

EASWARI ENGINEERING COLLEGE

Department of Information technology

Regulation: 2017

BATCH -2017-2021

Course with Subject Code Mapping

| Course Code | Sub Code | COURSE NAME |
|--------------------|-----------------|---|
| C101 | HS8151 | Communicative English |
| C102 | MA8151 | Engineering Mathematics – I |
| C103 | PH8151 | Engineering Physics |
| C104 | CY8151 | Engineering Chemistry |
| C105 | GE8151 | Problem Solving and Python programming |
| C106 | GE8152 | Engineering Graphics |
| C107 | GE8161 | Problem Solving and Python Programming Laboratory |
| C109 | BS8161 | Physics and Chemistry Laboratory |
| C110 | HS8251 | Technical English |
| C111 | MA8251 | Engineering Mathematics – II |
| C112 | PH8252 | Physics for Information Science |
| C113 | BE8255 | Basic Electrical, Electronics and Measurement Engineering |
| C114 | IT8201 | Information Technology Essentials |
| C115 | CS8251 | Programming in C |
| C116 | GE8261 | Engineering practices laboratory |

| Course Code | Sub Code | COURSE NAME |
|--------------------|-----------------|--|
| C117 | CS8261 | C Programming Laboratory |
| C118 | IT8211 | Information Technology Essentials Laboratory |
| C201 | MA8351 | Discrete Mathematics |
| C202 | CS8351 | Digital Principles and System Design |
| C203 | CS8391 | Data Structures |
| C204 | CS8392 | Object Oriented Programming |
| C205 | CS8394 | Analog and Digital Communication |
| C206 | CS8381 | Data Structures Laboratory |
| C207 | CS8383 | Object Oriented Programming Laboratory |
| C208 | CS8382 | Digital Systems Laboratory |
| C209 | HS8381 | Interpersonal skills/Listening & Speaking |
| C210 | MA8391 | Probability and Statistics |
| C211 | CS8491 | Computer Architecture |
| C212 | CS8492 | Database Management Systems |
| C213 | CS8451 | Design and Analysis of Algorithms |
| C214 | CS8493 | Operating Systems |
| C215 | GE8291 | Environmental Science and Engineering |
| C216 | CS8481 | Database Management Systems Laboratory |
| C217 | CS8461 | Operating Systems Laboratory |

| Course Code | Sub Code | COURSE NAME |
|--------------------|-----------------|---|
| C218 | HS8461 | Advanced Reading and Writing |
| C301 | MA8551 | Algebra and Number Theory |
| C302 | CS8591 | Computer Networks |
| C303 | EC8691 | Microprocessors and Microcontrollers |
| C304 | IT8501 | Web Technology |
| C305 | CS8494 | Software Engineering |
| C306 | EC8681 | Microprocessors and Microcontrollers Laboratory |
| C307 | CS8581 | Networks Laboratory |
| C308 | IT8511 | Web Technology Laboratory |
| C309 | IT8601 | Computational Intelligence |
| C310 | CS8592 | Object Oriented Analysis and Design |
| C311 | IT8602 | Mobile Communication |
| C312 | CS8091 | Big data Analytics |
| C313 | CS8092 | Computer Graphics and Multimedia |
| C314 | CS8662 | Mobile Application Development Laboratory |
| C315 | CS8582 | Object Oriented Analysis and Design Laboratory |
| C316 | IT8611 | Mini Project |
| C401 | MG8591 | Principles of Management |
| C402 | CS8792 | Cryptography and Network Security |

| Course Code | Sub Code | COURSE NAME |
|--------------------|-----------------|-------------------------------------|
| C403 | CS8791 | Cloud Computing |
| C404 | IT8711 | FOSS and cloud Computing laboratory |
| C405 | IT8761 | Security Laboratory |
| C406 | IT8074 | Service Oriented Architecture |
| C407 | GE8076 | Professional Ethics in Engineering |
| C408 | MG6088 | Software Project Management |
| C409 | IT6811 | Project Work |

REGULATION 2017

Course Name: C105-PROBLEM SOLVING AND PYTHON PROGRAMMING

Year of Study: 2017-18

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|---------------|---|
| C105.1 | To know the basics of algorithmic problem solving |
| C105.2 | To read and write simple Python programs. |
| C105.3 | To develop Python programs with conditionals and loops. |
| C105.4 | To define Python functions and call them. |
| C105.5 | To use Python data structures -- lists, tuples, dictionaries. |
| C105.6 | To do input/output with files in Python. |

