                                                                                                                                                                                                                                                                          |                                |                    |
| II                                          | Flow Control : Branching and Looping , Decision Making<br>Classes, Objects and Methods–Defining a Class –Adding Variables and Methods –Creating Objects – Accessing Class Members - Constructors – Method Overloading – Inheritance – Overriding of Methods – Final Variables, Methods and Class –Abstract Methods and Class – Visibility Control        | 2                              | 3,4                |
| Instructional Hours                         |                                                                                                                                                                                                                                                                                                                                                          |                                | 12                 |
| Suggested Learning Methods : Group Learning |                                                                                                                                                                                                                                                                                                                                                          |                                |                    |
| III                                         | Arrays – Strings and Vectors : One Dimensional Arrays – Creating an Array – Two-Dimensional Arrays – String arrays – String methods – String Buffer class– Vectors , Interfaces : Defining Interfaces –Extending Interfaces – Implementing Interface - Accessing Interface Variables<br>Packages : Java API Packages – Using System Packages – Creating, | 2                              | 5,6                |

|                                               |                                                                                                                                                                                                                                                                                                                                                 |             |            |         |               |       |     |                 |      |      |      |      |       |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|---------|---------------|-------|-----|-----------------|------|------|------|------|-------|
|                                               | Accessing and Using a Package –Adding a Class to a Package                                                                                                                                                                                                                                                                                      |             |            |         |               |       |     |                 |      |      |      |      |       |
| Instructional Hours                           |                                                                                                                                                                                                                                                                                                                                                 | 12          |            |         |               |       |     |                 |      |      |      |      |       |
| Suggested Learning Methods : Peer Learning    |                                                                                                                                                                                                                                                                                                                                                 |             |            |         |               |       |     |                 |      |      |      |      |       |
| IV                                            | Exception Handling : Exception Types - try and catch – Multiple catch statements –Nested try Statements –throw – finally–Throwing our own exception Multithreaded Programming : Creating Threads – Extending the Thread Class – Stopping and Blocking a Thread – Life Cycle of a Thread –Using Thread Methods – Thread Priority                 | 1           | 7,8        |         |               |       |     |                 |      |      |      |      |       |
| Instructional Hours                           |                                                                                                                                                                                                                                                                                                                                                 | 12          |            |         |               |       |     |                 |      |      |      |      |       |
| Suggested Learning Methods : Concept Learning |                                                                                                                                                                                                                                                                                                                                                 |             |            |         |               |       |     |                 |      |      |      |      |       |
| V                                             | File Streams: Stream Classes, Input / Output stream class, Character stream classes – Creation of Files - Reading/Writing Characters, Bytes –Simple File Example.<br>Applets : Preparing to Write Applets – Building Applet Code – Applet Life Cycle – Creating Executable Applet – Applet Tag – Adding Appletto HTML File – Running the Applet | 2           | 9,10       |         |               |       |     |                 |      |      |      |      |       |
| Instructional Hours                           |                                                                                                                                                                                                                                                                                                                                                 | 12          |            |         |               |       |     |                 |      |      |      |      |       |
| Suggested Learning Methods : Case Studies     |                                                                                                                                                                                                                                                                                                                                                 |             |            |         |               |       |     |                 |      |      |      |      |       |
|                                               |                                                                                                                                                                                                                                                                                                                                                 | Total Hours | 60 Hrs     |         |               |       |     |                 |      |      |      |      |       |
| Text Books                                    | 1. E.Balagurusamy, Programming with Java - A Primer, Tata McGraw – Hill Publishing Company Limited, New Delhi, 2006.<br>2. Patrick Naughton, The Java Handbook, Tata McGraw – Hill Publishing Company Limited, New Delhi, 2006.                                                                                                                 |             |            |         |               |       |     |                 |      |      |      |      |       |
| Reference Books                               | 1. Herbert Schildt, Java the Complete Reference, Eighth Edition, McGraw Hill Professional, 2011.<br>2. ISRD Group, Introduction to Object–Oriented Programming through Java, Tata McGraw–Hill Publishing Company Ltd., 2007.                                                                                                                    |             |            |         |               |       |     |                 |      |      |      |      |       |
| Web. URLs                                     | 1. <a href="https://www.programiz.com/java-programming">https://www.programiz.com/java-programming</a><br>2. <a href="https://www.javatpoint.com/java-tutorial">https://www.javatpoint.com/java-tutorial</a>                                                                                                                                    |             |            |         |               |       |     |                 |      |      |      |      |       |
| Tools for Assessment (20 Marks)               |                                                                                                                                                                                                                                                                                                                                                 |             |            |         |               |       |     |                 |      |      |      |      |       |
| CIA I                                         | CIA II                                                                                                                                                                                                                                                                                                                                          | CIA III     | Assignment | Seminar | Poster Making | Total |     |                 |      |      |      |      |       |
| 4                                             | 4                                                                                                                                                                                                                                                                                                                                               | 5           | 2          | 2       | 3             | 20    |     |                 |      |      |      |      |       |
| Mapping                                       |                                                                                                                                                                                                                                                                                                                                                 |             |            |         |               |       |     |                 |      |      |      |      |       |
| CO \ PO                                       | PO1                                                                                                                                                                                                                                                                                                                                             | PO2         | PO3        | PO4     | PO5           | PO6   | PO7 | PO8             | PSO1 | PSO2 | PSO3 | PSO4 | PSO 5 |
| CO1                                           | M                                                                                                                                                                                                                                                                                                                                               | M           | H          | M       | H             | H     | M   | H               | H    | M    | M    | H    | M     |
| CO2                                           | M                                                                                                                                                                                                                                                                                                                                               | M           | H          | M       | H             | H     | L   | H               | H    | H    | H    | H    | H     |
| CO3                                           | M                                                                                                                                                                                                                                                                                                                                               | M           | H          | M       | H             | H     | M   | H               | H    | H    | M    | H    | M     |
| CO4                                           | M                                                                                                                                                                                                                                                                                                                                               | M           | H          | M       | H             | H     | M   | M               | H    | H    | H    | H    | H     |
| CO5                                           | L                                                                                                                                                                                                                                                                                                                                               | M           | H          | M       | H             | M     | M   | H               | M    | H    | H    | H    | H     |
| H-High; M-Medium; L-Low                       |                                                                                                                                                                                                                                                                                                                                                 |             |            |         |               |       |     |                 |      |      |      |      |       |
| Course designed by                            |                                                                                                                                                                                                                                                                                                                                                 |             |            |         |               |       |     | Verified by     |      |      |      |      |       |
|                                               |                                                                                                                                                                                                                                                                                                                                                 |             |            |         |               |       |     |                 |      |      |      |      |       |
| Dr.S.Joyce                                    |                                                                                                                                                                                                                                                                                                                                                 |             |            |         |               |       |     | Dr. R. Mahadevi |      |      |      |      |       |

| Course Code        |                                                                                     | Title                                                                                                                       |                                |                    |
|--------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------|
| 23U3CIP412         |                                                                                     | Core Paper–XII Java Programming Practical                                                                                   |                                |                    |
| Semester: IV       |                                                                                     | Credits: 3                                                                                                                  | CIA: 30 Marks                  | ESE: 45 Marks      |
| Course Objective   |                                                                                     | To enable the students to gain the knowledge of the structure and model of the Java programming language                    |                                |                    |
| Course Category    |                                                                                     | Employability, Skill Development                                                                                            |                                |                    |
| Development Needs  |                                                                                     | Global                                                                                                                      |                                |                    |
| Course Description |                                                                                     | This course introduces computer programming using the JAVA programming language with object-oriented programming principles |                                |                    |
| Course Outcomes    |                                                                                     |                                                                                                                             | Teaching Methods               | Assessment Methods |
| CO 1               | To define Java programs that solves business problems.                              |                                                                                                                             | Hands on training              | Models             |
| CO 2               | To summarize the knowledge on validating user input.                                |                                                                                                                             | Logical Analysis               | Demonstration      |
| CO 3               | To experiment a test plan to validate a Java program.                               |                                                                                                                             | Applications process           | Report             |
| CO 4               | To illustrate a document on a java program.                                         |                                                                                                                             | Complexity Analyze             | Demonstration      |
| CO 5               | To design an application and execute in java interface.                             |                                                                                                                             | Creative Thinking              | Models             |
| Offered by         |                                                                                     | Commerce                                                                                                                    |                                |                    |
| Course Content     |                                                                                     |                                                                                                                             | Instructional Hours / Week : 3 |                    |
| S.No.              | Description                                                                         |                                                                                                                             |                                |                    |
| 1                  | Write a program to check whether a given number is Prime o r not.                   |                                                                                                                             |                                |                    |
| 2                  | Write a program to check whether the given year is leap year or not.                |                                                                                                                             |                                |                    |
| 3                  | Write a program to find the Sum of the series $x+x^2/2!+X^3/3!+\dots+x^n/n!$        |                                                                                                                             |                                |                    |
| 4                  | Write a program to find and replace a word with a string.                           |                                                                                                                             |                                |                    |
| 5                  | Write a program to prepare the mark list using Inheritance.                         |                                                                                                                             |                                |                    |
| 6                  | Create a simple calculator applet that implements the 4 basic mathematical Function |                                                                                                                             |                                |                    |
| 7                  | Write a JAVA program to calculate the payroll of employees.                         |                                                                                                                             |                                |                    |
| 8                  | Write a JAVA program to create Student mark statement.                              |                                                                                                                             |                                |                    |
| 9                  | Create a program to perform Banking Transactions.                                   |                                                                                                                             |                                |                    |
| 10                 | Write a Program to calculate different stock level(Minimum Stock Level, Maximum     |                                                                                                                             |                                |                    |

