

**List of Subjects: (Regulation 2013)**

<b>Semester V</b>			
1.	C301	CS6551	Computer Networks
2.	C302	IT6501	Graphics and Multimedia
3.	C303	CS6502	Object Oriented Analysis and Design
4.	C304	IT6502	Digital Signal Processing
5.	C305	IT6503	Web Programming
6.	C306	EC6801	Wireless Communication
7.	C307	IT6511	Networks Laboratory
8.	C308	IT6512	Web Programming Laboratory
9.	C309	IT6513	Case Tools Laboratory
<b>Semester VI</b>			
10.	C310	CS6601	Distributed Systems
11.	C311	IT6601	Mobile Computing
12.	C312	CS6659	Artificial Intelligence
13.	C313	CS6660	Compiler Design
14.	C314	IT6602	Software Architectures
15.	C315	GE6757	Total Quality Management (Elective I)
16.	C316	IT6611	Mobile Application Development Laboratory
17.	C317	IT6612	Compiler Laboratory
18.	C318	GE6674	Communication and Soft Skills – Laboratory Based
<b>Semester VII</b>			
19.	C401	IT6701	Information Management
20.	C402	CS6701	Cryptography and Network Security
21.	C403	IT6702	Data Ware Housing and Data Mining
22.	C404	CS6703	Grid and Cloud Computing
23.	C405	IT6004	Software Testing (Elective II)
24.	C406	IT6711	Data Mining Laboratory
25.	C407	IT6712	Security Laboratory
26.	C408	IT6713	Grid and Cloud Computing Laboratory
<b>Semester VIII</b>			
27.	C409	IT6801	Service Oriented Architecture
28.	C410	GE6075	Professional Ethics in Engineering (Elective III)
29.	C411	CS6004	Cyber Forensics (Elective IV)
30.	C412	MG6088	Software Project Management (Elective V)
31.	C413	IT6811	Project Work

## SEMESTER V

<b>CS6551 Computer Networks (C301)</b>	
<b>C301.1</b>	Explain the components requirement of networks and Link layer services.
<b>C301.2</b>	Classify the Media Access Control Protocols and different Internet networking.
<b>C301.3</b>	Demonstrate various types of routing techniques.
<b>C301.4</b>	Outline the mechanisms involved in Transport Layer.
<b>C301.5</b>	Experiment with different application layer protocols.

<b>IT6501 Graphics And Multimedia (C302)</b>	
<b>C302.1</b>	Apply algorithms to draw 2D objects and to implement 2D geometric transformations.
<b>C302.2</b>	Describe Projection concepts, Visibility Detection and animation techniques.
<b>C302.3</b>	Explain the concepts of multimedia, multimedia architecture and multimedia databases.
<b>C302.4</b>	Examine Compression & Decompression techniques, File format and Storage and retrieval.
<b>C302.5</b>	Discuss about hypermedia messaging standards & Distributed Multimedia Systems.

<b>CS6502 – Object Oriented Analysis and Design (C303)</b>	
<b>C303.1</b>	Explain OOAD concepts and use case modeling.
<b>C303.2</b>	Select an appropriate design pattern.
<b>C303.3</b>	Illustrate about domain models and conceptual classes.
<b>C303.4</b>	Compare and contrast various testing techniques.
<b>C303.5</b>	Construct projects using UML diagrams.

<b>IT6502-Digital Signal Processing (C304)</b>	
<b>C304.1</b>	Classify Discrete Time signals & Systems.
<b>C304.2</b>	Apply frequency transforms for the signals.
<b>C304.3</b>	Construct the IIR filters.
<b>C304.4</b>	Construct the FIR filters.
<b>C304.5</b>	Analyze finite word length effects in digital filters.

<b>IT6503WebProgramming(C305)</b>	
<b>C305.1</b>	Relatetheconceptsofwebprogramminganddesignwebpages.
<b>C305.2</b>	Interprettheconcepts ofObjectOrientationanddevelopprograms injava.
<b>C305.3</b>	Createdatabases withJDBC connectivity.
<b>C305.4</b>	Experimentwithapplets and serversideprogramming.
<b>C305.5</b>	ConstructawebservicewiththesupportofXML.

