



# **Student Handbook**

**2020-2021**

**ICFAI Technical School  
Faculty of Science & Technology  
The ICF AI University Tripura  
[Established under Section 2(f) of UGC Act, 1956]**

## Calendar of Events

### Academic Year: 2020 – 2021

Semester	Activity	Date (Intermediate Students)	Date (Fresher's Students)
<b>First</b>	First Semester Begins	7 <sup>th</sup> September, 2020 (Monday)	1 <sup>st</sup> September, 2020 (Tuesday)
	Registration of students	7 <sup>th</sup> September, 2020 (Monday) to 11 <sup>th</sup> September, 2020 (Friday)	1 <sup>st</sup> September, 2020 (Tuesday) to 7 <sup>th</sup> September, 2020 (Monday)
	Orientation/preparatory program	10 <sup>th</sup> September (Thursday) to 11 <sup>th</sup> September, 2020 (Friday)	1 <sup>st</sup> September, 2020 (Tuesday) to 11 <sup>th</sup> September, 2020 (Friday)
	Class-work begins	14 <sup>th</sup> September, 2020 (Monday)	14 <sup>th</sup> September, 2020 (Monday)
	Last day for substitution of courses	28 <sup>th</sup> September, 2020 (Monday)	28 <sup>th</sup> September, 2020 (Monday)
	Last day for withdrawal from courses	12 <sup>th</sup> October, 2020 (Monday)	12 <sup>th</sup> October, 2020 (Monday)
	Mid-term Examinations	23 <sup>rd</sup> November, 2020 (Monday) to 27 <sup>th</sup> November, 2020 (Friday)	23 <sup>rd</sup> November, 2020 (Monday) to 27 <sup>th</sup> November, 2020 (Friday)
	Comprehensive Examinations	28 <sup>th</sup> December, 2020 (Monday) to 8 <sup>th</sup> January, 2021 (Friday)	28 <sup>th</sup> December, 2020 (Monday) to 8 <sup>th</sup> January, 2021 (Friday)
	First Semester Ends	8 <sup>th</sup> January, 2020 (Friday)	8 <sup>th</sup> January, 2020 (Friday)
Semester	Activity	Date (Intermediate Students)	Date (Final Year Students)
<b>Second</b>	Second Semester Begins	18 <sup>th</sup> January, 2021 (Monday)	18 <sup>th</sup> January, 2021 (Monday)
	Registration of students	18 <sup>th</sup> January, 2021 (Monday) to 20 <sup>th</sup> January, 2021 (Wednesday)	18 <sup>th</sup> January, 2021 (Monday) to 20 <sup>th</sup> January, 2021 (Wednesday)
	Class-work begins	21 <sup>st</sup> January, 2021 (Thursday)	21 <sup>st</sup> January, 2021 (Thursday)
	Last day for substitution of courses	1 <sup>st</sup> February, 2021 (Monday)	1 <sup>st</sup> February, 2021 (Monday)
	Last day for withdrawal from courses	15 <sup>th</sup> February, 2021 (Monday)	8 <sup>th</sup> February, 2021 (Monday)
	Mid-term Examinations	8 <sup>th</sup> March, 2021 (Monday) to 13 <sup>th</sup> March, 2021 (Saturday)	22 <sup>nd</sup> February, 2021 (Monday) to 27 <sup>th</sup> February, 2021 (Saturday)
	Comprehensive Examinations	26 <sup>th</sup> April, 2021 (Monday) to 7 <sup>th</sup> May, 2021 (Friday)	12 <sup>th</sup> April, 2021 (Monday) to 17 <sup>th</sup> April, 2021 (Saturday)
	Second Semester Ends	7 <sup>th</sup> May, 2021 (Friday)	17 <sup>th</sup> April, 2021 (Saturday)

## PREFACE

This student handbook provides students with information on operational features and course curriculum for the four years B.Tech/ three years B.Tech (Lateral Entry)/ two years M.Tech / three years BCA/five years BCA-MCA Integrated/ two years MCA Programs.

Important goal of **ICFAI University** education is to help you develop as a unique individual to be educated as a whole person, intellectually, socially, ethically and spiritually. University expects its students to be good and responsible citizens of India. Students need to act responsibly, be accountable for their own academic and personal schedules, obligations, activities and take advantage of the opportunities the University offers to further their educational pursuits and personal development. University expects its students to conduct themselves in an appropriate manner at all times.

# CONTENTS

Particulars	Page No.	Particulars	Page No.		
<b>Part I</b>		<b>Part V</b>			
<b>General Information</b>		<b>Teaching, Evaluation &amp; Grading</b>			
1.1	The ICFAI University, Tripura	05	5.1	Teaching	25
1.2	The ICFAI Technical School	05	5.2	Evaluation Components	26
1.3	Knowledge at ICFAI Technical School	05	5.3	Evaluation Feedback	26
1.4	Objectives of ICFAI Technical School	05	5.4	Attendance Policy	26
1.5	B.Tech Program	06	5.5	Unfair Practices	27
1.6	M.Tech Program	06	5.6	Make-up Policy	27
1.7	BCA Program	06	5.7	Grading Policy	27
1.8	BCA-MCA Integrated Program	07	5.8	Minimum Academic Requirements	31
1.9	MCA Program	07	5.9	Academic Counseling Committee	32
1.10	The Academic Year	07	5.10	Graduation Requirements	33
<b>Part II</b>		5.11	Certification	33	
<b>The B.Tech- M.Tech Program Details</b>		<b>Part VI</b>			
2.1	The B.Tech. Program	09	<b>Internship Program</b>		
2.2	The M.Tech. Program	09	6.1	Objective	35
2.3	The B.Tech. Program Structure	10	6.2	Student - Faculty Interaction	36
2.4	The M.Tech. Program Structure	14	6.3	Student - Project Guide Interaction	36
<b>Part III</b>		6.4	Discipline and Conduct	36	
<b>The UG-PG Program Details</b>		6.5	Evaluation Criteria	36	
3.1	The UG-PG Program	15	6.6	Internship Transcript	38
3.2	The BCA Program Structure	15	<b>Part VII</b>		
3.3	The BCA-MCA Integrated Program Structure	17	<b>Academic Administration and Infrastructure</b>		
3.4	The MCA Program Structure	19	7.1	Faculty	39
<b>Part IV</b>		7.2	Library Facilities	39	
<b>Registration</b>		7.3	Computer Facilities	39	
4.1	Registration	21	7.4	Laboratory Facilities	39
4.2	Not permitted to Register	21	7.5	Merit Scholarships	40
4.3	Backlog	21	7.6	Awards	41
4.4	Provisional Registration	21	7.7	IUT Alumni Association	41
4.5	Amendment to Original Registration	21	7.8	Co-curricular Activities	42
4.6	Revision of Original/Amended Registration	22	7.9	Placements	42
4.7	Pre-requisite Courses	22	7.10	Guest Lectures and Seminars	43
4.8	Prior Preparation	22	7.11	Medical Facilities	43
4.9	Flexibilities	23	7.12	Students' Activity Council	43
4.10	Fee Payment	24	7.13	Disciplinary Committee	43
4.11	Address Change	24	7.14	Prohibition of Ragging	44
			7.15	Students' Club	44

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## PART I

### General Information

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#### 1.1 The ICFAI University, Tripura

The ICFAI University, Tripura, (IUT) was established in 2004 through an Act of the State Legislature (Tripura Act 8 of 2004). The UGC has included this university in the list of Universities under section 2 (f) of the UGC Act, 1956. The campus is equipped with the state of art facilities like Amphitheatre, Auditoriums, Academic Blocks, Computer Centre, Language Lab, Library, Hostels, Canteen, Faculty Quarters/Accommodation, ATM Centre, Gymnasium, Sports and Recreational Facilities.

The University believes in creating and disseminating knowledge and skills in core and frontier areas through innovative educational programs as well as research, consultation and publication. It aims at developing a new cadre of professionals with a high level of competence, a deep sense of ethics, and a commitment to the code of professional conduct.

The University offers Bachelor's, Master's and Doctoral programs in Management, Finance, Science and Technology, Arts, Commerce and Education, Computer Applications, Humanities and Social Sciences, Law, Library and Information Science, Physical Education, Special Education, Paramedical Science, Post Graduate Diploma Program in Yogic Science, etc.

#### 1.2 The ICFAI Technical School

The **ICFAI Technical School** is a constituent of IUT. It has been established to promote quality education, research, training and consultation in the field of Technology with a global perspective to meet the challenges of the fast changing trends in the field and to match international standards.

#### 1.3 Knowledge at ICFAI Technical School

The **ICFAI Technical School** integrates into its learning system, an innovative and emerging body of knowledge. The following are its highlights:

- 1.3.1 Cutting-edge course curriculum, incorporating contemporary, effective and an application-oriented pedagogy, with emphasis on both fundamentals and application.
- 1.3.2 Encouraging students to address Science and Technology demands by providing appropriate solutions.  
Engaging students in multidisciplinary learning through workshops, internships and other group learning tools.

#### 1.4 Objectives of ICFAI Technical School

- 1.4.1 To acquire a reputation as a highly purposive innovative institution, setting the pace for workable reforms in professional education, suitable and relevant for Indian demands.
- 1.4.2 To provide a high quality, cutting-edge and career-oriented education program in Science and Technology to the student population across the country.
- 1.4.3 To offer practice-oriented, contemporary and flexible program developed through regular assessment and consultation with leading institutions, employees, academicians and practitioners.
- 1.4.4 To turn out highly motivated and successful Science and Technology graduates/post graduates to meet the current and projected needs of knowledge workforce.

## **1.5 B.Tech Program**

IUT offers full-time regular B.Tech degree program of four years duration and B.Tech (Lateral Entry) of three years duration. The program consists of eight semesters whereas six semesters in case of B.Tech (LE) program of study, leading to a Bachelor's degree.