|                                 |     |                 |     |     |        |     |        |                 |        |      |                  |      |       |  |
|---------------------------------|-----|-----------------|-----|-----|--------|-----|--------|-----------------|--------|------|------------------|------|-------|--|
| Total Hours                     |     |                 |     |     |        |     |        |                 |        |      | 45 Hrs           |      |       |  |
| Tools for Assessment (30 Marks) |     |                 |     |     |        |     |        |                 |        |      |                  |      |       |  |
| Creative Thinking               |     | Lab Performance |     |     | Report |     | Test 1 |                 | Test 2 |      | Observation Note |      | Total |  |
| 5                               |     | 5               |     |     | 5      |     | 5      |                 | 5      |      | 5                |      | 30    |  |
| Mapping                         |     |                 |     |     |        |     |        |                 |        |      |                  |      |       |  |
| CO \ PO                         | PO1 | PO2             | PO3 | PO4 | PO5    | PO6 | PO7    | PO8             | PSO1   | PSO2 | PSO3             | PSO4 | PSO5  |  |
| CO1                             | M   | M               | H   | H   | M      | M   | M      | H               | H      | H    | M                | M    | M     |  |
| CO2                             | M   | M               | H   | H   | L      | L   | M      | H               | H      | H    | H                | H    | H     |  |
| CO3                             | M   | M               | H   | H   | M      | M   | M      | H               | H      | H    | L                | M    | M     |  |
| CO4                             | M   | M               | H   | H   | M      | M   | L      | H               | M      | H    | M                | H    | M     |  |
| CO5                             | M   | L               | M   | M   | M      | L   | M      | H               | H      | H    | M                | M    | H     |  |
| H-High; M-Medium; L-Low         |     |                 |     |     |        |     |        |                 |        |      |                  |      |       |  |
| Course designed by              |     |                 |     |     |        |     |        | Verified by     |        |      |                  |      |       |  |
|                                 |     |                 |     |     |        |     |        |                 |        |      |                  |      |       |  |
| Dr.S.Joyce                      |     |                 |     |     |        |     |        | Dr. R. Mahadevi |        |      |                  |      |       |  |

| Course Code                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Title                             |                                |                    |          |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|--------------------------------|--------------------|----------|
| 23U3CIC514                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Core Paper-XIV VB.NET Programming |                                |                    |          |
| Semester: V                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Credits: 3                        | CIA : 20 Marks                 | ESE : 55 Marks     |          |
| Course Objective                          | To enhance the student to understand the concepts of Visual Basic.NET to build Windows applications.                                                                                                                                                                                                                                                                                                                                                                                                   |                                   |                                |                    |          |
| Course Category                           | Employability                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                   |                                |                    |          |
| Development Needs                         | Global                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                   |                                |                    |          |
| Course Description                        | Introduction to computer programming using VB.NET. Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes language syntax, data and file structures, input/output devices, and files                                                                                                                                                                                                                                                     |                                   |                                |                    |          |
| Course Outcomes                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                   | Teaching Methods               | Assessment Methods |          |
| CO 1                                      | Understand knowledge of basic programming concepts.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                   | Student Centric                | Assignment         |          |
| CO 2                                      | Describe the basic structure of a Visual Basic.NET                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                   | Flipped Teaching               | Quiz               |          |
| CO 3                                      | Understand the various menus and types of errors in project.                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                   | Making Connections             | Think – Pair-Share |          |
| CO 4                                      | Understand basic concepts and File handling process                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                   | Fishbowl technique             | Poster Making      |          |
| CO 5                                      | Summarize the concept of ADO.NET                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                   | Case-Based Learning            | Seminar            |          |
| Offered by                                | Information Technology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                   |                                |                    |          |
| Course Content                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                   | Instructional Hours / Week : 6 |                    |          |
| Unit                                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                   |                                | Text Book          | Chapters |
| I                                         | Getting started in Visual Basic to .NET:- Welcome to Visual Basic.NET - .NET Framework. Welcome to IDE: What is IDE – Using the Auto Hide facility – using the Properties Window – setting the properties of Forms and Controls – using the Solution Explorer – writing an Event Procedure – the Standard Toolbar. Setting properties using the Properties Window: Classification of Properties. Visual Basic.NET Programming Language-I: Variables and Data types.                                    |                                   |                                | 1                  | 1, 2,    |
| Instructional Hours                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                   |                                |                    | 18       |
| Suggested Learning Methods : Mind Mapping |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                   |                                |                    |          |
| II                                        | Visual Basic.NET Programming Language-I: Text box control – Radio button control – Programming Statements: IF...THEN AND IF...THEN...ENDIF – IF...THEN...ELSE...ENDIF. Visual Basic.NET Programming Language-II: The MsgBox ( ) function – The InputBox ( ) function – List box control – Programming Statement: Select Case. Visual Basic.NET Programming Language-III: Check box control – Iteration Statements – Do While Loop – Do Loop While – Do until Loop – Do Loop until – For Next – Arrays. |                                   |                                | 1                  | 3,4      |
| Instructional Hours                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                   |                                |                    | 18       |
| Suggested Learning Methods : Coding       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                   |                                |                    |          |

|                                           |                                                                                                                                                                                                                                                                                                                                                           |         |            |         |               |       |     |                 |      |      |      |      |      |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------|---------|---------------|-------|-----|-----------------|------|------|------|------|------|
| III                                       | Menus and Dialog Boxes: Basic elements of menus – Generic procedure of creating menus –creating a simple menu application. Structured programming: - What is structured programming? – Events, Subroutines & Functions – scope of variables – scope of procedures – Elementary and composite data types                                                   | 1       | 5,6        |         |               |       |     |                 |      |      |      |      |      |
| Instructional Hours                       |                                                                                                                                                                                                                                                                                                                                                           |         | 18         |         |               |       |     |                 |      |      |      |      |      |
| Suggested Learning Methods : Programming  |                                                                                                                                                                                                                                                                                                                                                           |         |            |         |               |       |     |                 |      |      |      |      |      |
| IV                                        | Object-oriented programming: What is OOP? – Implementing OOPS – Inheritance overriding – Collections. Working with files: Introduction to files – classification of files – Handling files and folders using functions – File processing using streams. Advanced Techniques in Visual Basic.NET: Singe document interface and multiple document interface | 2       | 3          |         |               |       |     |                 |      |      |      |      |      |
| Instructional Hours                       |                                                                                                                                                                                                                                                                                                                                                           |         | 18         |         |               |       |     |                 |      |      |      |      |      |
| Suggested Learning Methods : Coding       |                                                                                                                                                                                                                                                                                                                                                           |         |            |         |               |       |     |                 |      |      |      |      |      |
| V                                         | Data Access with ADO.NET: What are databases? – Connections, Data Adapters and Datasets – Accessing Data with the Server Explorer – Accessing Data with Data Adaptors and Datasets – Working with ADO.Net – Overview of ADO.Net Objects.                                                                                                                  | 4, 4    | 11, 10     |         |               |       |     |                 |      |      |      |      |      |
| Instructional Hours                       |                                                                                                                                                                                                                                                                                                                                                           |         | 18         |         |               |       |     |                 |      |      |      |      |      |
| Suggested Learning Methods : Case Studies |                                                                                                                                                                                                                                                                                                                                                           |         |            |         |               |       |     |                 |      |      |      |      |      |
| Total Hours                               |                                                                                                                                                                                                                                                                                                                                                           |         | 90 Hrs     |         |               |       |     |                 |      |      |      |      |      |
| Text Books                                | 1.Shirish Chavan, “Visual Basic.NET”, Pearson Education, Fourth Edition, 2010.<br>2.Steven Holzner, “Visual Basic.NET Black Book”, Wiley dream tech press, 2012.                                                                                                                                                                                          |         |            |         |               |       |     |                 |      |      |      |      |      |
| Reference Books                           | 1.JeffreyR.Shapiro, “The Complete Reference VISUAL BASIC.NET”, Tata McGraw Hill, Sixteenth Reprint, 2010.<br>2.Jeffrey Kent,“Visual Basic.Net –A beginner’s guide”,Tata McGraw Hill,First Edition, 2012.<br>3.John Smiley, “Visual Basic.Net”, Tata McGraw Hill, First Edition, 2002.                                                                     |         |            |         |               |       |     |                 |      |      |      |      |      |
| Web. URLs                                 | 1. <a href="https://www.tutorialspoint.com/vb.net/vb.net_quick_guide.htm">https://www.tutorialspoint.com/vb.net/vb.net_quick_guide.htm</a><br>2. <a href="https://learn.microsoft.com/en-us/dotnet/visual-basic/">https://learn.microsoft.com/en-us/dotnet/visual-basic/</a>                                                                              |         |            |         |               |       |     |                 |      |      |      |      |      |
| Tools for Assessment (20 Marks)           |                                                                                                                                                                                                                                                                                                                                                           |         |            |         |               |       |     |                 |      |      |      |      |      |
| CIA I                                     | CIA II                                                                                                                                                                                                                                                                                                                                                    | CIA III | Assignment | Seminar | Poster Making | Total |     |                 |      |      |      |      |      |
| 4                                         | 4                                                                                                                                                                                                                                                                                                                                                         | 5       | 2          | 2       | 3             | 20    |     |                 |      |      |      |      |      |
| Mapping                                   |                                                                                                                                                                                                                                                                                                                                                           |         |            |         |               |       |     |                 |      |      |      |      |      |
| CO \ PO                                   | PO1                                                                                                                                                                                                                                                                                                                                                       | PO2     | PO3        | PO4     | PO5           | PO6   | PO7 | PO8             | PSO1 | PSO2 | PSO3 | PSO4 | PSO5 |
| CO1                                       | M                                                                                                                                                                                                                                                                                                                                                         | M       | H          | H       | M             | M     | M   | H               | H    | H    | H    | M    | H    |
| CO2                                       | M                                                                                                                                                                                                                                                                                                                                                         | M       | H          | H       | L             | L     | M   | H               | H    | H    | M    | H    | H    |
| CO3                                       | M                                                                                                                                                                                                                                                                                                                                                         | M       | H          | H       | M             | M     | M   | H               | H    | H    | H    | H    | H    |
| CO4                                       | M                                                                                                                                                                                                                                                                                                                                                         | M       | H          | H       | M             | M     | L   | H               | H    | H    | H    | H    | M    |
| CO5                                       | M                                                                                                                                                                                                                                                                                                                                                         | L       | M          | M       | M             | L     | M   | H               | H    | H    | M    | H    | H    |
| H-High; M-Medium; L-Low                   |                                                                                                                                                                                                                                                                                                                                                           |         |            |         |               |       |     |                 |      |      |      |      |      |
| Course designed by                        |                                                                                                                                                                                                                                                                                                                                                           |         |            |         |               |       |     | Verified by     |      |      |      |      |      |
|                                           |                                                                                                                                                                                                                                                                                                                                                           |         |            |         |               |       |     |                 |      |      |      |      |      |
| Dr.S.Joyce                                |                                                                                                                                                                                                                                                                                                                                                           |         |            |         |               |       |     | Dr. R. Mahadevi |      |      |      |      |      |