CO-PO MAPPING

| Course Outcome | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO 9 | PO10 | PO11 | PO12 | PSO1 | PS O2 |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|-------|
| C105.1 | 3 | 3 | 3 | 3 | 1 | - | - | - | - | - | - | 3 | 2 | 2 |
| C105.2 | 3 | 3 | 3 | 3 | 2 | - | - | - | - | - | - | 3 | 2 | 2 |
| C105.3 | 3 | 3 | 3 | 2 | 2 | - | - | - | - | - | - | 2 | 3 | 2 |
| C105.4 | 3 | 3 | 3 | 3 | 2 | - | - | - | - | - | - | 2 | 3 | 3 |
| C105.5 | 3 | 3 | 3 | 2 | 2 | - | - | - | - | - | - | 2 | 3 | 3 |

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|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C105.6 | 3 | 3 | 3 | 3 | 2 | - | - | - | - | - | - | 3 | 3 | 3 |
| C105 | 3 | 3 | 3 | 3 | 2 | - | - | - | - | - | - | 3 | 3 | 2 |

Course Name: C114 -INFORMATION TECHNOLOGY ESSENTIALS

Year of Study: 2017-18

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|---------------|--|
| C114.1 | Basic control elements. |
| C114.2 | Create client side and server side programs using scripts using PHP. |
| C114.3 | Design dynamic web sites and handle multimedia components |
| C114.4 | Create applications with PHP connected to database. |
| C114.5 | Create Personal Information System |
| C114.6 | Implement the technologies behind computer networks and mobile communication |

CO-PO MAPPING

| Course Outcome | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO 9 | PO10 | PO11 | PO12 | PSO1 | PS O2 |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|-------|
| C114.1 | 3 | 3 | 3 | | 3 | - | - | - | - | - | - | 2 | 2 | 2 |
| C114.2 | 3 | 3 | 3 | | 3 | - | - | - | - | - | - | 2 | 2 | 2 |
| C114.3 | 3 | 3 | 3 | | 3 | - | - | - | - | - | - | 2 | 1 | 2 |
| C114.4 | 3 | 3 | 3 | | 3 | - | - | - | - | - | - | 2 | 1 | 2 |
| C114.5 | 3 | 3 | 3 | | 3 | - | - | - | - | - | - | 2 | 1 | 2 |
| C114.6 | 3 | 3 | 3 | | 3 | - | - | - | - | - | - | 2 | 1 | 3 |
| C114 | 3 | 3 | 3 | - | 3 | - | - | - | - | - | - | 2 | 1 | 2 |

Course Name:C115- PROGRAMMING IN C**Year of Study: 2017-18**

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|---------------|--|
| C115.1 | TO develop simple applications in c using basic constructs. |
| C115.2 | Design and implement applications using Arrays and Strings |
| C115.3 | Develop and implement applications in C using functions and pointers |
| C115.4 | Develop applications in C using Structures |
| C115.5 | Design applications using random access and file processing. |
| C115.6 | Design applications using modern tools. |

CO-PO MAPPING

| Course Outcome | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO 9 | PO10 | PO11 | PO12 | PSO 1 | PS O2 |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|-------|-------|
| C115.1 | 3 | 3 | 3 | | 2 | - | - | - | - | - | - | 2 | 2 | 2 |
| C115.2 | 3 | 3 | 3 | | 3 | - | - | - | - | - | - | 2 | 2 | 2 |
| C115.3 | 3 | 3 | 3 | | 2 | - | - | - | - | - | - | 2 | 1 | 2 |
| C115.4 | 3 | 3 | 3 | | 2 | - | - | - | - | - | - | 2 | 1 | 2 |
| C115.5 | 3 | 3 | 3 | | 2 | - | - | - | - | - | - | 2 | 1 | 2 |
| C115.6 | 3 | 3 | 3 | | 2 | - | - | - | - | - | - | 2 | 1 | 3 |
| C115 | 3 | 3 | 3 | - | 2 | - | - | - | - | - | - | 2 | 1 | 2 |