The B.Tech degree program provides cutting-edge education to equip students with comprehensive and critical understanding of their respective fields of study.

The following branches of engineering are offered:

- 1.5.1 Civil Engineering (CE)
- 1.5.2 Computer Science & Engineering (CSE)
- 1.5.3 Electronics & Communication Engineering (ECE)
- 1.5.4 Electrical & Electronics Engineering (EEE)
- 1.5.5 Mechanical Engineering (ME)

### **1.5.1 Eligibility and Admission**

Students securing an aggregate of 45% (40% in case of SC/ST/OBC) and above in 10+2 examination or its equivalent, with pass marks in each of the Mathematics, Physics, Chemistry, and English subjects, are eligible for admission to the B.Tech Program. Adequate knowledge of English is required as it is the medium of Instruction for the B.Tech Program.

Students can take admission into this program based on their Rank in JEE Main, TBJEE and other State Entrance Examinations.

Students, whose 10+2 examination results have not been declared at the time of admission, are given Provisional Admission into the B.Tech Program. The Provisional Admission is subject to their submitting proof of clearing the prescribed eligibility criteria for admission on or before the specified date. If a provisionally admitted student fails to submit the proof of completion of the above criteria on or before the specified date, his/her admission to the program shall stand cancelled and the student will cease to be on the rolls of IUT and will not be permitted to participate in any activity of the University.

## **1.6 M. Tech Program**

The Master of Technology (M.Tech) in Water Resource Engineering is a two year, four semester, full-time, campus-based program, with a view to impart the students an in-depth academic base in Water Resource Engineering and hands-on skills in Water Resource Engineering so that they can build an advanced career in Water Resource Engineering .

### **1.6.1 Eligibility and Admission**

Graduation in Civil Engineering with 60% marks or valid GATE Score with B.Tech/B.E in Civil Engineering.

## **1.7 BCA Program**

IUT offers full-time regular BCA degree program of three years duration. The program provides a sound academic base in computer skills and applications from which an advanced career in computer

applications can be developed. The students get a good conceptual grounding in computer usage and its practical business applications. The BCA Program focuses on various areas of IT and prepares students for a career in the field of Information Technology.

### **1.7.1 Eligibility and Admission**

Students who have passed in 10+2 examination or its equivalent are eligible for admission to the BCA Program.

## **1.8 BCA-MCA Integrated Program**

IUT offers full-time regular BCA-MCA integrated degree program of five years duration. The program provides a sound academic base in computer skills and applications from which an advanced career in computer applications can be developed. The students get a good conceptual grounding in computer usage and its practical business applications.

The Integrated BCA-MCA program provides cutting-edge education to equip students with comprehensive and critical understanding of their respective fields of study.

### **1.8.1 Eligibility and Admission**

Students who have passed in 10+2 examination or its equivalent are eligible for admission to the BCA-MCA Integrated Program.

## **1.9 MCA Programs**

The Master of Computer Applications (MCA) is a two year, four semester, full-time, campus-based program, with a view to impart the students an in-depth academic base in IT and hands-on skills in computer applications so that they can build an advanced career in IT. The program covers cutting-edge technology inputs as well as provides IT skills in programming and application development as per industry requirements.

### **1.9.1 Eligibility and Admission**

Graduation in any discipline (with Mathematics as a subject at 10+2 level or degree level), with 40% and above aggregate marks.

## **1.10 The Academic Year**

The academic year (August 01, 2020 to July 31, 2021) at IUT consists of the First Semester, the Second Semester and a Summer Term. Each semester is of 15 weeks duration and the summer term of 8 weeks duration. There are eight semesters during the four years B.Tech program, six semesters during the three years B.Tech (LE) program, four semester during the two year M.Tech program, six semesters during the three years BCA program, ten semesters during the five years BCA-MCA integrated program, four semesters during the two years MCA program.

All B.Tech/ M.Tech /BCA/BCA-MCA/MCA students will have to undergo a screening test in English Language Skills and Mathematics. Remedial course in English Language Skills and/or Mathematics will be offered to the students with low proficiency level. After completing two semesters (for regular students) they take Summer term Internship Program (SIP-101). After completing Four semesters (two semesters in case of B.Tech (LE)), the students undertake an Summer term Internship Program (SIP-201) for two months. After completion of third year, students undertake Summer term Internship Program (SIP-301) for

two months during summer.

BCA/BCA-MCA/MCA students undertake Summer Project I (BCIP-101)/Summer Project II (BCIP -201) after completion of two/four semesters respectively, for two months. However, BCA-MCA students undertake Major Information Technology Project/MCIC-503 respectively for five months during their last semester.



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**PART - II**  
**The B.Tech- M.Tech Program Details**

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### **2.1. The B. Tech Program**

ICFAI Technical School constantly endeavors to update the curriculum, benchmark its academic delivery against best academic standards and create a better environment for the students. The B.Tech Program encourages the future professionals to equip themselves with the latest tools and techniques in the field of Science and Technology. The program has been structured to identify and understand the commonality and the divergence in it.

The eligibility for the degree is determined on the basis of the number of units completed. Each course has a prescribed weightage in terms of units. The semester-wise program consists of a prescribed set of courses adding to a certain total number of units in each semester for an anticipated normal progress through the program.

A 'unit' is a convenient means to anticipate the number of hours per week of the total effort, including the class-work put in by the students. One unit normally indicates three hours per week of the total effort of a student including the lab and formal contact hours in the classroom. This also includes the hours for sustained self-study.

The study program leading to the award of the B.Tech degree consists of the prescribed courses sequentially distributed over the required number of semesters known as Semester-wise Pattern. The current operative semester-wise pattern for the degree program is given in Section-2.3. The program is planned in such a way that in the normal course, a student will complete the program in 8 semesters (6 semesters in case of B.Tech (LE)). The duration of degree program for a student can be shorter or longer than the normal duration due to academic flexibilities and student's ability. However, a student must complete all the courses offered in the 1<sup>st</sup> and 2<sup>nd</sup> year within 3 (three) years of studies. Only after completion of all the 1<sup>st</sup> and 2<sup>nd</sup> year courses, a student is allowed to register in 3<sup>rd</sup> and 4<sup>th</sup> year courses. The maximum allowable time for a student to complete the B.Tech Program is 6 (six) years. The eligibility for a degree is determined on the basis of number of courses or units completed. The B.Tech Program offers Program Core Courses, Program Elective Courses and Open Elective Courses for encouraging specialization in a particular field.

The Program Core Courses minimum of 28 including practical (thirty two) in number for each branch are to be completed as per the program structure. There are other discipline oriented courses namely Program Elective Courses in the category of Specialized Courses Other than Compulsory, which are taken as electives.

A student must take up a minimum of 2 (two) Humanities electives as per the program structure.

The Open Elective Courses can be chosen from the same discipline or from other branches are also allowed to be taken by a student as electives, provided he/she completes all the prerequisites for the same. Before taking up SIP-301 in the third year the student should complete all the courses till the first three years of his program.

### **2.2. The M. Tech Program**

The M.Tech programme is designed for students who would like to become Civil Engineer specialized in Water resources engineering. The study of water resources engineering involves in mastering the design, development and analysis of hydraulics and hydrological science.

The study program leading to the award of the M.Tech degree consists of the prescribed courses

sequentially distributed over the required number of semesters known as Semester-wise Pattern. The current operative semester-wise pattern for the degree program is given in Section-2.4. The program is planned in such a way that in the normal course, a student will complete the program in 4 semesters. The M.Tech Program offers Program Core Courses and Program Elective Courses particularly in the first year. Moreover, in the second year, project and dissertation will be done for encouraging specialization in the particular field. The duration of degree program for a student can be shorter or longer than the normal duration due to academic flexibilities and student's ability. The maximum allowable time for a student to complete the M.Tech Program is 3 (three) years. The eligibility for a degree is determined on the basis of number of courses or units completed.

### 2.3. The B. Tech Program Structure

PROGRAM STRUCTURE		
Year-I	<b>Semester - I</b>	<b>Semester - II</b>
	<ul style="list-style-type: none"> <li>English Language Skill</li> <li>Mathematics I</li> <li>Physics</li> <li>Chemistry</li> <li>Physics Lab</li> <li>Chemistry Lab</li> <li>Engineering Graphics</li> </ul>	<ul style="list-style-type: none"> <li>Engineering Mechanics</li> <li>Mathematics II</li> <li>Workshop</li> <li>C Programming</li> <li>C Programming Lab</li> <li>Basic Electrical And Electronics Engineering</li> <li>Basic Electrical And Electronics Engineering Lab</li> </ul>
<b>Summer Term Internship Program - I</b>		
Year-II	<b>Semester - III</b>	<b>Semester - IV</b>
	<ul style="list-style-type: none"> <li>Mathematics III</li> <li>Environmental Science</li> <li>Technical Report Writing</li> <li>Program Core Courses (3)</li> <li>Program Core Courses Lab (3)</li> </ul>	<ul style="list-style-type: none"> <li>Humanities Elective I</li> <li>Mathematics IV</li> <li>Program Core Courses (4)</li> <li>Program Core Courses Lab (2)</li> <li>Biology</li> </ul>
<b>Summer Term Internship Program - II</b>		
Year-III	<b>Semester - V</b>	<b>Semester - VI</b>
	<ul style="list-style-type: none"> <li>Soft Skills</li> <li>Program Core Courses (4)</li> <li>Program Core Courses Lab (3)</li> <li>Open Elective Courses (1)</li> </ul>	<ul style="list-style-type: none"> <li>Humanities Elective II</li> <li>Program Core Courses (3)</li> <li>Program Core Courses Lab (3)</li> <li>Open Elective Courses (1)</li> <li>Program Elective Courses(1)</li> </ul>
<b>Summer Term Internship Program - III</b>		
Year-IV	<b>Semester - VII</b>	<b>Semester - VIII</b>
	<ul style="list-style-type: none"> <li>Program Core Courses (2)</li> <li>Program Core Courses Lab (1)</li> <li>Program Elective Courses (1)</li> <li>Open Elective Courses (1)</li> <li>Special Project-I</li> </ul>	<ul style="list-style-type: none"> <li>Program Elective Courses (2)</li> <li>Open Elective Courses (1)</li> <li>Special Project-II</li> <li>Grand Viva</li> </ul>

\*Program Structure is tentative, subject to change.