| Course Code        |                                                                                                             | Title                                                                                              |                                |                    |
|--------------------|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------|--------------------|
| 23U3CIP515         |                                                                                                             | Core Paper – XV VB.NET Practical                                                                   |                                |                    |
| Semester: V        |                                                                                                             | Credits: 3                                                                                         | CIA: 30 Marks                  | ESE: 45 Marks      |
| Course Objective   |                                                                                                             | To enable the students to gain the knowledge of the structure and model of the VB.NET programming. |                                |                    |
| Course Category    |                                                                                                             | Employability                                                                                      |                                |                    |
| Development Needs  |                                                                                                             | Global                                                                                             |                                |                    |
| Course Description |                                                                                                             | It equips students with practical skills on GUI design, VB syntax and data structure.              |                                |                    |
| Course Outcomes    |                                                                                                             |                                                                                                    | Teaching Methods               | Assessment Methods |
| CO 1               | To define VB.NET programs that solves numeric problems                                                      |                                                                                                    | Hands on Training              | Models             |
| CO 2               | To summarize the knowledge on menu items in VB.NET forms                                                    |                                                                                                    | Video Lessons                  | Demonstration      |
| CO 3               | To experiment the MS Access with VB.NET programs                                                            |                                                                                                    | Flipped Teaching               | Report             |
| CO 4               | To illustrate directories and editor functions VB.NET programs                                              |                                                                                                    | Hands on Training              | Think-share        |
| CO 5               | To design a application and execute the database connection with VB.NET programs                            |                                                                                                    | Video Lessons                  | Quiz               |
| Offered by         |                                                                                                             | Commerce                                                                                           |                                |                    |
| Course Content     |                                                                                                             |                                                                                                    | Instructional Hours / Week : 4 |                    |
| S.No.              | Description                                                                                                 |                                                                                                    |                                |                    |
| 1                  | Write a program to convert the given decimal number into binary, octal and hexadecimal.                     |                                                                                                    |                                |                    |
| 2                  | Write a program to develop a calculator with basic operations                                               |                                                                                                    |                                |                    |
| 3                  | Write a program to create menus in a form using menu editor                                                 |                                                                                                    |                                |                    |
| 4                  | Write a program to add the items to list box and move the selected item from the list box to the combo box. |                                                                                                    |                                |                    |
| 5                  | Design a form using common dialog control to display the save and open dialog box                           |                                                                                                    |                                |                    |
| 6                  | Write a program to maintain student mark list using MS Access                                               |                                                                                                    |                                |                    |
| 7                  | Write a program for a various font application.                                                             |                                                                                                    |                                |                    |
| 8                  | Write a program for obtaining root directory and current directory                                          |                                                                                                    |                                |                    |
| 9                  | Write a program to use a tool bar to set editor properties.                                                 |                                                                                                    |                                |                    |
| 10                 | Write a program to create an employee detail (with database connectivity)                                   |                                                                                                    |                                |                    |

|                                 |                 |     |     |        |     |        |     |                 |      |                  |        |       |      |
|---------------------------------|-----------------|-----|-----|--------|-----|--------|-----|-----------------|------|------------------|--------|-------|------|
| Total Hours                     |                 |     |     |        |     |        |     |                 |      |                  | 60 Hrs |       |      |
| Tools for Assessment (30 Marks) |                 |     |     |        |     |        |     |                 |      |                  |        |       |      |
| Creative Thinking               | Lab Performance |     |     | Report |     | Test 1 |     | Test 2          |      | Observation Note |        | Total |      |
| 5                               | 5               |     |     | 5      |     | 5      |     | 5               |      | 5                |        | 30    |      |
| Mapping                         |                 |     |     |        |     |        |     |                 |      |                  |        |       |      |
| CO \ PO                         | PO1             | PO2 | PO3 | PO4    | PO5 | PO6    | PO7 | PO8             | PSO1 | PSO2             | PSO3   | PSO4  | PSO5 |
| CO1                             | M               | M   | H   | H      | M   | M      | M   | H               | H    | H                | H      | M     | H    |
| CO2                             | M               | M   | H   | H      | M   | M      | M   | H               | H    | H                | M      | H     | H    |
| CO3                             | M               | M   | H   | H      | M   | M      | M   | H               | H    | H                | H      | H     | H    |
| CO4                             | M               | L   | H   | H      | M   | M      | L   | H               | H    | H                | H      | H     | H    |
| CO5                             | M               | M   | M   | M      | M   | L      | M   | H               | H    | H                | M      | H     | M    |
| H-High; M-Medium; L-Low         |                 |     |     |        |     |        |     |                 |      |                  |        |       |      |
| Course designed by              |                 |     |     |        |     |        |     | Verified by     |      |                  |        |       |      |
|                                 |                 |     |     |        |     |        |     |                 |      |                  |        |       |      |
| Dr.S.Joyce                      |                 |     |     |        |     |        |     | Dr. R. Mahadevi |      |                  |        |       |      |