<b>EC6801Wireless Communication(C306)</b>	
<b>C306.1</b>	Explainthe wireless channels.
<b>C306.2</b>	Developacellularsystem.
<b>C306.3</b>	Illustratevarious signalingschemesforfadingchannels.
<b>C306.4</b>	Comparemultipathmitigationtechniques andanalyzetheirperformance.
<b>C306.5</b>	Constructsystems withtransmit/receivediversityandMIMO systems andanalyzetheirperformance.

<b>IT6511–NetworksLaboratory(C307)</b>	
<b>C307.1</b>	Usethe SocketProgramming.
<b>C307.2</b>	Use the simulationtools.
<b>C307.3</b>	Implementthevarious protocols.
<b>C307.4</b>	Analyzetheperformanceoftheprotocolsindifferentlayers.
<b>C307.5</b>	To Explain the difference between simulator and Emulator.

<b>IT6512WebProgrammingLab(C308)</b>	
<b>C308.1</b>	DesignWebpages usingHTML/DHTML andstylesheets.
<b>C308.2</b>	Developuserinterfaces usingJavaframes andapplets.
<b>C308.3</b>	DesignandImplementdatabaseapplications.
<b>C308.4</b>	Constructdynamicwebpages usingserversidescripting.
<b>C308.5</b>	ExperimentwithClientServerapplications.

<b>IT6513-Case ToolsLaboratory(C309)</b>	
<b>C309.1</b>	Outlinetheproblem statementforagivenproblem.
<b>C309.2</b>	ConstructUSECASEmodeltoidentifytheclassesandfunctionalityofthesystem.
<b>C309.3</b>	Showtheobjectsinteractionforallthesystemfunctionality.
<b>C309.4</b>	Developcodefromsystemdesign.
<b>C309.5</b>	Examinethedevelopedcodeusingtestingstrategies.

### **SEMESTER VI**

<b>CS6601DistributedSystem(C310)</b>	
<b>C310.1</b>	Explainthedistributed systemsarchitecture.
<b>C310.2</b>	Outlinetheinterprocess communicationindistributedsystems.
<b>C310.3</b>	Explainthefileaccessingmodelandvarious servicesindistributedsystem.
<b>C310.4</b>	Demonstrateconcurrencycontrolandproperties oftransactioninDistributed systems.
<b>C310.5</b>	Discuss resourceandprocessmanagementindistributed system.

<b>IT6601MobileComputing(C311)</b>	
<b>C311.1</b>	Explainthebasics ofmobileComputing.
<b>C311.2</b>	DescribethefunctionalityofMobile IPand TransportLayer.
<b>C311.3</b>	Classifydifferenttypes ofmobiletelecommunicationsystems.
<b>C311.4</b>	DemonstratetheAdhocnetworks concepts andits routingprotocols.
<b>C311.5</b>	Makeuseofmobileoperating systemsindevelopingmobileapplications.

<b>CS6659Artificial Intelligence (C312)</b>	
<b>C312.1</b>	Identifyproblems thatareamenabletosolutionbyAI methods.
<b>C312.2</b>	RecognizeappropriateAI methods tosolveagivenproblem.
<b>C312.3</b>	Discuss agivenproblem inthelanguage/frameworkofdifferentAI methods.
<b>C312.4</b>	DevelopbasicAI algorithms.
<b>C312.5</b>	Modelanempiricalevaluationofdifferentialalgorithms onaproblemformalization, andstatethe conclusions thattheevaluation supports.

<b>CS6660 Compiler Design (C313)</b>	
<b>C313.1</b>	Explain the phases of a Compiler.
<b>C313.2</b>	Illustrate the translation of regular expression into parse tree using syntax analyzer.
<b>C313.3</b>	Construct the intermediate representation considering the type systems.
<b>C313.4</b>	Apply the optimization techniques for the generated code.
<b>C313.5</b>	Use the different compiler construction tools to develop a simple compiler.

<b>IT6602 – Software Architectures (C314)</b>	
<b>C314.1</b>	Explain influence of software architecture on business and technical activities.
<b>C314.2</b>	Identify key architectural structures.
<b>C314.3</b>	Make use of views to specify architecture.
<b>C314.4</b>	Examine the architectural styles.
<b>C314.5</b>	Design document for a given architecture.

