Department of Information Technology

III B. Tech II Semester

SUBJECT: (C311) Automata Theory and Compiler Design

After going through this course, the student will be able to

S. No.	COURSE OUTCOMES	BT Level
C311.1	Understand basic concepts of formal languages, grammars, and automata	2-Understand
C311.2	gn finite automata and regular expressions for pattern recognition	6- Create
C311.3	Construct context-free grammars and pushdown automata for language processing	6- Create
C311.4	Analyze Turing machines and decidability issues in computation	4-Analyze
C311.5	Apply theoretical foundations to solve problems in compiler design and software engineering	3-Apply

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C311.1	3	2	2		3								3	3	
C311.2	3	3	3		3								3	3	
C311.3	3	3	3		3								3	3	
C311.4	3	3	3		3								3	3	
C311.5	2	2	2		2								2	2	
Average	**2.8**	**2.6**	**2.6**		**2.8**								**2.8**	**2.8**	

Department of Information Technology

III B. Tech II Semester

SUBJECT: **(C312) Algorithms Design and Analysis**

After going through this course, the student will be able to

S. No.	COURSE OUTCOMES	BT Level
C312.1	Analyze the time and space complexity of algorithms	4-Analyze
C312.2	Apply divide-and-conquer and greedy strategies to solve problems	3-Apply
C312.3	Design dynamic programming and backtracking algorithms	6- Create
C312.4	Evaluate NP-completeness and approximation algorithms	5-Evaluate
C312.5	Demonstrate teamwork and documentation in algorithmic problem solving	3-Apply

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C312.1	3	3	3	2									3	3	
C312.2	3	3	3	3									3	3	2
C312.3	3	3	3	3									3	3	2
C312.4	3	3	3	3									3	3	3
C312.5	3	3	3	3									3	3	3
Average	**3**	**3**	**3**	**2.8**									**3**	**3**	**2.5**

Department of Information Technology

III B. Tech II Semester

SUBJECT: (C313) Embedded Systems

After going through this course, the student will be able to

S. No.	COURSE OUTCOMES	BT Level
C213.1	Understand the fundamentals of embedded systems and their applications	2-Understand
C213.2	Analyze embedded system components and their interactions	4-Analyze
C213.3	Apply embedded programming concepts using real-time operating systems	3-Apply
C213.4	Design embedded solutions for real-world problems	6- Create
C213.5	Demonstrate teamwork, documentation, and communication in embedded system projects	3-Apply

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C213.1	2	2	3	2	3								2	2	
C213.2	3	3	3	3	2								3	3	
C213.3	2	3	1	1	2								3	3	
C213.4	3	3	3	1	3								3	2	
C213.5	2	3	3	3	2								3	3	
Average	**2.4**	**2.8**	**2.6**	**2**	**2.4**								**2.8**	**2.6**	

Department of Information Technology

III B. Tech II Semester

SUBJECT: (C314) PE-III (Software Testing Methodologies)

After going through this course, the student will be able to

S. No.	COURSE OUTCOMES	BT Level
C314.1	Understand the principles and objectives of software testing	2-Understand
C314.2	Apply path testing, transaction flow testing, and data flow testing techniques	3-Apply
C314.3	Design test cases using domain testing and logic-based testing strategies	6- Create
C314.4	Evaluate software quality using metrics and test management tools	5-Evaluate
C314.5	Demonstrate teamwork, documentation, and communication in testing projects	3-Apply

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C314.1	3	2	2	2									3	2	
C314.2	3	3	3	3	2								3	2	2
C314.3	2	3	2	3	3								3	3	2
C314.4	3	3	3	3	2								3	2	2
C314.5	2	2	2	2									2		3
Average	**2.6**	**2.6**	**2.4**	**2.6**	**2.333**								**2.8**	**2.25**	**2.25**

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III B. Tech II Semester

SUBJECT: (C315) Disaster Preparedness and Planning Management

After going through this course, the student will be able to

S.No.	COURSE OUTCOMES	BT Level
C315.1	Understand environmental hazards, disasters, and stress factors	2-Understand
C315.2	Analyze types of natural and man-made disasters	4-Analyze
C315.3	Apply ecological approaches to disaster management	3-Apply
C315.4	Evaluate disaster preparedness and mitigation strategies	5-Evaluate
C315.5	Demonstrate ethical responsibility and teamwork in disaster response planning	3-Apply

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C315.1	2						2	2	2		2				2
C315.2	2					2		2	2		2				2
C315.3									2		2				2
C315.4									3		2				2
C315.5	3						2		3		2				2
Average	**2.3**					**2**	**2**	**2**	**2.4**		**2**				**2**

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III B. Tech II Semester

SUBJECT: (C316) Compiler Design Lab

After going through this course, the student will be able to

S. No.	COURSE OUTCOMES	BT Level
C316.1	Design and implement lexical analyzers using Lex	6- Create
C316.2	Develop syntax analyzers using Yacc and parsing techniques	6- Create
C316.3	Implement LL and LR parsers for grammar analysis	3-Apply
C316.4	Generate intermediate code and perform syntax-directed translation	3-Apply
C316.5	Demonstrate teamwork, documentation, and communication in compiler projects	3-Apply