| Course Code                                  |                                                                                                                                                                                                                           | Title                                                                                                                                                                                                                                                   |                                |                     |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------|
| 23U3CIE501                                   |                                                                                                                                                                                                                           | Discipline Specific Elective Paper – I (A) Banking Law                                                                                                                                                                                                  |                                |                     |
| Semester: V                                  |                                                                                                                                                                                                                           | Credits: 4                                                                                                                                                                                                                                              | CIA: 25 Marks                  | ESE: 75 Marks       |
| Course Objective                             |                                                                                                                                                                                                                           | The students will gain the knowledge in the field of Banking and understand the recent developments in banking sector.                                                                                                                                  |                                |                     |
| Course Category                              |                                                                                                                                                                                                                           | Employability                                                                                                                                                                                                                                           |                                |                     |
| Development Needs                            |                                                                                                                                                                                                                           | Regional                                                                                                                                                                                                                                                |                                |                     |
| Course Description                           |                                                                                                                                                                                                                           | To have conceptual clarity about the process of banking, product and stakeholders with reference to particular acts passed in India. A deep study about the remittance process, virtual banking, digital banking with various laws applicable in India. |                                |                     |
| Course Outcomes                              |                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                         | Teaching Methods               | Assessment Methods  |
| CO 1                                         | Knowledge on origin of banking sector                                                                                                                                                                                     |                                                                                                                                                                                                                                                         | Student Centric                | Assignment          |
| CO 2                                         | Capacity to operate bank accounts                                                                                                                                                                                         |                                                                                                                                                                                                                                                         | Flipped Teaching               | Quiz                |
| CO 3                                         | Understand the process of cheques                                                                                                                                                                                         |                                                                                                                                                                                                                                                         | Making Connections             | Poster making       |
| CO 4                                         | Equip themselves in the formalities of Loans and Advances                                                                                                                                                                 |                                                                                                                                                                                                                                                         | Peer Teaching                  | Think – Pair- share |
| CO 5                                         | Analyze the Banking Services                                                                                                                                                                                              |                                                                                                                                                                                                                                                         | Case-Based Learning            | Seminar             |
| Offered by                                   |                                                                                                                                                                                                                           | Commerce                                                                                                                                                                                                                                                |                                |                     |
| Course Content                               |                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                         | Instructional Hours / Week : 5 |                     |
| Unit                                         | Description                                                                                                                                                                                                               |                                                                                                                                                                                                                                                         | Text Book                      | Chapters            |
| I                                            | Definition of banker and customer – Relationships banker and customer – special features of RBI, Banking Regulation Act 1949                                                                                              |                                                                                                                                                                                                                                                         | 1                              | 1(1)                |
|                                              | RBI Credit Control Measure – Secrecy of customer Account.                                                                                                                                                                 |                                                                                                                                                                                                                                                         | 2                              | 2                   |
| Instructional Hours                          |                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                         |                                | 15                  |
| Suggested Learning Methods : Mind Mapping    |                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                         |                                |                     |
| II                                           | Bank Pass book – Collecting Banker – banker lien.                                                                                                                                                                         |                                                                                                                                                                                                                                                         | 2                              | 3                   |
|                                              | Opening of account – special types of customer – types of deposit                                                                                                                                                         |                                                                                                                                                                                                                                                         |                                |                     |
| Instructional Hours                          |                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                         |                                | 15                  |
| Suggested Learning Methods : Case Studies    |                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                         |                                |                     |
| III                                          | Negotiable Instruments - Cheque – features –essentials of valid Cheque – Crossing of Cheques –Endorsement – payment of Cheques – statutory protection duties as paying banker and collecting banker – Dishonor of Cheques |                                                                                                                                                                                                                                                         | 1                              | 5 (23)              |
|                                              | Refusal of payment of Cheques- Duties of holder & holder in due course                                                                                                                                                    |                                                                                                                                                                                                                                                         | 2                              | 5                   |
| Instructional Hours                          |                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                         |                                | 15                  |
| Suggested Learning Methods : Open book study |                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                         |                                |                     |
| IV                                           | Loan and advances by commercial bank lending policies of commercial bank - Forms of securities.                                                                                                                           |                                                                                                                                                                                                                                                         | 2                              | 7                   |
|                                              | Lien – pledge - hypothecation and advance against the documents of title to goods – mortgage.                                                                                                                             |                                                                                                                                                                                                                                                         | 2                              | 7                   |

H-High; M-Medium; L-Low

| Course Code                                 | Title                                                                                                                                                                                                                  |                               |                    |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------|
| 23U3CIE604                                  | Discipline Specific Elective II – (A) Networking Management                                                                                                                                                            |                               |                    |
| Semester: VI                                | Credits: 4                                                                                                                                                                                                             | CIA: 25 Marks                 | ESE: 75 Marks      |
| Course Objective                            | To enable the students to have knowledge on combining the fundamental concepts of data communications.                                                                                                                 |                               |                    |
| Course Category                             | Employability                                                                                                                                                                                                          |                               |                    |
| Development Needs                           | Global                                                                                                                                                                                                                 |                               |                    |
| Course Description                          | This course explores the functional areas of network management and Data Communication. The course covers logical network design topologies, addressing, and protocols.                                                |                               |                    |
| Course Outcomes                             |                                                                                                                                                                                                                        | Teaching Methods              | Assessment Methods |
| CO 1                                        | To define data communications concepts.                                                                                                                                                                                | Role Play                     | Poster Making      |
| CO 2                                        | To interpret networking concept                                                                                                                                                                                        | Flipped Teaching              | Seminar            |
| CO 3                                        | To construct network layers and protocols                                                                                                                                                                              | Making Connections            | Assignment         |
| CO 4                                        | To understand the concept of MAN and WAN                                                                                                                                                                               | Jigsaw                        | Seminar            |
| CO 5                                        | To implement Network Management                                                                                                                                                                                        | Fish Bowl Technique           | Assignment         |
| Offered by                                  | Commerce                                                                                                                                                                                                               |                               |                    |
| Course Content                              |                                                                                                                                                                                                                        | Instructional Hours / Week :5 |                    |
| Unit                                        | Description                                                                                                                                                                                                            | Text Book                     | Chapters           |
| I                                           | Data Communication Concepts and Applications: Introduction to Data Communications, Components of Data Communications - Trends in Computer Communications and Networking, OSI Layers-Network Standard and Network Model | 1                             | 2,3                |
| Instructional Hours                         |                                                                                                                                                                                                                        |                               | 15                 |
| Suggested Learning Methods: Concept Mapping |                                                                                                                                                                                                                        |                               |                    |
| II                                          | Fundamentals of Data Communications and Networking: Physical Layer: Architectures, Devices and Circuits - Digital Transmission of Digital Type- Data Link Layer: Media Access Control, Error Control in Networks.      | 1                             | 5,6                |
| Instructional Hours                         |                                                                                                                                                                                                                        |                               | 15                 |
| Suggested Learning Methods: Group Learning  |                                                                                                                                                                                                                        |                               |                    |
| III                                         | Networking: Network Layer: Network Protocols, Network Addressing and Routing - Local Area Network (LAN):LAN Components, - Ethernet,IEEE802.3 -Token Ring, selecting a LAN, Improving - LAN Performance                 | 2                             | 1,2                |
| Instructional Hours                         |                                                                                                                                                                                                                        |                               | 15                 |
| Suggested Learning Methods : Peer Learning  |                                                                                                                                                                                                                        |                               |                    |
| IV                                          | Back Bone Networks: Backbone Network Components, Fast - Ethernet, FDDI. Metropolitan Area Network (MAN) - Wide Area Network (WAN) Bluetooth-Wireless Local Area Network- IEEE802.11.a, IEEE802.11.b.                   | 2                             | 4,5                |
| Instructional Hours                         |                                                                                                                                                                                                                        |                               | 15                 |

| Suggested Learning Methods: Open book Study |                                                                                                                    |                                                                                                                                                                                                                                                                                                                    |     |         |     |            |     |                 |      |               |       |       |      |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------|-----|------------|-----|-----------------|------|---------------|-------|-------|------|
| V                                           | Network Management: Design of Business Networks, Configuration Management - Cost Management, and Network, Security |                                                                                                                                                                                                                                                                                                                    |     |         |     |            |     |                 |      | 2             | 6,7   |       |      |
| Instructional Hours                         |                                                                                                                    |                                                                                                                                                                                                                                                                                                                    |     |         |     |            |     |                 |      |               | 15    |       |      |
| Suggested Learning Methods: Case studies    |                                                                                                                    |                                                                                                                                                                                                                                                                                                                    |     |         |     |            |     |                 |      |               |       |       |      |
| Total Hours                                 |                                                                                                                    |                                                                                                                                                                                                                                                                                                                    |     |         |     |            |     |                 |      |               | 75Hrs |       |      |
| Text Books                                  |                                                                                                                    | 1.Tanenbaum, A. S, Computer Networks, Pearson Education, 2011<br>2. JamesF.Kurose and Keith W.Ross, Computer Networks A Top Down Approach, Pearson Education, 2003.                                                                                                                                                |     |         |     |            |     |                 |      |               |       |       |      |
| Reference Books                             |                                                                                                                    | 1. Jerry, FitzGerald and Alan, Dennis, Business Data Communications & Networking, John Wiley & Sons, 2010.<br>2.David A Stamper, Business Data Communications, Addison Wesley, 2011.                                                                                                                               |     |         |     |            |     |                 |      |               |       |       |      |
| Web. URLs                                   |                                                                                                                    | 1. <a href="https://www.hh.se/english/education/programmes/network-design-and-computer-management.html">https://www.hh.se/english/education/programmes/network-design-and-computer-management.html</a><br>2. <a href="https://www.youtube.com/watch?v=mzKtDtjFSME">https://www.youtube.com/watch?v=mzKtDtjFSME</a> |     |         |     |            |     |                 |      |               |       |       |      |
| Tools for Assessment (25 Marks)             |                                                                                                                    |                                                                                                                                                                                                                                                                                                                    |     |         |     |            |     |                 |      |               |       |       |      |
| CIA I                                       |                                                                                                                    | CIA II                                                                                                                                                                                                                                                                                                             |     | CIA III |     | Assignment |     | Seminar         |      | Poster Making |       | Total |      |
| 5                                           |                                                                                                                    | 5                                                                                                                                                                                                                                                                                                                  |     | 6       |     | 3          |     | 3               |      | 3             |       | 25    |      |
| Mapping                                     |                                                                                                                    |                                                                                                                                                                                                                                                                                                                    |     |         |     |            |     |                 |      |               |       |       |      |
| CO \ PO                                     | PO1                                                                                                                | PO2                                                                                                                                                                                                                                                                                                                | PO3 | PO4     | PO5 | PO6        | PO7 | PO8             | PSO1 | PSO2          | PSO3  | PSO4  | PSO5 |
| CO1                                         | M                                                                                                                  | M                                                                                                                                                                                                                                                                                                                  | H   | M       | H   | H          | M   | H               | H    | M             | H     | M     | H    |
| CO2                                         | M                                                                                                                  | M                                                                                                                                                                                                                                                                                                                  | H   | M       | H   | H          | L   | H               | H    | H             | H     | M     | H    |
| CO3                                         | M                                                                                                                  | L                                                                                                                                                                                                                                                                                                                  | H   | M       | H   | H          | M   | H               | H    | H             | H     | M     | H    |
| CO4                                         | M                                                                                                                  | M                                                                                                                                                                                                                                                                                                                  | H   | M       | H   | H          | M   | M               | H    | H             | M     | M     | H    |
| CO5                                         | M                                                                                                                  | M                                                                                                                                                                                                                                                                                                                  | M   | M       | H   | M          | M   | H               | M    | H             | M     | M     | H    |
| H-High; M-Medium; L-Low                     |                                                                                                                    |                                                                                                                                                                                                                                                                                                                    |     |         |     |            |     |                 |      |               |       |       |      |
| Course designed by                          |                                                                                                                    |                                                                                                                                                                                                                                                                                                                    |     |         |     |            |     | Verified by     |      |               |       |       |      |
|                                             |                                                                                                                    |                                                                                                                                                                                                                                                                                                                    |     |         |     |            |     |                 |      |               |       |       |      |
| Dr.S.Joyce                                  |                                                                                                                    |                                                                                                                                                                                                                                                                                                                    |     |         |     |            |     | Dr. R. Mahadevi |      |               |       |       |      |

