BCA | 2018-2021 (Scheme of Studies) | SOET

ODD SEMESTER

Year	SNo		CourseCode	Course Title	L	T	P	C
First	1	SE	ETMC121	Principles of Management	3	-	-	3
	2	CC	ETCA131	Introduction to Computers & IT, Office Automation	3	1	-	4
	3	SE	ETCH125	Environmental Studies	3	-	-	3
	4	SE	ETCA 133	Digital Logic	3	1	-	4
	5	CC	ETCA135	Introduction to Programming	3	1	-	4
	6	SE	ETMA163	Basic of Mathematics	3	1	-	4
	7	SE	ETCA161	Introduction to Computers & IT, Office Automation Lab	-	-	2	1
	8	SE	ETCA165	Introduction to Programming Lab	-	-	2	1
	9	SE	ETCA 167	Digital Logic Lab	-	-	2	1
				TOTAL	**18**	**4**	**6**	**25**
Second	1	CC	ETCS 217	Data Structures	3	1	-	4
	2	CC	ETCS 206	Computer Graphics	3	1	-	4
	3	CC	ETCS202	Software Engineering	3	1	-	4
	4	CC	ETCS323	Java Programming	3	1	-	4
	5	SE	ETCS322	E- Commerce and ERP	3	1	-	4
	6	SE	ETMA233	Numerical Methods	3	1	-	4
	7	CC	ETCS 257	Data Structures Lab	-	-	2	1
	8	SE	ETCS258	Computer Graphics Lab	-	-	2	1
	9	CC	ETCS252	Software Engineering Lab	-	-	2	1
	10	CC	ETCS361	Java Programming Lab	-	-	2	1
				TOTAL	**18**	**6**	**8**	**28**
Third	1	CC	ETCS306	Data Warehousing and Data Mining	3	1	-	4
	2	CC	ETCA227	Web Based Programming using PHP	3	1	-	4
	3	CC	ETCA325	Linux Environment	3	1	-	4
	4	CC	ETCS314	Mobile Computing	3	1	-	4
	5	CC	ETCS214	Theory of Computation	3	1	-	4
	6	SE	ETCA267	Web Based Programming Using PHP Lab	-	-	2	1
	7	SE	ETCS362	Data Warehousing and Data Mining Lab	-	-	2	1
	8	SE	ETCA365	Linux Environment Lab	-	-	2	1
	9	SE	ETCA367	Practical Training	-	-	2	1
				TOTAL	**15**	**5**	**8**	**24**

EVEN SEMESTER

SNo		Course Code	Course Title	L	T	P	C
1	SE	ETEL101	Communication Skills	4	-	-	4
2	SE	ETCA231	Database System Concepts	3	1	-	4
3	SE	ETCA126	Computer Organization &Architecture	3	1	-	4
4	CC	ETCS112	Object Oriented Programming	3	1	-	4
5	CC	ETCA136	Web Technologies	3	1	-	4
6	SE	ETMA144	Differential Equations & Optimization Techniques	3	1	-	4
7	SE	ETCA269	Database System Concepts Lab	-	-	2	1
8	CC	ETCA164	Web Technologies Lab	-	-	2	1
9	CC	ETCS166	Object Oriented Programming Lab	-	-	2	1
10	SE	ETEL171	Communication Skills Lab	-	-	2	1
		TOTAL		**19**	**5**	**8**	**28**
1	CC	ETCA232	Foundation of Computer Science	3	1	-	4
2	CC	ETCS211	Operating Systems	3	1	-	4
3	CC	ETCS304	Computer Networks	3	1	-	4
4	SE	ETMC123	Micro Economics	3	-	-	3
5	SE	ETCA228	Mobile Application Development	3	1	-	4
6	SE	ETCA230	System Analysis and Design	3	1	-	4
7	SE	ETCS255	Operating Systems Lab	-	-	2	1
8	SE	ETCA264	Mobile Application Development Lab	-	-	2	1
9	CC	ETCS365	Computer Networks Lab	-	-	2	1
10	SE	ETCA380	Seminar	-	-	2	1
		TOTAL		**18**	**6**	**8**	**28**
1	CC	ETCS422	Cloud Computing	3	1	-	4
2	CC	ETCA324	Net Framework	3	1	-	4
3	CC	ETCA326	Enterprise Computing in JAVA	3	1	-	4
4	SE	ETCA362	Cloud Computing Lab	-	-	2	1
5	SE	ETCA364	Net Framework Lab	-	-	2	1
6	SE	ETCA366	Enterprise Computing in JAVA Lab	-	-	2	1
7	SE	ETCA368	Major Project	-	-	6	3
8		**Elective (with Lab)**					
(i)	CC	ETCA328	Multimedia Technologies	3	1	-	4
	SE	ETCA370	Multimedia Technologies Lab	-	-	2	1
(ii)	CC	ETCA 330	Network Security & Cryptography	3	1	-	4
	SE	ETCA372	Network Security & Cryptography Lab	-	-	2	1
(iii)	CC	ETCA 332	Software Testing	3	1	-	4
	SE	ETCA374	Software Testing Lab	-	-	2	1
		TOTAL		**12**	**4**	**14**	**23**