#### 2.3.1. List of Discipline Oriented Courses (DOC)

Civil Engineering (CE)		
PROGRAM CORE COURSES (CE)		
Course Name	Semester	Year
Surveying-I	I	2nd
Surveying-I Practical	I	2nd
Building Material & Construction	I	2nd
Concrete Technology	I	2nd
Civil Engineering Drawing	I	2nd

Surveying Field Work	I	2nd
Concrete Technology Practical	I	2nd
Surveying-II	II	2nd
Surveying-II Practical	II	2nd
Mechanics of Solids	II	2nd
Fluid Mechanics	II	2nd
Civil Engineering Estimation & Costing	II	2nd
Engineering Geology	II	2nd
Engineering Geology Practical	II	2nd

Mechanics of Solids Practical	II	2nd
Fluid Mechanics Practical	II	2nd
Analysis of Structures-I	I	3rd
Geotechnical Engineering-I	I	3rd
Design of Concrete Structures-I	I	3rd
Design of Steel Structures-I	I	3rd
Transportation Engineering-I	I	3rd
Geotechnical Engineering Practical	I	3rd
Transportation Engineering Practical	I	3rd
Analysis of Structures Lab	I	3rd
Analysis of Structures-II	II	3rd
Geotechnical Engineering-II	II	3rd
Design of Concrete Structure-II	II	3rd
Design of Steel Structures-II	II	3rd
Transportation Engineering-II	II	3rd
Design of Concrete Structure Practical	II	3rd
CAD Lab	II	3rd
Environmental Engineering-I	I	4th
Environmental Engineering Practical	I	4th
Engineering Hydrology	I	4th
Environmental Engineering-II	II	4th
Irrigation and Water Resource Engineering	II	4th
<b>PROGRAM ELECTIVE COURSES (CE)</b>		
<b>Course Name</b>	<b>Semester</b>	<b>Year</b>
Design and Drawing of Hydraulic Structures	II	3rd
Design of Bridge Structures	II	3rd
Finite Element Methods in Civil Engineering	I	4th
Ground Improvement Techniques	I	4th
Pavement Analysis and Design	I	4th
Advanced Structural Analysis	I	4th
Prestressed concrete	II	4th
Soil Dynamics and Machine Foundations	II	4th
Structural Dynamics	II	4th
Design of Industrial Structures	II	4th
Foundation Design	II	4th
Urban Transport Planning	II	4th
Stability of Structures	II	4th
Geo-informatics in Transportation Engineering	II	4th
<b>OPEN ELECTIVE COURSES (CE)</b>		
<b>Course Name</b>	<b>Semester</b>	<b>Year</b>
Disaster Preparedness & Planning	I	3rd
Engineering Geology	I	3rd
Infrastructure Financing	II	3rd
Emerging trends on Civil Engineering	I	4th
Remote sensing and GIS	II	4th
<b>Mechanical Engineering (ME)</b>		
<b>PROGRAM CORE COURSES (ME)</b>		
<b>Course Name</b>	<b>Semester</b>	<b>Year</b>
Thermodynamics	I	2nd
Structure & properties of material	I	2nd
Machine Drawing	I	2nd
Fluid Mechanics & Hydraulic Machines	II	2nd
Fluid Mechanics & Hydraulic Machines Lab	II	2nd
Applied Thermodynamics	II	2nd

Mechanics of Solid	II	2nd
Mechanics of Solid Lab	II	2nd
Advanced Mechanics of Solid	I	3rd
Kinematics of Machinery	I	3rd
Production Technology	I	3rd
Production Technology Lab	I	3rd
Dynamics of Machinery & Vibrations	II	3rd
Dynamics of Machinery & Vibrations Lab	II	3rd
Heat and Mass Transfer	II	3rd
Heat and Mass Transfer Lab	II	3rd
Machine Tools	II	3rd
Machine Tools Lab	II	3rd
Design of Machine Elements	II	3rd
Mechanical Measurement and Metrology	I	4th
Mechanical Measurement and Metrology Lab	I	4th
<b>PROGRAM ELECTIVE COURSES (ME)</b>		
<b>Course Name</b>	<b>Semester</b>	<b>Year</b>
IC Engines	I	3rd
IC Engines Lab	I	3rd
Control System Engineering	II	3rd
Refrigeration and Air-Conditioning	I	4th
Refrigeration and Air-Conditioning Lab	I	4th
Power Plant Engineering	I	4th
Computational Fluid Dynamics	I	4th
Production Planning & Control	II	4th
Unconventional machining	II	4th
Finite Element Methods	II	4th
Automotive Engineering	II	4th
<b>OPEN ELECTIVE COURSES (ME)</b>		
<b>Course Name</b>	<b>Semester</b>	<b>Year</b>
Non-Conventional Sources of Energy	I	4th
Quality Assurance & Reliability	I	4th
Power plant Engineering	I	4th
Production Planning & Control	I	4th
Principles of Entrepreneurship	I	4th
<b>Computer Science &amp; Engineering (CSE)</b>		
<b>PROGRAM CORE COURSES (CSE)</b>		
<b>Course Name</b>	<b>Semester</b>	<b>Year</b>
Object Oriented Programming Through C++	I	2nd
Object Oriented Programming Through C++ Lab	I	2nd
Data Structures & Algorithm	I	2nd
Data Structures & Algorithm Lab	I	2nd
Software Engineering	I	2nd
Software Engineering Lab	I	2nd
Design and Analysis of Algorithms	II	2nd
Database Management Systems	II	2nd
Database Management Systems Lab	II	2nd
Python Programming	II	2nd
Python Programming Lab	II	2nd
Discrete Structures for Computer Science	II	2nd
Data Communication and Computer Networks	I	3rd
Data Communication and Computer Networks Lab	I	3rd

Operating Systems	I	3rd
Operating Systems Lab	I	3rd
Java Programming	I	3rd
Java Programming Lab	I	3rd
Theory of Computation	I	3rd
Web Technologies	II	3rd
Web Technologies Lab	II	3rd
.Net Technologies	II	3rd
.Net Technologies Lab	II	3rd
Advance Database Management System	II	3rd
Advance Database Management System Lab	II	3rd
Compiler Design	I	4th
Advanced Java Programming	I	4th
Advanced Java Programming Lab	I	4th
Image Processing	I	4th
Image Processing Lab	I	4th
Natural Language Processing and Machine Translation	I	4th
<b>PROGRAM ELECTIVE COURSES (CSE)</b>		
<b>Course Name</b>	<b>Semester</b>	<b>Year</b>
Network Security	II	3rd
E-Commerce	II	3rd
Parallel Computing	II	3rd
Real Time Systems	II	3rd
SQL and Database Application	II	3rd
Advanced Operating System	II	3rd
Multimedia Computing	II	3rd
Block Chain and Applications	II	3rd
Digital Image Processing	I	4th
Smartphone Computing and Applications	I	4th
Data Warehousing and Data Mining using R	I	4th
Database Security and Administration	I	4th
Design Patterns	I	4th
Network Programming	I	4th
Unix and Shell Programming	II	4th
Software Testing Methods	II	4th
Service Oriented Architecture	II	4th
Object Oriented Analysis Design with UML	II	4th
Cyber Security	II	4th
System Analysis with Software Engineering	II	4th
Computer Organization and Architecture	II	4th
High Performance Computing	II	4th
Data Mining	II	4th
Artificial Neural Network	II	4th
<b>OPEN ELECTIVE COURSES (CSE)</b>		
<b>Course Name</b>	<b>Semester</b>	<b>Year</b>
Artificial Intelligence	I	3rd
Internet of Things	II	3rd
Introduction to data Science	II	3rd
Natural Language Processing and Machine Translation	I	4th
Big Data Analytics	II	4th
Augmented Reality	I	3rd
Virtual Reality	I	3rd
Machine Learning	II	3rd
Deep Learning	II	3rd
Data Analytics	I	4th
Business Analytics	II	4th

<b>Electronics &amp; Communication Engineering (ECE)</b>		
<b>PROGRAM CORE COURSES (ECE)</b>		
<b>Course Name</b>	<b>Semester</b>	<b>Year</b>
Digital System Design	I	2nd
Digital System Design Lab	I	2nd
Object Oriented Programming through C++	I	2nd
Object Oriented Programming through C++ Lab	I	2nd
Electrical and Electronics Measurement	I	2nd
Electrical and Electronics Measurement Lab	I	2nd
EM Fields and Waves	II	2nd
Python Programming	II	2nd
Python Programming Lab	II	2nd
Electronic Devices and Circuits	II	2nd
Network Theory	II	2nd
Network Theory Lab	II	2nd
Signals and Systems	I	3rd
Analog Electronics	I	3rd
Analog Electronics Lab	I	3rd
Control Systems	I	3rd
Control Systems Lab	I	3rd
Analog and Digital Communication	I	3rd
Analog and Digital Communication Lab	I	3rd
Digital Signal Processing	II	3rd
Digital Signal Processing Lab	II	3rd
RF & Microwave Engineering	II	3rd
RF & Microwave Engineering Lab	II	3rd
Microprocessors and Microcontrollers	II	3rd
Microprocessors and Microcontrollers Lab	II	3rd
VLSI Design	I	4th
VLSI Design Lab	I	4th
Mobile Telecommunication Networks	I	4th
<b>PROGRAM ELECTIVE COURSES (ECE)</b>		
<b>Course Name</b>	<b>Semester</b>	<b>Year</b>
Computer Organization and Architecture	II	3rd
Antenna and Wave Propagation	II	3rd
Power Electronics	II	3rd
Television Engineering	II	3rd
Digital Image Processing	I	4th
Speech and Audio Processing	I	4th
Information Theory and Coding	I	4th
Computer Networks	I	4th
Digital Control Systems	I	4th
Satellite Communication	II	4th
Wireless Sensor Networks	II	4th
Random Signal Processing	II	4th
Telecom Switching Systems and Networks	II	4th
Internet of Things	II	4th
Wavelet Transforms	II	4th
Wireless Communication Networks	II	4th
Industrial Automation and Control	II	4th
Instrumentation and Process Control	II	4th
<b>OPEN ELECTIVE COURSES (ECE)</b>		
<b>Course Name</b>	<b>Semester</b>	<b>Year</b>
Data Compression and Encryption	I	3rd