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|--------|---|
| C204.1 | To understand OOPS concepts and basic characteristics of Java |
| C204.2 | To know the principles of packages, inheritance and interfaces |
| C204.3 | To define exceptions and use I/O streams |
| C204.4 | To develop a java application with threads and generics classes |
| C204.5 | To design and build simple Graphical User Interfaces |
| C204.6 | To learn and practice AWT and Swing packages |

Course Name: C204-OBJECT ORIENTED PROGRAMMING

Year of Study: 2018-19

CO-PO MAPPING

| <i>Course Outcome</i> | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
|-----------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| C204.1 | 1 | 3 | 1 | 2 | 3 | - | - | - | - | - | - | - | 2 | 1 |
| C204.2 | 2 | 2 | 2 | 1 | 3 | - | - | - | - | - | - | - | 2 | 2 |
| C204.3 | 2 | 3 | 1 | 2 | 3 | - | - | - | - | - | - | - | 3 | 1 |
| C204.4 | 2 | 2 | 2 | 1 | 3 | - | - | - | - | - | - | - | 2 | 2 |
| C204.5 | 2 | 3 | 3 | 2 | 3 | - | - | - | - | - | - | - | 2 | 2 |
| C204.6 | 3 | 3 | 2 | 1 | 3 | - | - | - | - | - | - | - | 2 | 1 |
| C204 | 2 | 2 | 3 | 1 | 3 | - | - | - | - | - | - | - | 2 | 2 |

Course Name: C211-COMPUTER ARCHITECTURE

Year of Study: 2018-19

| | |
|---------------|--|
| C211.1 | Understand the basics structure of computers, operations and instructions. |
| C211.2 | Design arithmetic and logic unit. |
| C211.3 | Understand pipelined execution and design control unit. |
| C211.4 | Understand parallel processing architectures |
| C211.5 | Understand the various memory systems and I/O communication |
| C211.6 | Design high availability and cost effective computers. |

CO-PO MAPPING

| <i>Course Outcome</i> | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
|-----------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| C211.1 | 3 | 3 | 3 | 2 | 3 | - | - | - | - | - | - | - | 2 | 1 |
| C211.2 | 3 | 2 | 3 | 1 | 3 | - | - | - | - | - | - | - | 2 | 2 |
| C211.3 | 3 | 2 | 3 | 2 | 3 | - | - | - | - | - | - | - | 3 | 1 |
| C211.4 | 3 | 2 | 3 | 1 | 3 | - | - | - | - | - | - | - | 2 | 2 |
| C211.5 | 3 | 2 | 3 | 2 | 3 | - | - | - | - | - | - | - | 2 | 2 |
| C211.6 | 3 | 2 | 3 | 1 | 3 | - | - | - | - | - | - | - | 2 | 1 |
| C211 | 3 | 2 | 3 | 1 | 3 | - | - | - | - | - | - | - | 2 | 2 |

Course Name: C212-DATABASE MANAGEMENT SYSTEMS

Year of Study: 2018-19

| | |
|--------|---|
| C212.1 | Classify the modern and futuristic database applications based on size and complexity |
| C212.2 | Map ER model to Relational model to perform database design effectively |
| C212.3 | Write queries using normalization criteria and optimize queries |
| C212.4 | Compare and contrast various indexing strategies in different database systems |
| C212.5 | Appraise how advanced databases differ from traditional databases. |
| C212.6 | Develop applications with database connectivity |

| <i>Course Outcome</i> | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO 11 | PO1 2 | PS O 1 | PSO 2 |
|-----------------------|----------|----------|----------|-----|----------|-----|-----|-----|-----|------|-------|-------|----------|----------|
| C212.1 | 3 | 3 | 3 | - | 3 | - | - | - | - | - | - | - | 2 | 1 |
| C212.2 | 3 | 2 | 3 | - | 3 | - | - | - | - | - | - | - | 2 | 2 |
| C212.3 | 3 | 2 | 3 | - | 3 | - | - | - | - | - | - | - | 3 | 1 |
| C212.4 | 3 | 2 | 3 | - | 3 | - | - | - | - | - | - | - | 2 | 2 |
| C212.5 | 3 | 2 | 3 | - | 3 | - | - | - | - | - | - | - | 2 | 2 |
| C212.6 | 3 | 2 | 3 | - | 3 | - | - | - | - | - | - | - | 2 | 1 |
| C212 | 3 | 2 | 3 | - | 3 | - | - | - | - | - | - | - | 3 | 2 |