Note: Practical training will be of four weeks duration at the end of fourth Semester during summer break and the evaluation will be done at the end of fifth Semester.

Total Hours: Lect [L]+Prac [P]+Tut [T]	**181**
Total Credits [C]	**155**

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BCA — **2019-2022 (Scheme of Studies as per Choice-Based Credit System)** — **SOET**

Year	SNo	CourseCode		Course Title	L	T	P	C
ODD SEMESTER								
First	1	ETMC121A	SE	Management Thoughts and Applications	3	-	-	3
	2	ETCA131A	CC	Introduction to Computers & IT, Office Automation	3	1	-	4
	3	ETCS103A	CC	Programming for Problem Solving	3	1	-	4
	4	ETMA163A	SE	Basics of Mathematics	3	1	-	4
	5	ETCH 125A	SE	Environmental Studies	3	-	-	3
	6	ETCA161A	SE	Introduction to Computers & IT, Office Automation Lab	-	-	2	1
	7	ETCS153A	SE	Programming for Problem Solving Lab	-	-	2	1
	8		SE	Open Elective - I	6	-	-	6
				TOTAL	**21**	**3**	**4**	**26**
EVEN SEMESTER								
	1	ETEL 101A	SE	Communication Skills	4	-	-	4
	2	ETCS112A	CC	Object Oriented Programming	3	1	-	4
	3	ETCS316A	CC	WebTechnologies	3	1	-	4
	4	ETMA144A	SE	Differential Equations & Optimization Techniques	3	1	-	4
	5	ETCA 164A	SE	Web Technologies Lab	-	-	2	1
	6	ETCS166A	SE	Object Oriented Programming Lab	-	-	2	1
	7	ETEL 171A	SE	Communication Skills Lab	-	-	2	1
	8		SE	Open Elective - II	6	-	-	6
				TOTAL	**19**	**3**	**6**	**25**
Second	1	ETCS217A	CC	Data Structures	3	1	-	4
	2	ETEC210A	SE	Digital Electronics	3	1	-	4
	3	ETCS219A	CC	Foundation of Computer Systems	3	1	-	4
	4	ETCS 211A	CC	Operating Systems	3	1	-	4
	5	ETCS323A	CC	Java Programming	3	1	-	4
	6	ETCS 257A	SE	Data Structures Lab	-	-	2	1
	7	ETEC 256A	SE	Digital Electronics Lab	-	-	2	1
	8	ETCS361A	SE	Java Programming Lab	-	-	2	1
	9	ETCA268A	SE	Seminar	-	-	2	1
				TOTAL	**15**	**5**	**8**	**24**
	1	ETCS222A	CC	Computer Organization & Architecture	3	1	-	4
	2	ETCS307A	CC	Database Management Systems	3	1	-	4
	3	ETCA326A	CC	Enterprise Computing in JAVA	3	1	-	4
	4	SMMC123A	SE	Business Applications Of Economics	3	-	-	3
	5	ETCA228A	CC	Mobile Application Development	3	1	-	4
	6	ETCA366A	SE	Enterprise Computing in JAVA Lab	-	-	2	1
	7	ETCS 355A	SE	Database Management Systems Lab	-	-	2	1
	8	ETCA264A	SE	Mobile Application Development Lab	-	-	2	1
	9	ETDM301A	SE	Disaster Management	3	-	-	3
				TOTAL	**18**	**4**	**6**	**25**