Sensors and Actuators	I	3rd
Robotics and Robot Application	II	3rd
Fiber Optics and Optoelectronics	I	4th
Embedded Systems	I	4th
Smart Antennas for Mobile Communication	II	4th
Radar System	II	4th
<b>Electrical &amp; Electronics Engineering (EEE)</b>		
<b>PROGRAM CORE COURSES (EEE)</b>		
Course Name	Semester	Year
Electrical and Electronics Measurements	I	2nd
Electrical and Electronics Measurements Lab	I	2nd
Digital System Design	I	2nd
Digital System Design Lab	I	2nd
Electrical Machines I	I	2nd
Electrical Machines I Lab	I	2nd
Network Theory	II	2nd
Network Theory Lab	II	2nd
Electronic Devices and Circuits	II	2nd
Electrical Machines II	II	2nd
Electrical Machines II Lab	II	2nd
EM Fields and Waves	II	2nd
Analog Electronics	I	3rd
Analog Electronics Lab	I	3rd
Analog and Digital Communication	I	3rd
Analog and Digital Communication Lab	I	3rd
Power Systems I	I	3rd
Control Systems	I	3rd
Control Systems Lab	I	3rd
Powers Systems II	II	3rd
Powers Systems Lab	II	3rd
Power Electronics	II	3rd
Power Electronics Lab	II	3rd
Microprocessors and Microcontrollers	II	3rd
Microprocessors and Microcontrollers Lab	II	3rd
Renewable Sources of Electrical Energy	I	4th
Switch Gear and Protection	I	4th
Switch Gear and Protection Lab	I	4th
<b>PROGRAM ELECTIVE COURSES (EEE)</b>		
Course Name	Semester	Year
Electrical Machine Design	II	3rd
Line-Commutated and Active PWM Rectifiers	II	3rd
Electric Power Utilization and Illumination	I	4th
Advanced Control System	I	4th
Electrical Energy Conservation and Auditing	I	4th
Power Semiconductor drives	II	4th
Design of Electrical Systems	II	4th
HVDC Systems and FACTS	II	4th
Power Systems Dynamics and Control	II	4th
Industrial Electrical Systems	II	4th
High Voltage Engineering	II	4th
<b>OPEN ELECTIVE COURSES (EEE)</b>		
Course Name	Semester	Year
Electrical Materials	I	3rd
Sensors and Actuators	I	3rd

Instrumentation and Process Control	II	3rd
Electric Design, Estimation and Costing	II	3rd
VLSI Design	I	4th
Special Electro-Mechanical Systems	I	4th
Electric and Hybrid Vehicles	I	4th
Reliability and Safety Engineering	II	4th
Smart Grid Technology	II	4th
<b>Humanities Elective - I</b>		<b>Humanities Elective - II</b>
Economics	Marketing Management	
Dynamics of Social Change	Entrepreneurship Development	
Intellectual Property Rights	Principles of Management	
Introduction to Psychology	Business Ethics	
Performative Art	International Business	
	Operation Management	
	Law of Patent	

## 2.4 The M. Tech Program Structure

YEAR	SEMESTER I	SEMESTER II
<b>I</b>	Surface water hydrology	Subsurface Hydrology
	Advanced hydraulic engineering	Design of Hydraulic Structure
	Advance Irrigation engineering	Sediment Transport
	Advanced hydraulic engineering lab	Advanced water resource engineering lab
	Elective- I	Elective- III
	Elective- II	Elective- IV
YEAR	SEMESTER III	SEMESTER IV
<b>II</b>	Project and Dissertation (Part I)	Project and Dissertation (Part II)

\*Program Structure is tentative, subject to change.

### 2.4.1 List of Electives

#### **ELECTIVE I**

1. Open Channel Flow
2. Fuzzy Logic and Artificial Intelligence in Civil Engineering Applications
3. Watershed Management and Remote Sensing Applications

#### **ELECTIVE II**

1. Water Resources Systems Analysis, planning & Management
2. Computational Methods in Hydraulics and Environmental Engineering Applications
3. Water Power Engineering

#### **ELECTIVE III**

1. River Engineering
2. Transient Flow Analysis
3. Flow and Transport Processes in Fractured Media

#### **ELECTIVE IV**

1. Water Quality Management
2. Introduction to Multiphase Flow in Porous Media
3. Sediment Dynamics in Fluvial Systems

## PART-III

### The UG-PG Program Details

#### 3.1 The UG-PG Program

ICFAI Technical School constantly endeavors to update the curriculum, benchmark its academic delivery against best academic standards and create a better environment for the students. The UG-PG Program encourages the future professionals to equip themselves with the latest tools and techniques in the field of Science and Technology. The program has been structured to identify and understand the commonality and the divergence in it.

The eligibility for the degree is determined on the basis of the number of units completed. Each course has a prescribed weightage in terms of units. The semester-wise program consists of a prescribed set of courses adding to a certain total number of units in each semester for an anticipated normal progress through the program.

A 'unit' is a convenient means to anticipate the number of hours per week of the total effort, including the class-work put in by the students. One unit normally indicates three hours per week of the total effort of a student including the lab and formal contact hours in the classroom. This also includes the hours for sustained self-study.

The study program leading to the award of the BCA/Integrated BCA-MCA/MCA degree consists of the prescribed courses sequentially distributed over the required number of semesters known as Semester-wise Pattern. The current operative semester-wise pattern for the above programs is given in Section- 3.2, 3.3 and 3.4. The duration of degree program for a student can be shorter or longer than the normal duration due to academic flexibilities and student's ability. The eligibility for a degree is determined on the basis of number of courses or units completed. The UG-PG Programs offer the Elective Courses for encouraging specialization in a particular field.

#### 3.2 The BCA Program Structure

Year	Semester I	Semester II
I	English Language Skills I	English Language Skills II
	C Programming	Fundamentals of Finance & Accounting
	C Programming Practical	Mathematics II
	Mathematics I	Object Oriented Programming through C ++
	Probability and Statistics	Object Oriented Programming through C ++ Practical
	Principles of Management	Principles of Economics
	Information Technology Trends	Data Structures & Algorithms
Data Structures & Algorithms Practical		
Summer Term	SUMMER PROJECT - I	

Semester III		Semester IV	
II	Data Communication & Computer Networks	Soft Skills-I	
	Data Communication & Computer Networks Practical	Web Technologies	
	Database Management Systems	Web Technologies Practical	
	Database Management Systems Practical	Software Engineering	
	Operating Systems	Java Programming	
	Operating Systems Practical	Java Programming Practical	
	Technical Report Writing	Operations Research	
	System Analysis and Design	Environmental Studies	
	Computer Organization and Architecture		
<b>Summer Term</b>	<b>SUMMER PROJECT - II</b>		
Semester V		Semester VI	
III	Advance Java Programming	Smartphone Computing and Applications	
	Advance Java Programming Practical	Smartphone Computing and Applications Practical	
	Computer Graphics	IT Project	
	Computer Graphics Practical	Compiler Design	
	Theory of Computation	PHP with MySql	
	Windows Applications using Dot Net Technologies	PHP with MySql Practical	
	Windows Applications using Dot Net Technologies Practical	Web Applications using Dot Net Technologies	
	Python Programming	Web Applications using Dot Net Technologies Practical	
	Python Programming Practical	Internet of Things	
	Elective I	Elective II	

\*Program Structure is tentative, subject to change.

### 3.2.1 List of Electives

Sl. No.	3rd Year Semester-V	Sl. No.	3rd Year Semester-VI
1	Database Security and Administration	1	Network Programming
2	Software Project Management	2	Network Security
3	Management Information Systems	3	Software Testing and Quality Management
4	Data Warehousing and Data Mining	4	Unix & Shell Programming
5	Data Warehousing and Data Mining Practical	5	Unix & Shell Programming Practical
6	Multimedia Systems	6	E-Commerce
7	Multimedia Systems Practical	7	Software Project Management
8	Parallel Computing	8	Artificial Intelligence



9	Parallel Computing Practical	9	Software Testing Methods
10	Real Time Systems	10	Fiber Optics & Opto Electronics
11	Multimedia Computing	11	Design Patterns
12	Image Processing System	12	Advance Database Management
13	Image Processing Practical	13	Advance Database Management System Practical
14	Natural Language Processing and Machine Translation	14	Parallel Programming
15	Python Programming Database	15	Structured Query Language and Applications
16	Python Programming Practical	16	Structured Query Language and Database Applications Practical