| Course Code        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Title                                                                                                                                                                                                                                                                                                                    |                                |                    |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|--------------------|
| 23U4CIZ612         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Skill Based Paper IV (C) Oracle Practical                                                                                                                                                                                                                                                                                |                                |                    |
| Semester: VI       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Credits: 3                                                                                                                                                                                                                                                                                                               | CIA:30 Marks                   | ESE:45 Marks       |
| Course Objective   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | To understand the Database Architectural Concept, Hierarchical approach and Network Concept.                                                                                                                                                                                                                             |                                |                    |
| Course Category    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Skill Development                                                                                                                                                                                                                                                                                                        |                                |                    |
| Development Needs  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Global                                                                                                                                                                                                                                                                                                                   |                                |                    |
| Course Description |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | The students can learn basic database concepts and SQL fundamentals, restricting and sorting of data, single-row functions, joins, multi-row functions, sub-queries, data reporting using interface commands, DML and TCL, DDL and constraints, views, DCL commands, dictionary tables, and analytic functions in Oracle |                                |                    |
| Course Outcomes    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                          | Teaching Methods               | Assessment Methods |
| CO 1               | Knowledge of creating a table retrieves records and calculate GP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                          | Hands on Training              | Models             |
| CO 2               | Able to extract records from table with constraints                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                          | Video Lessons                  | Demonstration      |
| CO 3               | Ability to create table and aware of doing calculation in table with constraints                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                          | Flipped Teaching               | Report             |
| CO 4               | Implementing mathematical functions in Oracle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                          | Hands on Training              | Demonstration      |
| CO 5               | Ability to create and manipulate payroll library and loan management system in Oracle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                          | Video Lessons                  | Models             |
| Offered by         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Information Technology                                                                                                                                                                                                                                                                                                   |                                |                    |
| Course Content     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                          | Instructional Hours / Week : 4 |                    |
| S.No.              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                          |                                |                    |
| 1                  | Create a table "Company" with the following fields and insert the values for 10 employees.<br>Field Name, Field Type, Field Size- Company Name Character 15, Proprietor Character 15, Address Character 25, Supplier Name Character 15, No of employees Number 4, GP Percent Number 6 with 2 decimal places.<br>Queries:<br>a) Display all the records of the company which are in the ascending order of GP percent.<br>b) Display the name of the company whose supplier name is "Telco".<br>c) Display the details of the company whose GP percent is greater than 20 and order by GP Percent.<br>d) Display the detail of the company having the employee ranging from 300 to1000.<br>e) Display the name of the company whose supplier is same as the Tata's. |                                                                                                                                                                                                                                                                                                                          |                                |                    |

|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | <p>Create a table named "Employee" with the following fields and insert the values.<br/>Field Name, Field Type, Field Size- Employee Name Character 15 Employee Code Number 6 Address Character 25 Designation Character 15 Grade Character 1 Date of Join Date - Salary Number 10 with 2 decimal places.</p> <p>Queries:</p> <ol style="list-style-type: none"> <li>Display the name of the employee whose salary is greater than Rs.10,000</li> <li>Display the details of employees in ascending order according g to Employee Code.</li> <li>Display the total salary of the employees whose grade is "A"</li> <li>Display the details of the employee earning the highest salary.</li> <li>Display the names of the employees who earn more than "Ravi"</li> </ol>         |
| 3 | <p>Create a table "Student" with the following fields and insert the values:. Field Name, Field Type, Field Size- Size Student Name Character 15 Gender Character 6 Roll No Character 10 Department Name Character 15 Address Character 25 Percentage Number 4 with 2 decimal places</p> <p>Queries:</p> <ol style="list-style-type: none"> <li>Calculate the average percentage of students.</li> <li>Display the names of the students whose percentage is greater than80.</li> <li>Display the details of the student who got the highest percentage.</li> <li>Display the details of the students whose percentage is between 50 and70.</li> <li>Display the details of the students whose percentage is greater than the percentage of the roll no=12CA01.</li> </ol>      |
| 4 | <p>Create a table "Product" with the following fields and insert the values:<br/>Field Name, Field Type, Field Size- Product No Number 6 Product Name Character 15 Unit of Measure Character 15 Quantity Number 6 with decimal places Total Amount Number 8 with decimal places</p> <p>Queries:</p> <ol style="list-style-type: none"> <li>Using update statements calculate the total amount and then select therecord.</li> <li>Select the records whose unit of measure is"Kg".</li> <li>Select the records whose quantity is greater than 10 and less than or equal to20.</li> <li>Calculate the entire total amount by using sumoperation.</li> <li>Calculate the number of records whose unit price is greater than 50 with count operation.</li> </ol>                   |
| 5 | <p>Create the table PAYROLL with the following fields and insert the values: Field Name, Field Type, Field Size-Employee No Number 8 Employee Name Character 8 Department Character 10 Basic Pay Number 8 with 2 decimal places HRA Number 6 with 2 decimal places DA Number 6 with 2 decimal places PF Number 6 with 2 decimal places Net Pay Number 8 with 2 decimal places</p> <p>Queries:</p> <ol style="list-style-type: none"> <li>Update the records to calculate the netpay.</li> <li>Arrange the records of the employees in ascending order of their netpay.</li> <li>Display the details of the employees whose department is"Sales".</li> <li>Select the details of employees whose HRA&gt;= 1000 and DA&lt;=900.Select the records in descending order.</li> </ol> |

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |     |        |     |        |     |                 |      |                  |        |       |      |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----|--------|-----|--------|-----|-----------------|------|------------------|--------|-------|------|
| 6                               | Create a Table Publisher and Book with the following fields: Field Name, Field Type, Field Size-<br>Publisher Code Var Char 5 Publisher Name Var Char 10 Publisher city Var Char 12 Publisher<br>State Var Char 10 Title of book Var Char 15 Book Code Var Char 5 Book Price Var Char 5<br>Queries:<br>a) Insert the records into the table publisher and book.<br>b) Describe the structure of the tables.<br>c) Show the details of the book with the title "DBMS".<br>d) Show the details of the book with price>300.<br>e) Show the details of the book with publisher name "Kalyani".<br>f) Select the book code, book title; publisher city is"Delhi".<br>g) Select the book code, book title and sort by book price.<br>h) Count the number of books of publisher starts with "Sultanchand".<br>i) Find the name of the publisher starting with "S". |                 |     |        |     |        |     |                 |      |                  |        |       |      |
| 7                               | Create a table Deposit and loan with the following fields: Field Name, Field Type, Field Size-<br>Account Var Char 6 Branch Name Var Char 15 Customer Name Var Char 20 Balance Amount Var<br>Char 10 Loan Number Var Char 7 Loan Amount Var Char 6<br>Queries:<br>a) Insert the records into the table.<br>b) Describe the structure of the table.<br>c) Display the records of Deposit and Loan.<br>d) Find the number of loans with amount between 10000 and 50000.<br>e) List in the alphabetical order the names of all customers who have a loan at the<br>Coimbatore branch.<br>f) Find the average account balance at the Coimbatore branch.<br>g) Update deposits to add interest at 5% to the balance.<br>h) Arrange the records in descending order of the loan amount.<br>i) Find the total amount of deposit in 'Erode' branch.                 |                 |     |        |     |        |     |                 |      |                  |        |       |      |
| Total Hours                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |     |        |     |        |     |                 |      |                  | 60 Hrs |       |      |
| Tools for Assessment (30 Marks) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |     |        |     |        |     |                 |      |                  |        |       |      |
| Creative Thinking               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Lab Performance |     | Report |     | Test 1 |     | Test 2          |      | Observation Note |        | Total |      |
| 5                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5               |     | 5      |     | 5      |     | 5               |      | 5                |        | 30    |      |
| Mapping                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |     |        |     |        |     |                 |      |                  |        |       |      |
| CO \ PO                         | PO1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | PO2             | PO3 | PO4    | PO5 | PO6    | PO7 | PO8             | PSO1 | PSO2             | PSO3   | PSO4  | PSO5 |
| CO1                             | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | M               | H   | M      | H   | H      | M   | H               | M    | M                | M      | M     | M    |
| CO2                             | L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | M               | H   | M      | H   | H      | L   | H               | H    | H                | H      | H     | H    |
| CO3                             | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | L               | H   | L      | H   | H      | M   | H               | H    | M                | L      | M     | M    |
| CO4                             | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | M               | H   | M      | H   | H      | M   | M               | H    | H                | M      | H     | M    |
| CO5                             | L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | M               | H   | M      | H   | M      | M   | H               | M    | H                | M      | M     | H    |
| H-High; M-Medium; L-Low         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |     |        |     |        |     |                 |      |                  |        |       |      |
| Course designed by              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |     |        |     |        |     | Verified by     |      |                  |        |       |      |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |     |        |     |        |     |                 |      |                  |        |       |      |
| Dr.S.Joyce                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |     |        |     |        |     | Dr. R. Mahadevi |      |                  |        |       |      |