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|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C302 | 3 | 1 | 2 | - | - | - | - | - | - | - | - | - | 2 | 2 |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

Course Name: C304-Web Technology

Year of Study: 2017-18

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|--------|--|
| C304.1 | Design simple web pages using markup languages like HTML and XHTML. |
| C304.2 | Create dynamic web pages using DHTML and java script that is easy to navigate and use |
| C304.3 | Program server side web pages that have to process request from client side web pages. |
| C304.4 | Represent web data using XML and develop web pages using JSP. |
| C304.5 | Understand various web services and how these web services interact. |
| C304.6 | Develop real time application using server side programming and Web Services |

CO-PO MAPPING

| CO | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PO13 | PSO1 | PSO2 |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|
| C304.1 | 3 | 2 | 3 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 2 | 3 | 3 | 2 | |
| C304.2 | 3 | 3 | 3 | 3 | 3 | 2 | 0 | 0 | 2 | 0 | 2 | 3 | 3 | 2 | |
| C304.3 | 3 | 3 | 3 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 2 | 3 | 3 | 2 | |
| C304.4 | 3 | 3 | 3 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 2 | 3 | 3 | 2 | |
| C304.5 | 3 | 3 | 3 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 2 | 3 | 3 | 2 | |
| C304.6 | 3 | 2 | 3 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 2 | |
| C304 | 3 | 2 | 3 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 2 | 3 | 3 | 2 | |

Course Name: C305- Software Engineering

Year of Study: 2019 – 20

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|---------------|--|
| C305.1 | Students will be able to identify the key activities in managing a software project. |
| C305.2 | Students will be able to compare different process models. |
| C305.3 | Students will be able to understand requirement specifications and analysis modeling. |
| C305.4 | Students will be able to apply systematic procedure for software design and deployment. |
| C305.5 | Students will be able compare and contrast the various testing and maintenance. |
| C305.6 | Students will be able to Manage project schedule, estimate project cost and effort required. |

CO-PO MAPPING

| CO | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | SO1 | PSO |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|-----|-----|
| C305.1 | 3 | 3 | 3 | 2 | | | | | | | | 3 | 2 | 2 |
| C305.2 | 3 | 3 | 3 | 2 | | | | | | | | 3 | 2 | 2 |
| C305.3 | 3 | 3 | 3 | 3 | | | | | | | | 3 | 2 | 2 |
| C305.4 | 3 | 3 | 3 | 2 | | - | | | | | | 3 | 2 | 2 |
| C305.5 | 3 | 3 | 3 | 2 | | - | | | | | | 3 | 2 | 2 |
| C305.6 | 3 | 3 | 3 | 3 | | - | | | | | | 3 | 2 | 2 |

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| C305 | 3 | 3 | 3 | 2 | | | | | | | | 3 | 2 | 2 |
| C309.1 | To provide a strong foundation on fundamental concepts in Computational Intelligence. | | | | | | | | | | | | | |
| C309.2 | To enable Problem-solving through various searching techniques. | | | | | | | | | | | | | |
| C309.3 | To apply these techniques in applications which involve perception, reasoning and learning. | | | | | | | | | | | | | |
| C309.4 | To apply Computational Intelligence techniques for information retrieval. | | | | | | | | | | | | | |
| C309.5 | To apply Computational technique primarily for machine learning. | | | | | | | | | | | | | |
| C309.6 | To apply applications of AI techniques in intelligent agents, expert systems, artificial neural networks and other machine learning models | | | | | | | | | | | | | |

Course Name: C309- Computational Intelligence

Year of Study: 2019-20

CO-PO MAPPING

| Course Outcome | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO 9 | PO10 | PO11 | PO12 | PSO1 | PSO 2 |
|----------------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|-------|
| C309.1 | 3 | 3 | 3 | 3 | 2 | - | - | - | 3 | - | - | 2 | 2 | 2 |
| C309.2 | 2 | 3 | 3 | 2 | 2 | - | - | - | 2 | - | - | 2 | 3 | 3 |
| C309.3 | 3 | 3 | 2 | 2 | 2 | - | - | - | 3 | - | - | 2 | 2 | 2 |
| C309.4 | 2 | 3 | 2 | 3 | 2 | - | - | - | 2 | - | - | 1 | 2 | 2 |
| C309.5 | 2 | 3 | 2 | 2 | 2 | - | - | - | 2 | - | - | 3 | 2 | 3 |