### 3.3 The BCA-MCA Integrated Program Structure

Year	Semester I	Semester II
<b>I</b>	English Language Skills I	English Language Skills II
	C Programming	Fundamentals of Finance & Accounting
	C Programming Practical	Mathematics II
	Mathematics I	Object Oriented Programming through C ++
	Probability and Statistics	Object Oriented Programming through C ++ Practical
	Principles of Management	Principles of Economics
	Information Technology Trends	Data Structures & Algorithms
		Data Structures & Algorithms Practical
<b>Summer Term</b>	<b>SUMMER PROJECT - I</b>	
Semester III		Semester IV
<b>II</b>	Data Communication & Computer Networks	Soft Skills-I
	Data Communication & Computer Networks Practical	Web Technologies
	Database Management Systems	Web Technologies Practical
	Database Management Systems Practical	Software Engineering
	Operating Systems	Java Programming
	Operating Systems Practical	Java Programming Practical
	Technical Report Writing	Operations Research
	System Analysis and Design	Environmental Studies
	Computer Organization and Architecture	
<b>Summer Term</b>	<b>SUMMER PROJECT - II</b>	
Semester V		Semester VI
	Theory of Computation	Multimedia Systems
	Management Information Systems	Multimedia Systems Practical

<b>III</b>	Advance Java Programming	Mini Information Technology Project
	Advance Java Programming Practical	Digital Electronics and Micro Processors
	Network Security	Compiler Design
	Network Security Practical	Smartphone Computing and Applications
	Python Programming	Smartphone Computing and Applications Practical
	Python Programming Practical	Web Applications using Dot Net Technologies
	Windows Applications using Dot Net Technologies	Web Applications using Dot Net Technologies Practical
	Windows Applications using Dot Net Technologies Practical	Internet of Things
<b>Semester VII</b>		<b>Semester VIII</b>
<b>IV</b>	Data Warehousing and Data Mining	Object Oriented Analysis and Design with Unified Modeling Language
	Data Warehousing and Data Mining Practical	Object Oriented Analysis and Design with Unified Modeling Language Practical
	Computer Graphics	Soft Skills-II
	Computer Graphics Practical	Artificial Intelligence
	Cloud Computing	Artificial Intelligence Practical
	Parallel and Distributed Database Systems	Big Data Analysis
	Natural Language Processing and Machine Translation	Enterprise Application development using Java
	PHP with MySql	Enterprise Application development using Java Practical
	PHP with MySql Practical	Image Processing
		Image Processing Practical
<b>Semester IX</b>		<b>Semester X</b>
<b>V</b>	Design and Analysis of Algorithm	Major Information Technology Project
	Soft Skills-III	
	Elective 1 (Theory)	
	Elective 1 (Practical)	
	Elective 2 (Theory)	
	Elective 2 (Practical)	
	Elective 3 (Theory)	
	Elective 3 (Practical)	
	Elective 4	

\*Program Structure is tentative, subject to change.

### 3.3.1 List of Electives

#### List of Electives 1, 2 & 3

Sl. No.	Course Title
1	Network Programming

#### List of Elective 4

Sl. No.	Course Title
1	E-Commerce

2	Network Programming Practical	2	Software Testing and Quality Management
3	Structured Query Language and Database Applications	3	Real Time Systems
4	Structured Query Language and Database Applications Practical	4	Advance Operating System
5	Advance Operating System Practical	5	Software Testing Methods
6	Advanced Computer Networks	6	Software Process and Project
7	Advanced Computer Networks Practical	7	Parallel Programming
8	Advance Data Structures	8	Fiber Optics & Opto Electronics
9	Advance Data Structures Practical	9	Bio-Informatics
10	Multimedia Computing	10	Program Paradigms
11	Multimedia Computing Practical		
12	Parallel Computing		
13	Parallel Computing Practical		
14	Unix and Shell Programming		
15	Unix and Shell Programming Practical		
16	Advance Database Management System Practical		
17	Linux and Unix System Administration		
18	Linux and Unix System Administration Practical		
19	Rich Internet Application		
20	Rich Internet Application Practical		

### 3.4 The MCA Program Structure

Year	Semester I	Semester II
<b>I</b>	Programming and Problem Solving with C and C++	Object Oriented Programming using Java
	Programming and Problem Solving with C and C++ Practical	Object Oriented Programming using Java Practical
	Computer Organization and Architecture	Data Structure using C++
	Discrete Mathematics	Data Communication & Computer Networks
	Digital Electronics and Microprocessor	Object Oriented Analysis and Design using UML
	Information and Communication Technology	Object Oriented Analysis and Design using UML Practical
	Principles of Management	Financial Management I
	Financial Accounting	Emerging Technologies
		Soft Skills-I
	Semester III	Semester IV
<b>II</b>	Design and Analysis of Algorithms	Software Engineering
	Database Management System	Theory of Computation

	Database Management System Practical	Artificial Intelligence
	Web Technologies	Computer System and Network Security
	Web Technologies Practical	Python Programming
	Operating System	Python Programming Practical
	Operating System Practical	Elective- I
	Financial Management II	Elective II
	Soft Skills-II	
<b>Semester V</b>		<b>Semester VI</b>
<b>III</b>	Business Analytics and Big Data	Internship-III
	Computer Graphics and Multimedia	
	Computer Graphics and Multimedia Practical	
	Android Programming	
	Android Programming Practical	
	Internet of Things	
	Elective- III	
	Elective- IV	

\*Program Structure is tentative, subject to change.

### 3.4.1. List of Electives

List of Electives 2 <sup>nd</sup> Year		List of Elective 3 <sup>rd</sup> Year	
Sl. No.	Course Title	Sl. No.	Course Title
1	Unix and Shell Programming	1	Unix and Linux System Administration
2	Advance Operating System	2	Unix and Linux System Administration Practical
3	Advance Operating System Practical	3	Advanced Topics In Computer Network; Compiler Design
4	Theory of Computation	4	Investment Banking and Financial Services
5	Database Security and Administration	5	Embedded Systems
6	Program Paradigms	6	Computer Simulation and Modeling
7	Data Warehousing and Data Mining	7	Neural Network Computing
8	Data Warehousing and Data Mining Practical	8	Image Processing
9	Artificial Intelligence	9	Mobile Computing
10	Advance Multimedia System	10	Software Project Management
11	Information Technology in Banking and Insurance	11	Spatial Databases
12	Management Accounting; Enterprise Solutions	12	Bio-Informatics
		13	Financial Markets
		14	Software Design Pattern
		15	Parallel and Distributed Database System
		16	Advance Software Testing and Quality Management

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**PART – IV**  
**Registration**

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#### **4.1. Registration**

The structuring of the courses with reference to lecture hours, lab hours etc. is done through the timetable for each semester/term. A student, whether newly admitted or already on rolls, is required to undergo a registration process on the first day of each semester/term. It is the responsibility of the student to complete his/her registration properly, failing which he/she will not be permitted to attend classes or use the facilities of ICFAI TECHNICAL SCHOOL during that semester/term. However, late registration is permitted only on the 7<sup>th</sup> day following the day of original registration with penalty fee. Physical presence of the student on the day of registration is mandatory. The student should take a written permission of absence from the Principle, ICFAI TECHNICAL SCHOOL to be allowed for the late registration. The permission for the late registration will be sanctioned only under extreme circumstances.

#### **4.2. Not Permitted to Register**

A student is not permitted to register in a semester/term if:

- He / She has outstanding dues to the University, hostel or any recognized part of the University.
- His/her grade sheet of the immediately preceding semester/term is withheld.
- He/She has an incomplete (I) report in the immediately preceding semester/term.
- He/She has been specifically asked to stay away from the semester.
- He/She has failed to convert the provisional admission into a regular admission by the specified date.

#### **4.3. Backlog**

If a student has not cleared a course (other than electives) mentioned in his/her semester-wise chart by the time under consideration, then the student comes under backlog category. While registering, the student should first register for all those backlog courses which are offered in that semester to avoid clash in the timetable. Electives are not included in the package of backlog courses.

#### **4.4. Provisional Registration**

Registration in certain courses, like IP-I, may be permitted even if the result of the preceding semester is not available due to a very small gap between the semester and the term. But the same will be subjected to cancellation without notice later, if the student is found defaulting from any of the conditions given in Section 4.2 (Not permitted to Register).

Students can check his/her registered course details through University online ERP system using their login ID and password.

#### **4.5. Amendment to Original Registration**

The registration in a semester, when altered at the initiative of a student, will be called an amended registration and will be covered by the conditions listed below.

- (i) A student may request for substitution from a course, in which he/she has already registered to another course any time within two weeks from the beginning of the semester.
- (ii) If a student desires to withdraw from a course, he/she may submit a formal application for

withdrawal from the course within ten weeks from the beginning of the semester.

(iii) A student may be permitted to completely withdraw from all the course and drop the semester/term when the Director/Dean is satisfied about the genuineness of his/her reason(s) under exceptional circumstances.

(iv) A student who comes under the purview of Academic Counseling Committee (ACC) (see section 5.8 & 5.9) ceases to have any right in the amendment of his/her original registration. When any alteration in the original registration is called for, it will be done entirely at the discretion of the ACC.

#### 4.6. Revision of Original/Amended Registration

The revision of original/amended registration can be done by concerned authority any time during the semester, term as per the details listed under 4.9 (Flexibilities).

(i) If the registration of a student in a course is found to be not in accordance with the regulations, his/her registration in that course will be cancelled and the grade obtained, will be rejected.

(ii) The registration of a student in a course or a complete set of courses in a semester can be revised through the instrument of Registration Cancelled (RC) (see section 5.7.3) by the concerned authority, when the student is found guilty in cases of unfair means, breach of discipline, etc., or when he/she persistently and deliberately does not clear his/her dues.

(iii) Concerned authority can revise the registration by cancelling registration in all courses, when the student ceases to be on the rolls of the University by his/her own action or by the action of the University.

(iv) The ACC can revise the registration of a student who is under its purview.

(v) Concerned authority can revise the registration by cancelling the Internship Program (SIP) option through the instrument of RRA/RC (see section 5.7.3).

(vi) Revision of registration can be modified by the concerned authority by allowing a student to register in additional course or by canceling the registration of a course in which the student has registered, when the situation warrants.

#### 4.7. Pre-requisite Courses

Certain courses have pre-requisite conditions attached to them. Before registering in such course(s), a student should fulfill the pre-requisite conditions. If a course has pre-requisite conditions, then the student should have a valid grade and not a report in the pre-requisite course(s).