| Course Code                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Title                                                                  |                                |                    |           |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------------|--------------------|-----------|
| 23U3CIE608                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Discipline Specific Elective Paper–III (B) Software Project Management |                                |                    |           |
| Semester: VI                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Credits:4                                                              | CIA: 25 Marks                  | ESE: 75 Marks      |           |
| Course Objective                       | To enable the students, gain the software project management concepts, techniques and issues related to implementation                                                                                                                                                                                                                                                                                                                                  |                                                                        |                                |                    |           |
| Course Category                        | Employability                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                        |                                |                    |           |
| Development Needs                      | Global                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                        |                                |                    |           |
| Course Description                     | The course is aimed at introducing the primary important concepts of project management related to managing software development projects. This course will also get familiar with the different activities involved in Software Project Management and how to successfully plan and implement a software project management activity, and to complete a specific project in time with the available budget.                                            |                                                                        |                                |                    |           |
| Course Outcomes                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                        | Teaching Methods               | Assessment Methods |           |
| CO 1                                   | Describe the basic concept of software project.                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                        | Student Centric                | Assignment         |           |
| CO 2                                   | Explain the project management and project evaluation.                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                        | Flipped Teaching               | Seminar            |           |
| CO 3                                   | Discuss the Software estimation and Risk management.                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                        | Making Connections             | Poster Making      |           |
| CO 4                                   | Summarize the concept of Resource allocation, Monitoring and Control.                                                                                                                                                                                                                                                                                                                                                                                   |                                                                        | Flipped Teaching               | Seminar            |           |
| CO 5                                   | Classify the managing contracts and software quality.                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                        | Case-Based Learning            | Assignment         |           |
| Offered by                             | Commerce                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                        |                                |                    |           |
| Course Content                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                        | Instructional Hours / Week : 5 |                    |           |
| Unit                                   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                        |                                | Text Book          | Chapter s |
| I                                      | Introduction to software project management: Introduction – why is software project management important? – What is a project? – Software project versus other types of project – Activities covered by software project management                                                                                                                                                                                                                     |                                                                        |                                | 1                  | 1         |
| Instructional Hours                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                        |                                |                    | 15        |
| Suggested Learning Methods: Assignment |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                        |                                |                    |           |
| II                                     | Project Management and Project Evaluation: Introduction – Evaluation of individual projects – Technical Assessment – Cost-benefit analysis – Cash-flow forecasting – Cost-benefit evaluation techniques.<br>Selection of an appropriate project approach: Introduction – choosing technologies – Technical plan content list – Choice of process models – waterfall model – V-Process model – Spiral model-software prototyping – Incremental delivery. |                                                                        |                                | 2                  | 3         |
| Instructional Hours                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                        |                                |                    | 15        |
| Suggested Learning Methods: Seminar    |                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                        |                                |                    |           |
| III                                    | Software Effort Estimation: Introduction – Problems with over and under estimates – the basis for software estimation – Software effort estimation techniques – Expert judgment – COCOMO: a parametric model. Risk management: Introduction – Categories of risk – Evaluating risks to the                                                                                                                                                              |                                                                        |                                | 2                  | 4         |

|                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |            |         |               |       |     |                 |      |      |      |      |      |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------|---------|---------------|-------|-----|-----------------|------|------|------|------|------|
|                                                | schedule.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |         |            |         |               |       |     |                 |      |      |      |      |      |
| Instructional Hours                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         | 15         |         |               |       |     |                 |      |      |      |      |      |
| Suggested Learning Methods: Case Studies       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |            |         |               |       |     |                 |      |      |      |      |      |
| IV                                             | Resource Allocation: Introduction - The nature of resources – Identifying resource requirements – Scheduling resources – Creating critical paths – counting the cost. Monitoring and control: Introduction – Creating the Framework – Collecting the data – visualizing progress.                                                                                                                                                                                                                                                                      | 1       | 15         |         |               |       |     |                 |      |      |      |      |      |
| Instructional Hours                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         | 15         |         |               |       |     |                 |      |      |      |      |      |
| Suggested Learning Methods: Report Preparation |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |            |         |               |       |     |                 |      |      |      |      |      |
| V                                              | Managing Contracts: Introduction – Types of contract – Stages in contract placement – contract management – Acceptance. Managing people and organizing teams: Introduction – understanding behavior – Selecting the right person for the job – Instruction in the best methods– Motivation – Becoming a team – Decision making – Leadership – Organizational structures – Software projects in educational institutions. Software quality – some problems with student projects – PRINCE 2- Project Closure, Role and performance of Closure analysis. | 1       | 15         |         |               |       |     |                 |      |      |      |      |      |
| Instructional Hours                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         | 15         |         |               |       |     |                 |      |      |      |      |      |
| Suggested Learning Methods: Case Studies       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |            |         |               |       |     |                 |      |      |      |      |      |
| Total Hours                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         | 75 Hrs     |         |               |       |     |                 |      |      |      |      |      |
| Text Books                                     | 1. Bob Hughes and Mike Cotterell B,Software Project Management, Tata Mc Graw Hill Publishing Company Ltd, 2011<br>2. Walker Royce Software Project Management Pearson Education, 2013<br>3. Futrell,Quality Software Project Management Pearson education India, 2002                                                                                                                                                                                                                                                                                  |         |            |         |               |       |     |                 |      |      |      |      |      |
| Reference Books                                | 1. Pankaj Jalote,Software Project Management in Practise Pearson education India, 2002<br>2. Wysocki Robert K.Wiley,Effective Software Project Management, Dreamtech India p Ltd, 2012                                                                                                                                                                                                                                                                                                                                                                 |         |            |         |               |       |     |                 |      |      |      |      |      |
| Web. URLs                                      | 1. <a href="https://onlinecourses.nptel.ac.in/noc22_cs107/preview">https://onlinecourses.nptel.ac.in/noc22_cs107/preview</a><br>2. <a href="https://skillsgaptrainer.com/project-management-for-software/">https://skillsgaptrainer.com/project-management-for-software/</a><br>3. <a href="https://www.youtube.com/watch?v=mh3k9kq2Hfg">https://www.youtube.com/watch?v=mh3k9kq2Hfg</a>                                                                                                                                                               |         |            |         |               |       |     |                 |      |      |      |      |      |
| Tools for Assessment (25 Marks)                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |            |         |               |       |     |                 |      |      |      |      |      |
| CIA I                                          | CIA II                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | CIA III | Assignment | Seminar | Poster Making | Total |     |                 |      |      |      |      |      |
| 5                                              | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 6       | 3          | 3       | 3             | 25    |     |                 |      |      |      |      |      |
| Mapping                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |            |         |               |       |     |                 |      |      |      |      |      |
| CO \ PO                                        | PO1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | PO2     | PO3        | PO4     | PO5           | PO6   | PO7 | PO8             | PSO1 | PSO2 | PSO3 | PSO4 | PSO5 |
| CO1                                            | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | M       | H          | H       | M             | M     | M   | H               | H    | H    | H    | M    | H    |
| CO2                                            | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | M       | H          | H       | L             | L     | M   | H               | H    | H    | M    | H    | H    |
| CO3                                            | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | M       | H          | H       | M             | M     | M   | H               | H    | H    | H    | H    | H    |
| CO4                                            | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | M       | H          | H       | M             | M     | L   | H               | H    | H    | H    | H    | M    |
| CO5                                            | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | L       | M          | M       | M             | L     | M   | H               | H    | H    | M    | H    | H    |
| H-High; M-Medium; L-Low                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |            |         |               |       |     |                 |      |      |      |      |      |
| Course designed by                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |            |         |               |       |     | Verified by     |      |      |      |      |      |
|                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |            |         |               |       |     |                 |      |      |      |      |      |
| Dr.S.Joyce                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |         |            |         |               |       |     | Dr. R. Mahadevi |      |      |      |      |      |