Note: Practical training will be of six weeks duration at the end of fourth Semester during summer break and the evaluation will be done during fifth Semester.

Third	1	ETCS306A	CC	Data Warehousing and Data Mining	3	1	-	4
	2	ETCA227A	CC	Web Based Programming using PHP	3	1	-	4
	3	ETCA325A	CC	Linux Environment	3	1	-	4
	4	ETCS304A	CC	Computer Networks	3	1		4
	5	ETCS214A	CC	Theory of Computation	3	1	-	4
	6	ETCA267A	SE	Web Based Programming Using PHP Lab	-	-	2	1
	7	ETCS362A	SE	Data Warehousing and Data Mining Lab	-	-	2	1
	8	ETCA365A	SE	Linux Environment Lab	-	-	2	1
	9	ETCA367A	SE	Practical Training	-	-	2	1
	10			Value Added Courses	2	-	-	-
				TOTAL	**15**	**5**	**8**	**24**
	1	ETCS314A	CC	Mobile Computing	3	1	-	4
	2	ETCA324A	CC	Net Framework	3	1	-	4
	3	ETCS 202A	CC	Software Engineering	3	1	-	4
	4	ETCS422A	CC	Cloud Computing	3	1	-	4
	5	ETCA364A	SE	Net Framework Lab	-	-	2	1
	6	ETCA362A	SE	Cloud Computing Lab	-	-	2	1
	7	ETCA368A	SE	Major Project	-	-	6	3
	8	**Elective (with Lab)**						
	(i)	ETCA328A	CC	Multimedia Technologies	3	1	-	4
		ETCA370A	SE	Multimedia Technologies Lab	-	-	2	1
	(ii)	ETCA 330A	CC	Network Security & Cryptography	3	1	-	4
		ETCA372A	SE	Network Security & Cryptography Lab	-	-	2	1
	(iii)	ETCA 332A	CC	Software Testing	3	1	-	4
		ETCA374A	SE	Software Testing Lab	-	-	2	1
				TOTAL	**15**	**5**	**12**	**26**
				Total Credits [C]				**150**

Value Added Courses						
VAC101	SE	SELF DEVELOPMENT	2	-	-	-
VAC102	SE	PREPARING STUDENTS FOR FUTURE ROLES	2	-	-	-
VAC103	SE	UNIVERSAL HUMAN VALUES AND PROFESSIONAL ETI	2	-	-	-
VAC104	SE	ETIQUETTE FOR PROFESSIONALS	2	-	-	-
VAC105	SE	CITIES FOR PEOPLE	2	-	-	-
VAC106	SE	INDIAN CONSTITUTION	2	-	-	-
VAC107	SE	ESSENCE OF INDIAN TRADITIONAL KNOWLEDGE	2	-	-	-
VAC108	SE	BOUTIQUE MANAGEMENT	2	-	-	-
VAC109	SE	UNDERSTANDING ADOLESCENTS BEHAVIOR	2	-	-	-
VAC110	SE	TIME MANAGEMENT	2	-	-	-

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ETCA368	MAJOR PROJECT	L	T	P	C
		-	-	6	3

The project can be developed in any technology desired by student. However, the same should be duly approved by the department. The same should be completed in VI Semester itself and will be evaluated through a panel of examiners consisting of the following:

Chairperson of Department: Chairperson
Project coordinator: Member
External expert: To be appointed by the University

The student will be required to submit two copies of his/her project report to the department for record (one copy each for the department and participating teacher).