#### 4.8. Prior Preparation

For **B.Tech Program**, a specified prior preparation is required as given in the following table.

To register in	Prior preparation required to be cleared
SIP-101	All courses in First Year semester I and semester II
SIP-201	All courses in the semesters preceding SIP-201 for a student's program*
SIP-301	All courses in semesters and terms preceding Third year of a student's degree program

\*If SIP-II is delayed by one year for a student with the permission of the appropriate authority, he/she would be permitted to register for third year.

For **BCA Program**, a specified prior preparation is required as given in the following table.

To register in	Prior preparation required to be cleared
Summer Project-I	All courses in the semesters preceding Summer
Summer Project-II	All courses in the semesters preceding Summer

For **BCA-MCA Integrated Program**, a specified prior preparation is required as given in the following table.

To register in	Prior preparation required to be cleared
Summer Project-I	All courses in the semesters preceding Summer Project-I
Summer Project-II	All courses in the semesters preceding Summer Project-II
Major Information Technology Project	

#### 4.9. Flexibilities

A few flexibilities are available for students during registration. The principle of merit, preference of students and facilities available at ICFAI Technical School, which generally guide decisions regarding flexibilities, can be listed as follows:

- (i) Choosing electives from across the courses offered by other disciplines is possible, provided the student fulfills the required pre-requisites for these courses.
- (ii) A student may, at his/her own responsibility, delay or advance taking of the electives in the prescribed program structure.
- (iii) To improve grades, a student can repeat courses at his/her own option, subject to regulations.
- (iv) Apart from the number of electives specified in the chart, students are allowed to take a maximum of two additional courses as optional electives. A student can graduate even if he/she do not get valid grades in these optional elective courses. However, a student will not be permitted to register in a semester only in optional elective courses. For the purpose of eligibility for a degree, a student should get valid grades in at least the prescribed number of electives of his/her program.
- (v) 'Transfer' is a movement of the student from one goal to another before completion of the first. The structure provides for a transfer from
  - a) One branch of B.Tech Program to another branch (at the end of 1<sup>st</sup> year).
  - b) BCA regular program to BCA-MCA Integrated Program, latest before commencement of 4<sup>th</sup> Semester.

The student's semester-wise course list upon transfer arising from any of the above options has to be changed accordingly. If a student has done a course, with a valid grade, which is not a course belonging to the new program; it may be allowed to be booked against a future necessity for an elective slot in the new program. Further his/her entire up-to-date scholastic record including CGPA is carried over to the point of

transfer.

#### **4.10. Fee Payment**

- (i) A student is required clear all the dues on or before the day of registration failing which the student will not be allowed to register for the semester.
- (ii) However special permission should be taken from the competent authority for the delays in extraordinary circumstances.
- (iii) Students can pay semester fee through University online ERP system using their login ID and password.

#### **4.11. Address Change**

In case of a change in permanent address, or e-mail, students are required to incorporate the same in the registration cards during Registration. If a change is contemplated in the middle of any semester, students can submit an application at the Students Services Department. All correspondences will be sent only to the mailing address.



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**PART – V**  
**Teaching, Evaluation and Grading**

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### **5.1. Teaching**

The objective of classroom education is to awaken the curiosity of students, generate habits of rational thinking in them, gear their mind to face the unfamiliar and train them to be independent. Classroom instructions help a student to organize and correlate facts, comprehend ideas and to use knowledge creatively.

The teacher also has the additional responsibility of making the student seek knowledge on their own and encourage them to use all facilities offered by the University like library and laboratory, to optimize their learning process. As self-study by a student would form an important factor in the planning of teaching and evaluation, a student is required to co-operate and respond to meet this challenge.

Every course, whether single-section or multi-section, is conducted by a member of the faculty called an Instructor-in-Charge, with the assistance, wherever necessary, of required number of Instructors - who will be partners with them in meeting the full academic responsibilities and organizational needs of teaching and evaluation. Wherever the Instructor-in-Charge is mentioned hereafter, it connotes the team of instructors, acting as one entity under his/her captainship.

The Instructor-in-Charge with the team of instructors makes a comprehensive plan with respect to the conduct of the course even before the semester begins. In case of a multi-section course, the team remains in continuous interaction in order to ensure smooth operation of the course. Variations due to personal attitudes and styles are smoothed out so that the operational aspects including grading in various sections of a course are free from any seeming arbitrariness.

The Instructor-in-Charge/Course Instructor provides necessary information through the Course Handout at the beginning of the Class-work. Course Handout gives details about offered courses, their scope & objectives, text and reference books, lecture wise plan and other details as given below.

- (i) Scope & objectives and references.
- (ii) Text books and reference books.
- (iii) Operations of the course (its pace, coverage and level of treatment).
- (iv) Frequency/duration of classes.
- (v) Tentative schedule; textbooks and other reading assignments, home tasks etc.
- (vi) Components of evaluation like quizzes/tests/examination (announced or unannounced, open-book or closed-book), laboratory exercises, home assignments and their relative weightage.
- (vii) Attendance policy.
- (viii) Broad policy governing decisions about make-up tests.
- (ix) Mid-semester grading.
- (x) Grading procedure (overall basis, review of border line cases, effect of class average, etc.).
- (xi) Chamber consultation hours.
- (xii) Other matters found desirable and relevant.

## 5.2. Evaluation Components

Teaching and evaluation forms a coherent function and operates on the basis of mutual understanding and trust at ICFAI Technical School. The different components of evaluation are evenly spread out in the semester and are aimed to draw out responses from the students. Various attributes like spontaneous recall, practical application of concepts, ability to work on their own, competence in conceptualized arguments, aptitude to face unfamiliar situations are put to test. One of the components (examination) is comprehensive enough to include the entire course and is held at the end of the semester.

The evaluation component, weightage and evaluation method may vary depending on the nature of the course. However, in general, there will be two major written examination components: **Midterm of 20 marks** and **Comprehensive of 30 marks**. The components for **Internal evaluation** consists of **Internal I & Internal II of 25 Marks each** would be decided by the Course Instructor/Instructor-in-charge along with his team and announced at the beginning of the semester, with dates.

Mid-semester grading for each course will be announced to the students to inform their current position compared to other students in that course. This grade alert will help the student to improve their performance in the remaining evaluation components.

All written examinations are conducted at specified venues as per the pre-specified schedules. Examination schedules are announced to the students through Student Circulars. The written examination consists of questions like multiple-choice, short-answer, descriptive-answer, numerical problems. The pattern and type of questions may vary depending on the nature of the course.

### 5.2.1 Grand Viva

Students of B.Tech final semester will be appearing for Grand Viva through which the overall domain knowledge acquired by a student during 4-years B.Tech curriculum will be evaluated comprehensively. The evaluation will be done for a weightage of 5 units, by a panel of core branch faculties and external expert(s).

## 5.3. Evaluation Feedback

Just as evaluation is done in a continuous manner, feedback is also made available at regular intervals. The answer scripts are promptly evaluated, shown to the students for clarification on their performance and returned whenever practicable. The performance of the students with reference to the highest, lowest and average marks is discussed in detail in the class. Solutions with the marking scheme are displayed soon after a test.

## 5.4. Attendance Policy

A student must maintain a **minimum of 75% attendance**, failing which he/she will be barred from appearing in the examinations. A student must inform the concerned Instructor-in-Charge in case of any absence from class. In case of any absence due to illness the genuine medical certificate must be submitted to the course in charge immediately after joining back the class. However, final consideration of attendance status completely depends upon the respective Instructor-in-Charge.

If a student misses the Midterm exam due to attendance shortage and is unable to secure 75% attendance till the middle of the semester, he/she may withdraw from the course. If a student does not maintain requisite attendance by the end of the semester, his/her registration in that particular course may be cancelled and he/she will be required to register again (RRA) for the same course.

Students can check their up-to-date attendance in registered courses through University online ERP system using their login ID and password.

### **5.5. Unfair Practices**

Students are prohibited from resorting to unfair practices during any evaluation components. Any of the following events (inclusive but not exhaustive) will be considered as unfair practice(s) during examinations.

- (i) Possessing unauthorized material like notes, small slips, content written on calculator, scale, cell phone, etc inside exam hall, whether used or not.
- (ii) Copying from other students.
- (iii) Allowing/enabling other students to copy from one's paper.
- (iv) Communicating with others in or outside the examination hall during examination.
- (v) Referring to any notes, slips or other sources in the wash room.
- (vi) Indiscipline and disruptive conduct.
- (vii) Resorting to any other unfair means to provide or obtain advantage.

Use of unfair means would result in academic actions against students leading to:

- (i) Cancellation of student's registration for the course(s).
- (ii) Cancellation of student's registration for the subsequent semester.
- (iii) Cancellation of scholarship.
- (iv) Cancellation of academic initiatives; i.e., facility of late registration, amendment to registration.
- (v) Cancellation of any fee waiver.

### **5.6. Make-up Policy**

Any student, who misses any component of evaluation for genuine reasons, must immediately approach the Instructor-in-Charge/instructor with a request for make-up for the same, stating the reasons. If the Instructor-in-Charge is satisfied with the request, a make-up test would be given at the earliest. If a student anticipates a genuine difficulty in meeting the date of component of evaluation, he/she should take the Instructor-in-Charge/Course Instructor into confidence prior to the event. The decision of the Instructor-in-Charge/Course Instructor in the matters of make-up shall be final.

### **5.7. Grading Policy**

ICFAI Technical School emphasizes continuous evaluation, which includes numerical marking in grading the student. At the end of a semester, letter grades A<sup>+</sup>, A, B<sup>+</sup>, B, C<sup>+</sup>, C, D and E are awarded to the students based on their overall performance in the course. Absolute Grading System has been introduced, effective from 2016-17 sessions.