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|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C309.6 | 3 | 2 | 3 | 2 | 3 | - | - | - | 3 | - | - | 2 | 1 | 2 |
| C309 | 3 | 3 | 2 | 2 | 3 | - | - | - | 3 | - | - | 2 | 2 | 2 |

Course Name: C310 Object Oriented Analysis and Design Year of Study: 2017-18

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|---------------|---|
| C310.1 | Students will be able to design and implement projects using OO concepts |
| C310.2 | Students will be able to use the UML analysis and design diagrams. |
| C310.3 | Students will be able to understand the various concepts and types of the design pattern. |
| C310.4 | Students will be able to apply the use case modeling and domain modeling to various domains. |
| C310.5 | Students will be able to apply appropriate design patterns. |
| C310.6 | Students will be able to implement code from design and to compare and contrast various testing techniques. |

CO-PO MAPPING

| CO | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|
| C310.1 | - | 3 | 3 | 1 | 1 | - | - | - | - | - | - | 1 | 2 | 2 |
| C310.2 | 1 | 2 | 2 | 2 | 2 | - | - | - | - | - | - | - | 2 | 2 |
| C310.3 | - | 2 | 1 | 2 | - | - | - | - | - | - | 1 | - | 2 | 2 |

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| C313.6 | 3 | 2 | 3 | 1 | 2 | - | - | - | - | - | - | - | 1 | 1 |
| C313 | 3 | 2 | 3 | 1 | 2 | - | - | - | - | - | - | - | 1 | 1 |

Course Name: C402- Cryptography and Network Security

YEAR OF STUDY-2019-2020

CO PO MAPPING

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|---------------|--|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|-------------|-------------|
| C402.1 | The Student will be able to remember the basics of information security and understand the concept of Number theory necessary of cryptology | | | | | | | | | | | | | |
| C402.2 | The Student will be able to remember and Compare various Cryptographic Techniques | | | | | | | | | | | | | |
| C402.3 | The Student will be able to remember , Compare and apply various authentication Techniques | | | | | | | | | | | | | |
| C402.4 | The Student will be able to Design Secure applications and Inject secure coding in the developed applications and will be able to understand about the Intrusion, Viruses , firewalls and its configurations | | | | | | | | | | | | | |
| C402.5 | To remember the practices and services provided for network security and practically implement cryptography and network security for network based applications | | | | | | | | | | | | | |
| C402.6 | At the end of the course, the Students will be able to remember the practices and services provided network security and practically implement cryptography and network security for network based applications. | | | | | | | | | | | | | |
| CO | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
| C402.1 | 3 | 3 | 2 | - | - | 1 | 1 | - | - | - | - | - | 3 | - |

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|---------------|----------|----------|----------|---|---|----------|----------|---|---|---|---|---|----------|---|
| C402.2 | 3 | 2 | 2 | - | - | 1 | 1 | - | - | - | - | - | 2 | - |
| C402.3 | 3 | 3 | 2 | - | - | 1 | 1 | - | - | - | - | - | 3 | - |
| C402.4 | 3 | 3 | 3 | - | 3 | 1 | 1 | - | - | - | - | - | 3 | - |
| C402.5 | 3 | 3 | 2 | - | - | 1 | 1 | - | - | - | - | - | 3 | - |
| C402.6 | 3 | 3 | 3 | - | 3 | 1 | 1 | - | - | - | - | - | 3 | - |
| C402 | 3 | 3 | 3 | - | 3 | 1 | 1 | - | - | - | - | - | 3 | - |

Course Name: C403- Cloud Computing

YEAR OF STUDY-2019-2020

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|----------------|---|
| C403 .1 | Students will able to Articulate the main concepts, key technologies, strengths and limitations of cloud computing. |
| C403 .2 | Students will be able To Learn the key and enabling technologies that help in the development of cloud. |
| C403 .3 | Students will be able to Develop the ability to understand and use the architecture of compute and storage cloud, service and delivery models |
| C403 .4 | Students will be able to Explain the core issues of cloud computing such as resource management and security. |
| C403.5 | Students will Be able to install and use current cloud technologies. |
| C403.6 | Studdents will be able to Choose the appropriate technologies, algorithms and approaches for implementation and use of cloud. |