<b>GE6757 Total Quality Management [Elective I] (C315)</b>	
<b>C315.1</b>	Outline the Dimensions and Barriers regarding with Quality.
<b>C315.2</b>	Illustrate the TQM Principles.
<b>C315.3</b>	Demonstrate tools utilization for quality improvement.
<b>C315.4</b>	Explain the various types of techniques that are used to measure Quality.
<b>C315.5</b>	Apply various Quality Systems and auditing on implementation of TQM.

<b>IT6611 – Mobile Application Development Laboratory (C316)</b>	
<b>C316.1</b>	Build a native application using GUI components and Mobile application development framework.
<b>C316.2</b>	Develop an application using basic graphical primitives and databases.
<b>C316.3</b>	Construct an application using multi-threading and RSS feed.
<b>C316.4</b>	Make use of location identification using GPS in an application.
<b>C316.5</b>	Model new applications to handheld devices.

<b>IT6612CompilerLaboratory(C317)</b>	
<b>C317.1</b>	Applydifferentcompilerwritingtools to implementthedifferentPhases.
<b>C317.2</b>	Analyzethedataflowandcontrolflow.
<b>C317.3</b>	Constructtheintermediate representation.
<b>C317.4</b>	Designthebackendo facompilerfor8086assembler.
<b>C317.5</b>	Comparevarious codeoptimizationtechniques.

<b>HS1301Communicationand softSkills Laboratory(C318)</b>	
<b>C318.1</b>	Applyappropriatecommunicationskills across settings,purposes,andaudiences.
<b>C318.2</b>	DevelopKnowledgeofcommunicationusingtechnologyprominenttodiversesituations.
<b>C318.3</b>	Organize criticalthinkingtodevelopinnovativeandwell-foundedperspectives relatedtothe students'emphases.
<b>C318.4</b>	Makeuseofhealthyandeffective humanrelationships.
<b>C318.5</b>	Demonstrateappropriateandprofessionalethicalbehavior.

### SEMESTER VII

<b>IT6701InformationManagement(C401)</b>	
<b>C401.1</b>	Explain relationaldatabasetopicsincludinglogicalandphysicaldesignandmodeling.
<b>C401.2</b>	Designandimplementacomplexinformationsystemthatmeets regulatoryrequirements,defineand manageanorganizations keymasterdataentities.
<b>C401.3</b>	Design,Createandmaintain the datawarehouses.
<b>C401.4</b>	Explainabouttheinformationarchitectureandframework.
<b>C401.5</b>	Describeabout the recentadvancesinNOSQL,BigDataandrelatedtools.

<b>CS6701-Cryptography&amp;NetworkSecurity(C402)</b>	
<b>C402.1</b>	Outlinethebasics ofnumbertheoryandcomparevarious encryptiontechniques.
<b>C402.2</b>	Summarizethefunctionalityofpublickeycryptography.
<b>C402.3</b>	Comparevariousmessageauthenticationfunctionsandsecurealgorithms.
<b>C402.4</b>	Demonstratesystem-level securityapplications andtheimplementationofsecurityinvarious networklayers.
<b>C402.5</b>	Identifythedifferenttypes ofattacks andapplysecurityalgorithms.

<b>IT6702DataWarehousingAndDataMining(C403)</b>	
<b>C403.1</b>	Outlinedatawareconcepts andarchitecture.
<b>C403.2</b>	Summarizethevarious OLAPtypes.
<b>C403.3</b>	Explainthedataminingtechniques.
<b>C403.4</b>	Makeuseoftoolfor associationruleminingandclassification.
<b>C403.5</b>	Comparetheclusteringmethods.

<b>CS6703GridandCloudComputing(C404)</b>	
<b>C404.1</b>	OutlinetheconceptofGridandCloudArchitectures.
<b>C404.2</b>	Illustratethedataintensivegrid servicemodels and gridcomputingtechniques.
<b>C404.3</b>	Demonstratetheconceptofvirtualizationincloud.
<b>C404.4</b>	ExperimentwiththeprogrammingmodelforHadoop's andGlobus toolkit.
<b>C404.5</b>	Interpretthesecuritymodelsinthegridandcloudenvironment.