### 5.7.1. Letter Grades

Each letter grade has a qualitative meaning and grade point values as given below:

<b>Letter Grade</b>	<b>A+</b>	<b>A</b>	<b>B+</b>	<b>B</b>	<b>C+</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>S</b>	<b>U</b>
Grade range	90 - 100	80 - 89	70 - 79	60 - 69	50 - 59	40 - 49	30 - 39	20 - 29	—	—
Qualitative Meaning	Outstanding	Excellent	Very good	Good	Fair	Moderate	Poor	Exposed	Satisfactory	Unsatisfactory
Grade Point	10	9	8	7	6	5	4	3	0	0

In order to arrive at these letter grades, the total marks in a particular course for all the students pursuing the course are tabulated in descending order (equivalently a histogram). A student should secure minimum of 20 marks in a course to obtain a valid grade. However, exception may arise in some special situation.

### 5.7.2. Non-letter Grades

For the course Soft Skill, a student will get non-letter grades such as **Satisfactory (S)** or **Unsatisfactory (U)**. These non-letter grades have no grade points attached to them.

### 5.7.3. Reports

At the end of a course, in certain cases, the Instructor-in-Charge can report, certain events/facts in suitable words, in place of letter grades discussed earlier. These reports are not to be construed as grades. The various reports are elaborated below:

1. Incomplete (I)
2. Grade Awaited (GA)
3. Withdrawn (W)
4. Registration Cancelled (RC), Required to Register Again (RRA) and Discontinued from the Program (DP)
5. Not Cleared (NC)

#### **Incomplete (I)**

If the Instructor-in-Charge finds that a student has not fulfilled some of the requirements of a course before the final deadline for transmitting the grades, and is satisfied that the student is able to transmit other grades or a report with or without this particular fulfillment, but at their discretion wishes to give the student an opportunity, then they can within the deadline, send a report 'I' (Incomplete) for that student and also inform the student of the same.

It shall be the responsibility of the student to contact the Instructor-in-Charge on time for replacement of the 'I' report within two weeks after the end of the semester. This may be relaxed by the competent authority, failing which the Instructor-in-Charge will communicate whatever the grade/report is possible for that situation. Whenever such relaxation is made, the concerned authority will specify at their discretion, with the consent of the Instructor-in-Charge, the date by which 'I' report has to be converted.

## **Grade Awaited (GA)**

There are many situations where operational and practical difficulties may cause a delay in the communication of a grade. In situations like (a) pending case of unfair means (b) pending case of indiscipline (c) where the courses are being conducted at an off campus centre for IP students, co-ordination between the University and the centers may not work in a timely manner. In these circumstances, the concerned authority may make a specific authorization for the Instructor-in-Charge to report GA (Grade Awaited).

A student may also get a “GA” report if he/she due to genuine reasons is unable to appear for an examination on the scheduled date and his/her request for make-up has been granted. In such a case, the student should ensure by the end of the term that either:

- (i) He/she takes the make-up examination and converts the “GA” report into a letter grade or
- (ii) He/she makes an application to the concerned authority, through the Instructor-in-Charge to convert the “GA” report to “NC” report.

Whenever the report GA appears in the grade sheet, a student will not be allowed to register for the subsequent semester, until the student takes steps to convert the “GA” report into a letter grade or a “NC” report.

## **Withdrawn (W)**

A student may seek withdrawal from course(s) in a semester for any of the following reasons:

- (i) The student is unable to register for the course(s) for genuine reasons.
- (ii) The student is unable to cope with the normal load and withdraws from the course(s) to reduce his/her academic load for a particular semester.

Request for withdrawal should be made to the competent authority, within two weeks of commencement of the semester in case of above point (i) and within the stipulated duration as specified in the academic calendar in case of above point (ii). In such cases, the grade sheet/transcript of the student will indicate ‘W’ (withdrawn) against the course(s) from which the student has withdrawn his/her registration. The student will have to register for the course(s) at the next offer and obtain a valid letter grade. If ‘W’ remark is on a pre-requisite course, registration to course(s) of the subsequent terms is possible only on obtaining a valid letter grade in the course with ‘W’ remark. If the student withdraws after the due date, the event will be reported as “RC” or “DP” as the case may be.

## **Registration Cancelled (RC), Required to Register Again (RRA)**

If the registration of a student for a course has to be cancelled, it will be reported in the grade sheet as RC. Registration will be cancelled and a RC is issued in the following cases:

- (i) Cancellation is recommended as a part of disciplinary action against the student for resorting to unfair means during examination or other unprofessional behavior.
- (ii) Cancellation is recommended if the student gets less than the minimum required percentage of attendance.
- (iii) Cancellation is recommended if a provisionally admitted student fails to submit the proof of necessary documents required for registration and/or does not satisfy the minimum eligibility requirements for the admission within prescribed time limit.
- (iv) Cancellation is recommended when a student persistently and/or deliberately does not pay his/her dues.

RC has several meanings and is subject to the following:

- (i) If it is clearly known that the student is required to register again in the same course, the event will be reported as RRA (Required to Register Again).
- (ii) If RC amounts to discontinuation from the program, it will be reported as DP (Discontinued from the Program).
- (iii) If the cancellation of registration is not reported either as RRA or as DP but as RC, the meaning of the constraint has to be construed from the context in which the RC is reported.

### **Not Cleared (NC)**

If a student continues to remain registered in a course but gives the Instructor inadequate opportunity to evaluate him/her by not attending the quizzes/tests/examinations/and other components of evaluation, or by appearing in the same for the sake of appearing without applying himself/herself to the task at hand or by submitting a blank answer script, these events will be reported as NC (Not Cleared).

Whenever a student gets a NC report in a course, irrespective of whether he/she has or has not obtained a grade in the course previously, the following terms will govern further action. It is to be noted that a NC cannot be ignored, except under the situations described in (ii) and (iii) below:

- (i) If a student gets a NC report in a course which is in the compulsory package of his/her program, he/she is required to register again in the same course and get a valid grade therein.
- (ii) If a student gets a NC report in an elective course, he/she can either repeat the course to get a valid grade or ignore it to choose another course. However, a student must get valid grades in at least the prescribed number of electives in his/her program.
- (iii) If a student gets a NC report in a course which remains unaccounted after a process of transfer has been completed, it will not be possible for him/her to wipe out the NC report because this course is no longer a part of his/her program; and he/she can graduate with this NC.
- (iv) If a student gets a NC report in a project course, it will administratively be converted to RC by the competent authority and future registration in project courses will be done only if the concerned authority is satisfied with the candidate's interest in the course.
- (v) If a student gets a NC in Thesis or Seminar, he/she will be required to register in the same for one more semester. Operationally, this is achieved by requiring him/her to register once again in as many units of Thesis or Seminar in which he/she had registered when he/she was awarded NC. If these two courses get separated due to NC in one of them, there is no need to register in the other.

### **5.7.4. Cumulative Grade Point Average (CGPA)**

The Cumulative Grade Point Average (CGPA) is used to describe the overall performance of a student in all courses in which he/she is awarded letter grades, since his/her entry into the University up to and including the latest semester/term. It is also used for the declaration of division when the program is completed.

CGPA is the weighted average of the grade points of all the letter grades received by the student from his/her entry into the University and is computed as follows:

$$CGPA = \frac{\sum u_i g_i}{\sum u_i} = \frac{(u_1 g_1 + u_2 g_2 + u_3 g_3 + \dots)}{(u_1 + u_2 + u_3 + \dots)}$$

where,  $u_1, u_2, u_3, \dots$  denotes units associated with the courses taken by the student and  $g_1, g_2, g_3, \dots$  denotes grade points of the letter grades awarded in the respective courses. The reports obtained in a course or non-letter grades obtained in thesis/seminar will not alter the CGPA, since the same are not accounted for in the CGPA calculation.

When a student repeats a course in which he/she has already received a grade, as soon as a new grade is obtained, it will replace the earlier one in the calculation of CGPA. It is to be noted that only the latter grade in a course would be taken into account for the calculation of CGPA and not the better of the two grades.

### 5.7.5. Grade Sheet

A student's grades, reports, CGPA, etc., at the end of every semester/term will be recorded on a grade sheet, a copy of which will be issued to him/her. The grade sheet will be withheld when a student has not paid his/her dues or when there is a case of breach of discipline or unfair means pending against him/her.

While registration with approval of the appropriate authority is a token of permission to pursue studies, the grade sheet is a complete record of the outcome of what was intended in the original/amended/revised registration. The various grades and reports discussed above will be appropriately used to tally the grade sheet with original/amended/revised registration. It would be evident that this tally between what was registered for and what was obtained in terms of grades and reports will apply to all courses except for any course which was originally registered for, but subsequently replaced by another course through substitution.

The tally is made on a course basis at the end of the term to determine which of the courses have been cleared. A course is deemed to have been cleared if a student obtains a grade in the course. However, mere clearing of the prescribed courses one-by-one is not tantamount to fulfilling the requirements of graduation.

All grades secured, reports and other pertinent information for a semester are given in a grade sheet. The chronologically organized information from the grade sheets of a student with necessary explanation constitutes his/her transcript, which is issued at the time he/she leaves the University or at an intermediate point on request. Students can check their grades through University online ERP system using their login ID and password.

### 5.8. Minimum Academic Requirements

The education philosophy of the ICFAI Technical School interlinks and distinguishes between the performance of a student in a single course and his/her overall cumulative performance. Accordingly, a student has to maintain an expected minimum academic requirement for the B.Tech Program, at the end of each semester. They are as follows:

- (i) A student should not have secured more than one 'E' grade in the semester.
- (ii) A student should have CGPA of at least 4.50 (while 5.5 in case of post-graduation)
- (iii) A student should have at least cleared with his/her latest performance, such courses (counted from the point of his/her entry into the University) as are prescribed for a period that corresponds to two-thirds of the number of semesters spent by him/her since his/her entry into the University with reference to his/her current program. This means that at any stage of reckoning, a student should

not have spent more than 50% extra time than what is prescribed for him/her up to that stage.

