



KONGUNADU COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous)

NAMAKKAL- TRICHY MAIN ROAD, THOTTIAM

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

List of Subjects (2019-2020)

| S.No. | Course code | Subject code | Course Name |
|----------------------|-------------|--------------|--------------------------------------------|
| Semester VII | | | |
| 1. | C401 | CS6701 | Cryptography and Network Security |
| 2. | C402 | CS6702 | Graph Theory and Applications |
| 3. | C403 | CS6703 | Grid and Cloud Computing |
| 4. | C404 | CS6704 | Resource Management Techniques |
| 5. | C405 | IT6801 | Service Oriented Architecture |
| 6. | C406 | CS6007 | Information Retrieval |
| 7. | C407 | CS6711 | Security Laboratory |
| 8. | C408 | CS6712 | Grid and Cloud Computing Laboratory |
| Semester VIII | | | |
| 9. | C409 | CS6801 | Multi – Core Architectures and Programming |
| 10. | C410 | CS6008 | Human Computer Interaction |
| 11. | C411 | MG6088 | Software Project Management |
| 12. | C412 | CS6811 | Project Work |

Course Outcomes of all subjects (2019-2020)

| Cryptography and Network Security: C401 Year of study : 2019-20 | |
|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| C401.1 | To discuss on various types of ciphering techniques and their characteristics. |
| C401.2 | To identify the basic concept of encryption and decryption for secure data transmission. |
| C401.3 | To Analyze and compare various cryptography techniques and digital signature authentication. |
| C401.4 | To illustrate the concept of firewall and its design principles, E-commerce and virus. |
| C401.5 | Proposing strategies to secure data communication using web security and IP security |

| Graph Theory and Applications: C402 Year of study : 2019-20 | |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| C402.1 | Write precise and accurate mathematical definitions of objects in graph theory. |
| C402.2 | Use mathematical definitions to identify and construct examples and to distinguish examples from non-examples. |
| C402.3 | Validate and critically assess a mathematical proof. |
| C402.4 | Create a combination of theoretical knowledge and independent mathematical thinking in creative investigation of questions in graph theory. |
| C402.5 | Develop simulations from definitions to construct mathematical proofs. |

| Grid and Cloud Computing: C403 Year of study : 2019-20 | |
|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| C403.1 | The students should be able to apply grid computing techniques to solve large scale scientific problems. |
| C403.2 | Understands when to use OGSA services. |
| C403.3 | The students should be able to apply the concept of virtualization. |
| C403.4 | The students should become familiar in using the grid and cloud toolkits. |
| C403.5 | The students should be able to apply the security models in the grid and the cloud environment. |

| Resource Management Techniques: C404 Year of study : 2019-20 | |
|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| C404.1 | Solve optimization problems using Simplex method |
| C404.2 | Utilize Shortest route problem to solve real-life applications. |
| C404.3 | Apply integer programming and linear programming to solve real-life applications |
| C404.4 | Understand the basic concepts of non linear programming to solve real-life applications |
| C404.5 | Utilize PERT and CPM for problems in project management |

| Service Oriented Architecture: C405 Year of study : 2019-20 | |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| C405.1 | Create XML documents and schemas. |
| C405.2 | Build applications based on XML. |
| C405.3 | Gained knowledge on basic concepts of SOA and it differs from other architecture |
| C405.4 | Develop web services using technology elements. |
| C405.5 | Build SOA-based applications for intra-enterprise and inter-enterprise applications. |

| Information Retrieval: C406 Year of study : 2019-20 | |
|------------------------------------------------------------|-----------------------------------------------------------------------------------|
| C406.1 | To Understand the basic Concepts of information retrieval models |
| C406.2 | To understand Information retrieval system strategies. |
| C406.3 | To Design search engine mechanism and to apply modern tool in web search. |
| C406.4 | To analyze various web based information retrieval techniques using modern tools. |
| C406.5 | To Apply document text mining techniques. |

| Security Laboratory: C407 Year of study : 2019-20 | |
|----------------------------------------------------------|----------------------------------------------------------|
| C407.1 | Implement the cipher techniques |
| C407.2 | Deploy the various security algorithms |
| C407.3 | Apply the digital signature for secure data transmission |
| C407.4 | Use different open source tools for network monitoring |
| C407.5 | Imply the tools for intrusion detection systems |

| Grid and Cloud Computing Laboratory: C408 Year of study : 2019-20 | |
|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| C408.1 | Use the grid and cloud tool kits. |
| C408.2 | Design and implement web services using grid computing. |
| C408.3 | Design and implement the various applications on the Grid environment. |
| C408.4 | Able to install virtual machine concept in Cloud environment. |
| C408.5 | Design and Implement applications on the Cloud environment using Hadoop and MapReduce Techniques. |

| Multi – Core Architectures and Programming: C409 Year of study : 2019-20 | |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| C409.1 | Students should understand the need for multi-core processor and parallel programming along with its basics. |
| C409.2 | Students should identify the challenges involved in parallel programming. |
| C409.3 | Students should implement parallel programming with shared memory system using OMP. |
| C409.4 | Students should implement parallel programming with distributed memory system using MPI. |
| C409.5 | Students should be able to design parallel programs for different case studies using OMP and MPI. |

| Human Computer Interaction: C410 Year of study : 2019-20 | |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| C410.1 | Design effective dialog for HCI. |
| C410.2 | Design effective HCI for individuals and persons with disabilities. |
| C410.3 | Assess the importance of user feedback. |
| C410.4 | Explain the HCI implications for designing multimedia/ ecommerce/ e-learning Web sites. |
| C410.5 | Develop meaningful user interface. |

| Software Project Management: C411 Year of study : 2019-20 | |
|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| C411.1 | Identify problems that are amenable to solution by Software Project Management. |
| C411.2 | Identify appropriate Process model to solve a given problem. |
| C411.3 | Design and carry out an empirical evaluation of different activity planning on problem formalization |
| C411.4 | Formalize a given problem in terms of Cost monitoring, Earned Value Analysis & Project tracking |
| C411.5 | The students will be able to practice Project Management principles while developing software. |

| Project Work: C412 Year of study : 2019-20 | |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| C412.1 | Competence in fundamental and advance knowledge of hardware and software. |
| C412.2 | Graduates will be able to identify and define problems in the area of Computer science. |
| C412.3 | Graduates will be able to explain and illustrate their practical skills needed to understand and modify problems related to programming and designing. |
| C412.4 | Graduates will get a chance to apply current technologies , create systems and solve problems |
| C412.5 | Graduates will get opportunities to practice as teams on multidisciplinary projects with effective writing and communication skills. |