<b>IT6004Software Testing [Elective-II] (C405)</b>	
<b>C405.1</b>	Outlinethesoftwaretestingcriteriafordevelopingtestcases.
<b>C405.2</b>	Buildthetestcasesforsoftwaredevelopment.
<b>C405.3</b>	Explainthevariousleveloftesting.
<b>C405.4</b>	Discuss aboutthetestmetrics,measurements andManagementprocess.
<b>C405.5</b>	Makeuseofthelatesttesttoolforfunctionalandperformancetesting.

<b>IT6711DataMiningLaboratory(C406)</b>	
<b>C406.1</b>	Create aDataWarehouse
<b>C406.2</b>	Use the dataminingtools.
<b>C406.3</b>	Implement the Clusteringmethods
<b>C406.4</b>	Apply the Classification methods
<b>C406.5</b>	Applydataminingtechniques andmethods tolargedatasets.

<b>IT6712 SecurityLaboratory(C407)</b>	
<b>C407.1</b>	Explainthedifferent ciphertechniques.

<b>C407.2</b>	Implement the algorithms DES, RSA, MD5, and SHA-1
<b>C407.3</b>	Use tools like GnuPG, KFSensor, NetStrumbler.
<b>C407.4</b>	Demonstrate how to provide secured data storage, secured data transmission and for creating digital signatures.
<b>C407.5</b>	Employ intrusion detection system using tools.

<b>IT6713–Grid and Cloud Computing Lab(C408)</b>	
<b>C408.1</b>	Make use of Globus Toolkit for Grid environment
<b>C408.2</b>	Develop a Grid Service
<b>C408.3</b>	Apply the security mechanism for a grid service
<b>C408.4</b>	Develop an application in the cloud
<b>C408.5</b>	Experiment with Hadoop's map-reduce framework

### SEMESTER VIII

<b>IT6801–Service Oriented Architecture(C409)</b>	
<b>C409.1</b>	Infer the XML schema, namespaces and document structure.
<b>C409.2</b>	Build applications based on XML.
<b>C409.3</b>	Outline the service oriented architecture principles and service layers.
<b>C409.4</b>	Develop web services using SOAP and UDDI technologies.
<b>C409.5</b>	Build SOA based applications for enterprises.

<b>GE6075 Professional Ethics in Engineering [Elective III](C410)</b>	
<b>C410.1</b>	Give importance to Human Values in work environment
<b>C410.2</b>	Follow the Engineering Ethics in the professional world.
<b>C410.3</b>	Explain the concept of engineering as social experimentation.
<b>C410.4</b>	Assess the Safety, risk and responsibilities in work environment.
<b>C410.5</b>	Analyze the global issues related to adopting professional ethics

<b>CS6004 Cyber Forensics [Elective IV](C411)</b>	
<b>C410.1</b>	Discuss the security issues network layer and transport layer.
<b>C410.2</b>	Apply security principles in the application layer.
<b>C410.3</b>	Explain the concept of computer forensics.
<b>C410.4</b>	Use the forensics tools
<b>C410.5</b>	Analyze and validate forensics data

<b>MG6088 Software Project Management [Elective V](C412)</b>	
<b>C410.1</b>	Identify problems that are amenable to solution by Software Project Management.
<b>C410.2</b>	Identify appropriate Process model to solve a given problem.
<b>C410.3</b>	Design and carry out an empirical evaluation of different activity planning on problem formalization.
<b>C410.4</b>	Formalize a given problem in terms of Cost monitoring, Earned Value Analysis & Project tracking.
<b>C410.5</b>	Practice Project Management principles while developing software.

<b>IT8811- PROJECT WORK(C413)</b>	
<b>C411.1</b>	Identify the problem by applying acquired knowledge.
<b>C411.2</b>	Analyze and categorize executable project modules after considering risks.
<b>C411.3</b>	Choose efficient tools for designing project modules.
<b>C411.4</b>	Combine all the modules through effective teamwork after efficient testing.
<b>C411.5</b>	Elaborate the completed task and compile the project report.