| Course Code                               |                                                                                                                                                                                                                                                                                        | Title                                                       |                               |                    |          |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-------------------------------|--------------------|----------|
| 23U3CIE606                                |                                                                                                                                                                                                                                                                                        | Discipline Specific Elective Paper – II (C) Cloud Computing |                               |                    |          |
| Semester: VI                              |                                                                                                                                                                                                                                                                                        | Credits: 4                                                  | CIA: 25 Marks                 | ESE: 75 Marks      |          |
| Course Objective                          | To provide in-depth knowledge of Cloud Computing concepts, technologies, architecture and applications, fundamental issues and implementations.                                                                                                                                        |                                                             |                               |                    |          |
| Course Category                           | Employability                                                                                                                                                                                                                                                                          |                                                             |                               |                    |          |
| Development Needs                         | Global                                                                                                                                                                                                                                                                                 |                                                             |                               |                    |          |
| Course Description                        | Cloud Computing covers management, storage and processing of data on networks of the internet server, types of cloud and applications.                                                                                                                                                 |                                                             |                               |                    |          |
| Course Outcomes                           |                                                                                                                                                                                                                                                                                        |                                                             | Teaching Methods              | Assessment Methods |          |
| CO 1                                      | Understand the basic concept of Cloud and Distributed Computing.                                                                                                                                                                                                                       |                                                             | Student Centric               | Quiz               |          |
| CO 2                                      | Define the virtualization and cloud computing architecture                                                                                                                                                                                                                             |                                                             | Flipped Teaching              | Poster Making      |          |
| CO 3                                      | Describe about the thread programming and task programming                                                                                                                                                                                                                             |                                                             | Making Connections            | Test               |          |
| CO 4                                      | Explain the Data Intensive computing and cloud platforms                                                                                                                                                                                                                               |                                                             | Jigsaw                        | Seminar            |          |
| CO 5                                      | Classify the Cloud applications and Business application                                                                                                                                                                                                                               |                                                             | Case-Based Learning           | Assignment         |          |
| Offered by                                |                                                                                                                                                                                                                                                                                        | Commerce                                                    |                               |                    |          |
| Course Content                            |                                                                                                                                                                                                                                                                                        |                                                             | Instructional Hours / Week :5 |                    |          |
| Unit                                      | Description                                                                                                                                                                                                                                                                            |                                                             |                               | Text Book          | Chapters |
| I                                         | Cloud Computing at a Glance - Historical Developments - Building Cloud Computing Environments - Computing Platforms and Technologies Parallel vs. Distributed Computing - Elements of Parallel Computing - Elements of Distributed Computing - Technologies for Distributed Computing. |                                                             |                               | 1                  | 1,2      |
| Instructional Hours                       |                                                                                                                                                                                                                                                                                        |                                                             |                               |                    | 15       |
| Suggested Learning Methods: Case Studies  |                                                                                                                                                                                                                                                                                        |                                                             |                               |                    |          |
| II                                        | Virtualization: Characteristics - Virtualization Techniques - Virtualization and Cloud Computing - Pros and Cons of Virtualization. Cloud Computing Architecture: Cloud Reference Model - Types of Clouds - Economics of Clouds, Open challenges.                                      |                                                             |                               | 1                  | 4,5      |
| Instructional Hours                       |                                                                                                                                                                                                                                                                                        |                                                             |                               |                    | 15       |
| Suggested Learning Methods: Auditing      |                                                                                                                                                                                                                                                                                        |                                                             |                               |                    |          |
| III                                       | Concurrent Computing-Thread Programming: Programming applications with Threads - Multithreading with Aneka - Programming applications with Aneka threads. High Throughput Computing- Task Programming: Task Computing - Task-based Application Models - Aneka Task-Based Programming.  |                                                             |                               | 1                  | 7,8      |
| Instructional Hours                       |                                                                                                                                                                                                                                                                                        |                                                             |                               |                    | 15       |
| Suggested Learning Methods: Hands on Labs |                                                                                                                                                                                                                                                                                        |                                                             |                               |                    |          |

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |                   |                |                      |              |     |                    |      |      |      |      |      |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------|----------------|----------------------|--------------|-----|--------------------|------|------|------|------|------|
| IV                                          | <b>Data Intensive Computing –Map-Reduce Programming:</b> Introduction - Technologies for data- intensive computing – Aneka Map Reduce Programming. <b>Cloud Platforms in Industry:</b> Amazon Web Services - Google App Engine- Microsoft Azure                                                                                                                                                                                                                            | 1              | 9,10              |                |                      |              |     |                    |      |      |      |      |      |
| <b>Instructional Hours</b>                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                | 15                |                |                      |              |     |                    |      |      |      |      |      |
| <b>Suggested Learning Methods : Videos</b>  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |                   |                |                      |              |     |                    |      |      |      |      |      |
| V                                           | <b>Cloud Applications: Scientific Applications:</b> Healthcare – Biology - Geo-science. <b>Business Applications:</b> CRM and ERP – Productivity - Social Networking. Media Applications - Multiplayer Online Gaming. <b>Advanced Topics in Cloud Computing:</b> Energy Efficiency in Clouds - Market Based Management of Clouds - Federated Clouds /InterCloud - Third Party Cloud Services                                                                               | 1              | 12,13             |                |                      |              |     |                    |      |      |      |      |      |
| <b>Instructional Hours</b>                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                | 15                |                |                      |              |     |                    |      |      |      |      |      |
| <b>Suggested Learning Methods: Articles</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |                   |                |                      |              |     |                    |      |      |      |      |      |
| <b>Total Hours</b>                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                | 75 Hrs            |                |                      |              |     |                    |      |      |      |      |      |
| <b>Text Books</b>                           | 1. RajKumarBuyya, Christian Vecchiloa, S. ThamaraiSelvi, “Mastering Cloud Computing Foundations and Applications Programming”, TMH Publications, New Delhi, 2013.                                                                                                                                                                                                                                                                                                          |                |                   |                |                      |              |     |                    |      |      |      |      |      |
| <b>Reference Books</b>                      | 1. Prasant Kumar Pattnaik, Manas Ranjan Kabat, Souvik Pal, “ <b>Fundamentals of Cloud Computing</b> ”, 5 <sup>th</sup> edition, 2014.<br>2. Velte Anthony and Velte T.J Elsenpeter, “ <b>Cloud Computing a Practical Approach</b> ”, 1 <sup>st</sup> Edition, 2010.<br>3. Michael Miller, “ <b>Cloud Computing</b> ”, 8 <sup>th</sup> Edition, 2012.                                                                                                                       |                |                   |                |                      |              |     |                    |      |      |      |      |      |
| <b>Web. URLs</b>                            | 1. <a href="https://onlinecourses.nptel.ac.in/noc23_cs42/preview">https://onlinecourses.nptel.ac.in/noc23_cs42/preview</a><br>2. <a href="https://www.coursera.org/lecture/introduction-to-cloud/welcome-to-introduction-to-cloud-computing-nV33H">https://www.coursera.org/lecture/introduction-to-cloud/welcome-to-introduction-to-cloud-computing-nV33H</a><br>3. <a href="https://www.youtube.com/watch?v=2LaAJq1lB1Q">https://www.youtube.com/watch?v=2LaAJq1lB1Q</a> |                |                   |                |                      |              |     |                    |      |      |      |      |      |
| <b>Tools for Assessment (25 Marks)</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |                   |                |                      |              |     |                    |      |      |      |      |      |
| <b>CIA I</b>                                | <b>CIA II</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>CIA III</b> | <b>Assignment</b> | <b>Seminar</b> | <b>Poster Making</b> | <b>Total</b> |     |                    |      |      |      |      |      |
| 5                                           | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6              | 3                 | 3              | 3                    | 25           |     |                    |      |      |      |      |      |
| <b>Mapping</b>                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |                   |                |                      |              |     |                    |      |      |      |      |      |
| CO \ PO                                     | PO1                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | PO2            | PO3               | PO4            | PO5                  | PO6          | PO7 | PO8                | PSO1 | PSO2 | PSO3 | PSO4 | PSO5 |
| CO1                                         | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | M              | H                 | M              | H                    | H            | M   | H                  | H    | M    | H    | H    | M    |
| CO2                                         | L                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | M              | H                 | M              | H                    | H            | L   | H                  | H    | H    | H    | H    | L    |
| CO3                                         | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | L              | H                 | M              | M                    | H            | M   | H                  | H    | H    | M    | H    | M    |
| CO4                                         | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | M              | H                 | M              | H                    | H            | M   | M                  | H    | H    | H    | H    | M    |
| CO5                                         | M                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | M              | M                 | M              | H                    | M            | M   | H                  | M    | H    | H    | M    | M    |
| H-High; M-Medium; L-Low                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |                   |                |                      |              |     |                    |      |      |      |      |      |
| <b>Course designed by</b>                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |                   |                |                      |              |     | <b>Verified by</b> |      |      |      |      |      |
|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |                   |                |                      |              |     |                    |      |      |      |      |      |
| Dr.S.Joyce                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |                   |                |                      |              |     | Dr. R. Mahadevi    |      |      |      |      |      |