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C316.1	3	2	2		3								3	3	
C316.2	3	3	3		3								3	3	
C316.3	3	3	3		3								3	3	
C316.4	3	3	3		3								3	3	
C316.5	2	2	2		2								2	2	
Average	**2.8**	**2.6**	**2.6**		**2.8**								**2.8**	**2.8**	

Department of Information Technology

III B. Tech II Semester

SUBJECT: (C317) Embedded Systems Lab

After going through this course, the student will be able to

S. No.	COURSE OUTCOMES	BT Level
C317.1	Understand to configure Raspberry Pi	2-Understand
C317.2	Design and implement various embedded system.	6- Create
C317.3	Implement communication protocol.	3-Apply
C317.4	Implement MQ Telemetry Transport protocol	3-Apply
C317.5	Develop program using Python Scripting Language which is used in many IoT devices	6- Create

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C317.1	3	2	3	2	3								2	3	2
C317.2		3	2	2	2								3	3	
C317.3	2	3	2	2	2								3	3	2
C317.4	3	3	2	2	3								3	3	3
C317.5	3	2	3	3	2								2	2	2
Average	**2.75**	**2.6**	**2.4**	**2.2**	**2.4**								**2.6**	**2.8**	**2.25**

Department of Information Technology

III B. Tech II Semester

SUBJECT: (C318) PE-III LAB (Software Testing Methodologies lab)

After going through this course, the student will be able to

S. No.	COURSE OUTCOMES	BT Level
C318.1	Understand the need for software testing and its role in software quality assurance	2-Understand
C318.2	Design and execute test cases using white-box and black-box testing techniques	6- Create
C318.3	Apply path testing, boundary value analysis, and equivalence class partitioning	3-Apply
C318.4	Use automation tools to perform regression and performance testing	3-Apply
C318.5	Demonstrate teamwork, documentation, and communication in testing projects	3-Apply

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C318.1	3	3	3		2				2	2	2	2		2	2
C318.2	3	3	3		2				2	2	2	2		3	2
C318.3	3	3	3		3				3	3	2	3		3	2
C318.4	3	3	3		3				3	3	3	3		3	2
C318.5	2	2	2		2				3	3	3	2		2	3
Average	**2.8**	**2.8**	**2.8**		**2.4**				**2.6**	**2.6**	**2.4**	**2.4**		**2.6**	**2.2**

Department of Information Technology

III B. Tech II Semester

SUBJECT: (C319) Industrial Oriented Mini Project/ Internship/ Skill Development Course (Big data-Spark)

After going through this course, the student will be able to

S. No.	COURSE OUTCOMES	BT Level
C319.1	Apply theoretical knowledge to solve real-world problems in an industrial environment	3-Apply
C319.2	Demonstrate technical skills and use of modern tools in a professional setting	3-Apply
C319.3	Exhibit professional ethics, teamwork, and communication in an industrial environment	3-Apply
C319.4	Document project outcomes and present findings effectively	3-Apply
C319.5	Analyze and reflect on the internship experience to identify areas of personal and professional growth	4-Analyze

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C319.1	2	2	2	2		3	2	3	3	3	3	3	3	3	3
C319.2	3	3	3	2		2		2	3	2		2	3	2	2
C319.3	3	3	3	2	3	2	2		3	2	3	2	3		2
C319.4	3	3	3	3	3	2		2	2	3	3		3	3	3
C319.5	2	2	2		2	3	2	3	3		3	3	2	3	3
Average	**2.6**	**2.6**	**2.6**	**2.25**	**2.667**	**2.4**	**2**	**2.5**	**2.8**	**2.5**	**3**	**2.5**	**2.8**	**2.75**	**2.6**

Department of Information Technology

III B. Tech II Semester

SUBJECT: (C320) ENVIRONMENTAL SCIENCE

After going through this course, the student will be able to

S. No.	COURSE OUTCOMES	BT Level
C320.1	Understand the structure and function of ecosystems	2-Understand
C320.2	Analyze natural resources and their sustainable use	4-Analyze
C320.3	Evaluate biodiversity and its conservation strategies	5-Evaluate
C320.4	Examine environmental pollution and control measures	4-Analyze
C320.5	Demonstrate awareness of environmental ethics and disaster management	2-Understand

CO-PO MAPPING

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
C320.1	3	2	1	2	1								2	1	2
C320.2	3	3	2	3	2								1	2	3
C320.3	3	3	3	3	2								2	2	3
C320.4	3	3	3	3	3								2	3	3
C320.5	2	2	2	2	2								3	3	3
Average	**2.8**	**2.6**	**2.2**	**2.6**	**2**								**2**	**2.2**	**2.8**