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ETCA368	MAJOR PROJECT	L	T	P	C
		-	-	6	3

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ETCA368	MAJOR PROJECT	L	T	P	C
		-	-	6	3

The project can be developed in any technology desired by student. However, the same should be duly approved by the department. The same should be completed in VI Semester itself and will be evaluated through a panel of examiners consisting of the following:

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ETCA368A MAJOR PROJECT (Credit 3)

The assignment to normally include:

1. Review and finalization of the Approach to the Problem relating to the assigned topic.
2. Preparing an Action Plan for conducting the investigation, including team work.
3. Detailed Analysis/Modelling/Simulation/Design/ProblemSolving/Experiment as needed.
4. Final development of product/process, testing, results, conclusions and future directions.
5. Preparing a report in the standard format for being evaluated by the Department.
6. Final project presentation before a Departmental Committee.

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ETCS368A	Major Project	L	T	P	C
Version 1.0		-	-	-	6
Pre-requisites/Exposure	--				
Co-requisites	--				

The course is designed to provide an opportunity to students to demonstrate the ability to devise, select and use a range of methodologies and tools to the Chosen/Given project, applying the theoretical knowledge to a real life situation. Experiential Learning outside classroom through self-exploration, practical experience, Industry, field experience, live experience, research, design projects etc.

The learning process in the Project seeks out and focuses attention on many latent attributes, which do not surface in the normal class room situations. These experiential learning attributes through project includes Intellectual ability, Professional judgment and decision making ability, Inter-disciplinary approach, Skills for data handling, Ability in written and oral presentation, Sense of responsibility Developing professional Skills Application of theory, concepts in given industry /practical / field scenario.

Course Outcomes

On completion of this course, the students will be able to

CO1. Use applied scientific knowledge to identify and implement relevant principles of mathematics and computer science.
C02. Use the relevant tools necessary for engineering practice.
CO3. Define overall needs and constraints to solve a problem and develop/ design a prescribed engineering sub-system.
CO4. Communicate effectively and learn to be a team player.

Catalog Description

Students are expected make a project based on the latest advancements related to the parent branch of Engineering. Students may opt for an in-disciplinary project (if feasible).
The project may be a complete hardware or a combination of hardware and software under the guidance of a Supervisor from the Department. This is expected to provide a good training for the student(s) in technical aspects

Student will be continuously evaluated during the semester in form of Project Progress Seminars. At the end of the semester, assessment of the research/project work of each student will be made by the board of examiners including supervisors on the basis of a viva-voce examination and the report submitted by the student.

Course Content

The assignment to normally include:

1. Review and finalization of the Approach to the Problem relating to the assigned topic.
2. Preparing an Action Plan for conducting the investigation, including team work.
3. Detailed Analysis/Modelling/Simulation/Design/Problem Solving/Experiment as needed.
4. Final development of product/process, testing, results, conclusions and future directions.

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5. Preparing a report in the standard format for being evaluated by the Department.
6. Final project presentation before a Departmental Committee.

Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination

Examination Scheme:

Components	Quiz	Attendance	Mid Term Exam	Presentation/ Assignment/ etc.	End Term Exam
Weightage (%)	10	10	20	10	50

Relationship between the Course Outcomes (COs) and Program Outcomes (POs)

Mapping between COs and POs		
	Course Outcomes (COs)	**Mapped Program Outcomes**
CO1	Use applied scientific knowledge to identify and implement relevant principles of mathematics and computer science.	**PO3**
CO2	Use the relevant tools necessary for engineering practice.	**PO5**
CO3	Define overall needs and constraints to solve a problem and develop/ design a prescribed engineering sub-system.	**PO3**
CO4	Communicate effectively and learn to be a team player.	**PO10**

		Engineering Knowledge	Problem analysis	Design/development of solutions	Conduct investigations of complex problems	Modern tool usage	The engineer and society	Environment and sustainability	Ethics	Individual or team work	Communication	Project management and finance	Life-long Learning	Application of Concepts	Project Management	Ethical and Professional Issues
Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
ETCS368A	Major Project			3		2					3			3		

1=weakly mapped
2= moderately mapped
3=strongly mapped

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