| Course Code                              |                                                                                                                                                                                                                                       | Title                                                                                                                         |                               |                    |               |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------|---------------|
| 23U3CIE609                               |                                                                                                                                                                                                                                       | Discipline Specific Elective Paper – III (C) Auditing                                                                         |                               |                    |               |
| Semester: VI                             |                                                                                                                                                                                                                                       | Credits: 4                                                                                                                    | CIA: 25 Marks                 | ESE: 75 Marks      |               |
| Course Objective                         |                                                                                                                                                                                                                                       | To familiarize the students with the auditing and to create an interest in the minds of students towards Auditing Profession. |                               |                    |               |
| Course Category                          |                                                                                                                                                                                                                                       | Employability                                                                                                                 |                               |                    |               |
| Development Needs                        |                                                                                                                                                                                                                                       | International                                                                                                                 |                               |                    |               |
| Course Description                       |                                                                                                                                                                                                                                       | An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements.    |                               |                    |               |
| Course Outcomes                          |                                                                                                                                                                                                                                       |                                                                                                                               | Teaching Methods              | Assessment Methods |               |
| CO 1                                     | Explain the fundamental concept of Auditing                                                                                                                                                                                           |                                                                                                                               | Student Centric               | Quiz               |               |
| CO 2                                     | Take part in Vouching various transactions                                                                                                                                                                                            |                                                                                                                               | Flipped Teaching              | Seminar            |               |
| CO 3                                     | Ability to do Verification and Valuation of Assets and Liabilities                                                                                                                                                                    |                                                                                                                               | Making Connections            | Assignment         |               |
| CO 4                                     | Outline the Auditor’s Duties and Liabilities                                                                                                                                                                                          |                                                                                                                               | Flipped Teaching              | Seminar            |               |
| CO 5                                     | Knowledge on Investigation and Electronic Auditing                                                                                                                                                                                    |                                                                                                                               | Case-Based Learning           | Assignment         |               |
| Offered by                               |                                                                                                                                                                                                                                       | Commerce                                                                                                                      |                               |                    |               |
| Course Content                           |                                                                                                                                                                                                                                       |                                                                                                                               | Instructional Hours / Week :5 |                    |               |
| Unit                                     | Description                                                                                                                                                                                                                           |                                                                                                                               |                               | Text Book          | Chapters      |
| I                                        | Auditing– Origin – Definition – Objectives – Types – Advantages and Limitations - Qualities of an Auditor                                                                                                                             |                                                                                                                               |                               | 1                  | 1,4           |
| Instructional Hours                      |                                                                                                                                                                                                                                       |                                                                                                                               |                               |                    | 15            |
| Suggested Learning Methods: Case Studies |                                                                                                                                                                                                                                       |                                                                                                                               |                               |                    |               |
| II                                       | Internal Control – Elements of Internal Control -Internal Check and Internal Audit - Audit note book – Working papers - Vouching – Voucher – Vouching of Cash Book - Vouching of Trading Transactions - Vouching of Impersonal Ledger |                                                                                                                               |                               | 1                  | 14, 16, 17,18 |
| Instructional Hours                      |                                                                                                                                                                                                                                       |                                                                                                                               |                               |                    | 15            |
| Suggested Learning Methods: Case Studies |                                                                                                                                                                                                                                       |                                                                                                                               |                               |                    |               |
| III                                      | Verification and Valuation of Assets and Liabilities – Auditor’s position regarding the valuation and verifications of Assets and Liabilities - Depreciation – Reserves-Provisions – Secret Reserves                                  |                                                                                                                               |                               | 1                  | 19,20,21      |
| Instructional Hours                      |                                                                                                                                                                                                                                       |                                                                                                                               |                               |                    | 15            |
| Suggested Learning Methods: Case Studies |                                                                                                                                                                                                                                       |                                                                                                                               |                               |                    |               |
| IV                                       | Audit of Joint Stock Companies – Qualification – Dis-qualifications – Various modes of Appointment of Company Auditor – Rights and Duties – Liabilities of a Company Auditor                                                          |                                                                                                                               |                               | 1                  | 22,24         |

|                                          |                                                                                                                                                                                                                                                                    |         |            |         |               |       |     |                 |      |      |      |      |      |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------|---------|---------------|-------|-----|-----------------|------|------|------|------|------|
|                                          | Share Capital and Share Transfer Audit – Audit Report– Contents and Types                                                                                                                                                                                          |         |            |         |               |       |     |                 |      |      |      |      |      |
| Instructional Hours                      |                                                                                                                                                                                                                                                                    | 15      |            |         |               |       |     |                 |      |      |      |      |      |
| Suggested Learning Methods: Case Studies |                                                                                                                                                                                                                                                                    |         |            |         |               |       |     |                 |      |      |      |      |      |
| V                                        | Investigation – Objectives of Investigation – Audit of Computerized Accounts – Electronic Auditing – Investigation under the provisions of Companies Act                                                                                                           | 1       | 34         |         |               |       |     |                 |      |      |      |      |      |
| Instructional Hours                      |                                                                                                                                                                                                                                                                    | 15      |            |         |               |       |     |                 |      |      |      |      |      |
| Suggested Learning Methods: Case Studies |                                                                                                                                                                                                                                                                    |         |            |         |               |       |     |                 |      |      |      |      |      |
| Total Hours                              |                                                                                                                                                                                                                                                                    | 75 Hrs  |            |         |               |       |     |                 |      |      |      |      |      |
| Text Books                               | 1. B. N. Tandon, S. Sudharsanam, S. Sundarabahu, Practical Auditing, S. Chand & Company Ltd,2013.                                                                                                                                                                  |         |            |         |               |       |     |                 |      |      |      |      |      |
| Reference Books                          | 1. Kamal Gupta & Ashok Arora, Fundamentals of Auditing, Tata Mchraw- Hill Publications, New Delhi,2004.<br>2. Ravinder Kumar &Virender Sharma, Auditing: Principles and Practice, PHIPublishers, 2015.<br>3. DingarPagar, Auditing, S.Chand& Co., New Delhi, 2015. |         |            |         |               |       |     |                 |      |      |      |      |      |
| Web. URLs                                | 1. <a href="https://www.youtube.com/watch?v=kk_3eldO9KI">https://www.youtube.com/watch?v=kk_3eldO9KI</a><br>2. <a href="https://www.youtube.com/watch?v=iXVlirfAJRc">https://www.youtube.com/watch?v=iXVlirfAJRc</a>                                               |         |            |         |               |       |     |                 |      |      |      |      |      |
| Tools for Assessment (25 Marks)          |                                                                                                                                                                                                                                                                    |         |            |         |               |       |     |                 |      |      |      |      |      |
| CIA I                                    | CIA II                                                                                                                                                                                                                                                             | CIA III | Assignment | Seminar | Poster Making | Total |     |                 |      |      |      |      |      |
| 5                                        | 5                                                                                                                                                                                                                                                                  | 6       | 3          | 3       | 3             | 25    |     |                 |      |      |      |      |      |
| Mapping                                  |                                                                                                                                                                                                                                                                    |         |            |         |               |       |     |                 |      |      |      |      |      |
| CO \ PO                                  | PO1                                                                                                                                                                                                                                                                | PO2     | PO3        | PO4     | PO5           | PO6   | PO7 | PO8             | PSO1 | PSO2 | PSO3 | PSO4 | PSO5 |
| CO1                                      | M                                                                                                                                                                                                                                                                  | M       | H          | H       | H             | M     | M   | H               | H    | H    | H    | H    | H    |
| CO2                                      | L                                                                                                                                                                                                                                                                  | M       | M          | H       | M             | L     | M   | M               | H    | M    | M    | M    | M    |
| CO3                                      | M                                                                                                                                                                                                                                                                  | M       | H          | M       | H             | M     | M   | H               | M    | H    | H    | H    | H    |
| CO4                                      | M                                                                                                                                                                                                                                                                  | M       | M          | H       | M             | M     | M   | M               | H    | M    | H    | H    | M    |
| CO5                                      | H                                                                                                                                                                                                                                                                  | M       | H          | M       | M             | H     | M   | H               | M    | M    | M    | M    | H    |
| H-High; M-Medium; L-Low                  |                                                                                                                                                                                                                                                                    |         |            |         |               |       |     |                 |      |      |      |      |      |
| Course designed by                       |                                                                                                                                                                                                                                                                    |         |            |         |               |       |     | Verified by     |      |      |      |      |      |
|                                          |                                                                                                                                                                                                                                                                    |         |            |         |               |       |     |                 |      |      |      |      |      |
| Ms. Vani Bagvathi                        |                                                                                                                                                                                                                                                                    |         |            |         |               |       |     | Dr. R. Mahadevi |      |      |      |      |      |