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| CO | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
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| C403.1 | 3 | 3 | 2 | - | - | 1 | 1 | - | - | - | - | - | 3 | - |
| C403.2 | 3 | 2 | 2 | - | - | 1 | 1 | - | - | - | - | - | 2 | - |
| C403.3 | 3 | 3 | 2 | - | - | 1 | 1 | - | - | - | - | - | 3 | - |
| C403.4 | 3 | 3 | 3 | - | 3 | 1 | 1 | - | - | - | - | - | 3 | - |
| C403.5 | 3 | 3 | 2 | - | - | 1 | 1 | - | - | - | - | - | 3 | - |
| C403.6 | 3 | 3 | 3 | - | 3 | 1 | 1 | - | - | - | - | - | 3 | - |
| C403 | 3 | 3 | 3 | - | 3 | 1 | 1 | - | - | - | - | - | 3 | - |

Course Name: C406- Service Oriented Architecture

Year of Study: 2019-20

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|---------------|--|
| C406.1 | Students will be able to use the standards and protocols such as XML, WSDL, SOAP and UDDI to develop web services |
| C406.2 | Students will be able to apply the concepts of Service Composition, Orchestration, Choreography, Business Process Execution Language to build applications based on XML |
| C406.3 | Students will be able to analyze and evaluate requirements and specifications in the context of web services |
| C406.4 | Students will be able to design, develop and evaluate web service systems |
| C406.5 | Students will be able to reengineer a legacy system to a service-oriented target system |
| C406.6 | Students will be able to gain attitude which reflect that web technologies are continuously evolving and their impacts on information systems and business process are also continuously evolving. |

CO PO MAPPING

| CO | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|
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|---------------|----------|----------|----------|----------|----------|---|---|---|---|---|---|----------|----------|----------|
| C406.1 | 3 | 2 | 2 | 1 | 3 | - | - | - | - | - | - | - | 1 | 2 |
| C406.2 | 3 | 2 | 2 | 1 | 3 | - | - | - | - | - | - | - | 1 | 2 |
| C406.3 | 2 | 3 | 3 | 3 | 2 | - | - | - | - | - | - | - | 1 | 2 |
| C406.4 | 2 | 3 | 3 | 3 | 3 | - | - | - | - | - | - | - | 1 | 2 |
| C406.5 | 2 | 1 | 2 | 2 | 3 | - | - | - | - | - | - | - | 1 | 2 |
| C406.6 | 2 | 1 | 2 | 1 | 3 | - | - | - | - | - | - | 1 | 1 | 2 |
| C406 | 3 | 3 | 3 | 3 | 3 | - | - | - | - | - | - | 1 | 1 | 2 |

Course Name: C407- Professional Ethics in Engineering Year of Study:2019-20

| CO | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO 10 | PC 11 | PO12 | PSO1 | PSO2 |
|---------------|----------|----------|-----|-----|-----|----------|----------|----------|-----|-------|-------|------|----------|----------|
| C407.1 | 3 | 2 | - | - | - | - | - | 3 | - | - | - | - | 2 | 1 |
| C407.2 | 3 | 2 | - | - | - | - | - | 3 | - | - | - | - | 1 | 1 |
| C407.3 | 3 | 2 | - | - | - | 2 | - | 3 | - | - | - | - | 1 | 1 |
| C407.4 | 3 | 2 | - | - | - | 2 | 2 | 3 | - | - | - | - | 1 | 1 |
| C407.5 | 3 | 2 | - | - | - | 3 | 2 | - | - | - | - | - | 1 | 1 |
| C407.6 | 3 | 2 | - | - | - | 2 | - | 3 | - | - | - | - | 1 | 1 |
| C407 | 3 | 2 | - | - | - | 3 | 2 | 3 | - | - | - | - | 1 | 1 |

| | |
|---------------|--|
| C407.1 | Students will be able to acquire knowledge about the principles of various moral and ethical theories. |
| C407.2 | Students will be able to extensively apply the concepts of Professional ideals and virtues. |
| C407.3 | Students will be able to discuss the ethical issues related to engineering and also describe the code of ethics. |

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|---------------|--|
| C407.4 | Students will be able to acquire sufficient knowledge to evaluate the consequences of safety and risk. |
| C407.5 | Students will be able to differentiate the responsibilities and rights of Engineering professionals and rights in the society. |
| C407.6 | Students will be able to explore the issues related to global contexts with respect to engineering practice. |