### 5.8.1. Minimum Credits Requirements

Following are the minimum requirement of credits, to be fulfilled by a student for his/her B.Tech- M.Tech degree.

Branch Name	Minimum Credits Required
Civil Engineering (CE)	195
Computer Science & Engineering (CSE)	192
Electronics & Communication Engineering (ECE)	187
Electrical & Electronics Engineering (EEE)	187
Mechanical Engineering (ME)	184
M.Tech (Water Resources Engineering)	94

Meanwhile, following are the minimum requirement of credits, to be fulfilled by a student for his/her UG-PG degree.

Program Name	Minimum Credits Required
BCA Program	141
BCA-MCA Integrated Program	237
MCA Program Structure	90

### 5.9. Academic Counseling Committee (ACC)

The minimum requirements that every student should meet at the end of every semester are mentioned in 5.8 above. Failure to meet even one of these requirements will automatically bring the student under the purview of the ACC or the designated authority. The ACC will take immediate charge of the student and ask him/her to follow a specific path so that he/she can be rehabilitated at the earliest; failing which, the student will be required to leave the University.

During the course of time of the purview, the student will lose all his/her options with regard to the various features permitted during the process of registration namely: option of naming the courses, choice of courses under electives, repetition of courses, taking a higher level course, departure from the normal load etc.; and will also lose all his/her options for amendment to his/her original registration namely, substitution and withdrawal. However, the ACC has the right to revise the original registration at any time during the semester. The student's entire semester load will be determined by the ACC and will have to be followed to the satisfaction of the ACC.

Once a student has been placed under the purview of the ACC, he/she should continue to be under its direct guidance until ACC, after being satisfied with his/her overall progress and performance, declares him/her to be outside its purview. All decisions of the ACC shall be final.

Students are advised to take serious note of the consequences of coming under the purview of the ACC as mentioned below:

**Warning:** A student, who comes under the purview of the ACC for the first time due to a performance which is not too bad, is warned to take studies seriously and improve the performance to be declared by



the ACC in the next semester.

**Severe Warning and Reduction in Course Load:** If a student performs very badly and/or remains under the purview of the ACC in the subsequent semester, he/she would be severely warned and will not be allowed to register with normal academic load in the ensuing semester. The ACC will work out a package of courses with reduced load for the ensuing semester, so that the student gets a chance to improve and come out of the purview of the ACC.

**Probation:** If the advice and guidance of the ACC is not taken seriously by the student, who continues to perform badly, he/she might be given a last chance and kept on probation during the next semester. During this semester his/her progress will be closely monitored. If the student does not show satisfactory improvement, he/she may be asked to leave the University. A student might be put on probation directly (without warning) if his/her performance so warrants.

**Discontinued:** If a student on probation during a semester fails to improve his/her performance to the satisfaction of the ACC, he/she would be discontinued from the Program (DP) and would be asked to leave the University. However, if the student shows a satisfactory improvement, ACC may extend his/her probation by one more semester, so that he/she may come out of the purview of the ACC.

It must be noted that any student under the purview of the ACC found to be involved in any act of indiscipline or unfair means in examination at any time would be immediately asked to leave the University.

It should therefore be the single minded objective of the student to fulfill the minimum academic requirements stipulated, thus enabling himself/herself to be declared outside the purview of the ACC.

### **5.10. Graduation Requirements**

A student is deemed to have fulfilled the requirement of graduation for the program when he/she satisfies the following conditions:

- (i) Has cleared all the courses prescribed for him/her in his/her program.
- (ii) Has obtained a minimum CGPA of 4.5 (while 5.5 in case of post-graduation).
- (iii) Has remained outside the purview of the ACC or been declared outside its purview.
- (iv) Has overcome all the consequential stipulations of an NC report; except where there is an NC report in an elective course over and above the prescribed number of elective courses or in a course which has ceased to be a part of his/her current program as a result of transfer of program.

A student is deemed to have become eligible for the Bachelor's degree if, in addition to the above requirements he/she has,

- (i) Satisfied all the rules of evaluation.
- (ii) No case of indiscipline or unfair means pending against him/her.

However, in case of a student having outstanding dues against him/her to be paid to the University, hostel or any other recognized organ of the University, his/her degree will be withheld until the said dues are cleared.

### **5.11. Certification**

The following classification based on CGPA will be made and mentioned in the graduation certificate of the student.

Distinction	CGPA 9.00 or above
I Division	CGPA 7.00 or more but less than 9.00
II Division	CGPA 6.00 or more but less than 7.00

A student who fulfills the graduation criteria will be given a Provisional Certificate before the final certificate. In case of a student having outstanding dues against him/her to be paid to the University or any other affiliate/associate organization of the University, his/her provisional certificate/degree will be withheld until the dues are cleared.

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**PART – VI**  
**Internship Program**

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### **6.1. Objective**

The Internship Program (IP) forms an important component of education at ICFAI Technical School. This program is an attempt to bridge the gap between the academic institution and industry by involving the students in an ongoing developmental activity under the direct supervision of experienced Faculty and experts from the Corporate World. The IP method of education and curriculum represents a controlled simulation of real life situations and circumstances. It is adopted by ICFAI Technical School to link the educational institution with the real working environment.

The registration for the Internship program has to be done on the day of original registration only. Late registration as mentioned in 4.1 is not applicable for Internship Program.

Students at ICFAI Technical School undertake two Internship Program Courses, at professional locations lasting for about four months where the students and faculty get involved in working on real-life situations.

#### **6.1.1. For B.Tech Program**

- a) Summer Term Internship Program-I (SIP-101) is of two months duration, conducted during the summer term after first year of study carries a weightage of 5 units.
- b) Summer Term Internship Program-II (SIP-201) is of two months duration, conducted after second year, which also includes a part of the summer term, carries a weightage of 5 units.
- c) Summer Term Internship Program-III (SIP-301) is of two months duration, conducted after third year of study also carries a weightage of 5 units.

#### **6.1.2. For BCA, BCA-MCA Integrated and MCA Program**

- a) Summer Project-I (BCIP 101) is of two months duration, conducted during the summer term after first year of study carries a weightage of 5 units.
- b) Summer Project-II (BCIP 201) is of two months duration, conducted during the summer term after second year of study carries a weightage of 5 units.
- c) Major Information Technology Project which is conducted during the last semester of the study carries a weightage of 22 units, only for the students of BCA-MCA Integrated Program.
- d) Summer Project-I (MCAIP 101) is of two months duration, conducted during the summer term after first year of study carries a weightage of 10 units.

The Internship Program requires the students to undergo the rigor of the professional world in form as well as in substance, providing them an opportunity to apply their classroom knowledge to live situations which cannot be simulated in the classroom environment. It differs from the “Practical Training” as well as “Sandwich Schemes” as the entire student education at the Internship Program station is supervised by the ICFAI technical school faculty with active assistance of company counterparts. The program forms a part of the total credit towards student’s degree.

Students are advised to take up assignments of direct interest to the host organization. These assignments involving team-work would be multidisciplinary, time bound, mission-oriented and goal-oriented. Solutions to various problems confronted in the assignment might be open-ended, involving an element of analytical thinking, processing and decision making in the face of insufficient data, parameters and

uncertain situations.

## **6.2. Student-Faculty Interaction**

A team of students, attending the Internship Program at an organization is assigned a faculty guide at the beginning of the program. The role of the faculty guide during the Internship program is executives while the IP is in progress. He/she plays the role of a mentor and facilitator to ensure smooth conduct of Internship Program. The faculty co-ordinates and interacts with the representatives of the host organization and monitors the student's progress.

It is the student's responsibility to regularly report to the faculty and co-operate in the effective monitoring.

The faculty guide interacts with the student's project guide and professional experts regularly to chalk out an effective interaction plan and to know about the student's progress in their respective projects and the quality and quantity of work put in by the students. For the final round of evaluation, the faculty should also ensure participation of the department head or other senior officials of the organization, apart from the project guide.

## **6.3. Student-Project Guide Interaction**

The project guides from the host organizations help in identifying the assignment suitable for the students. Later they act as technical guides to the students. They evaluate the students on the progress of work. The project guide's time should not be taken for granted and the student should approach him/her well prepared for specific assistance and guidance or suggestions on the project.

## **6.4. Discipline and Conduct**

### **Attendance**

100% attendance is compulsory for the Internship Program. However, if for any genuine reason a student is unable to report to the allotted organization on any day, he/she should obtain a formal permission for leave of absence as per the rules and regulations of the organization. Permission should also be taken from the faculty- in- charge of the Internship Program, ICFAI Technical School.

### **Conduct and Behavior**

As Interns, the students assume the role of ICFAI Technical School ambassadors. The University expects the students to maintain high standards of professional and social conduct in the organization. ICFAI Technical School expects the students at all times during the Internship Program, to conform to the rules and regulations of their place of work. It is important to be regular, punctual and obedient at work. During the period of Internship Program, a student shall be subjected to the leave rules of the organization he/she is working for and must ensure strict adherence to the timings of the organization.

Unprofessional behavior, misconduct, indiscipline, irregularity and unsatisfactory performance will lead to the cancellation of registration in the Internship Program. Consequently, a student may lose at least one year of study, besides other form of disciplinary action that ICFAI TECHNICAL SCHOOL might deem fit to take.

## **6.5. Evaluation Criteria**

The educational process in the Internship Program seeks and focuses attention on many latent attributes that do not surface in normal classroom situation. Hence, the process of evaluation in these courses is designed with care so that information becomes available continuously. The following attributes are put to test here: intellectual ability, personality, commonsense, professional judgment, responsibility and

punctuality, team work, leadership qualities, ability to take initiative, problem-solving and decision-making skills capability to meet deadlines, communicate through oral and written presentations etc. There will be two evaluation components- Mid-term and Comprehensive. In the mid-term, the evaluation will be on mid-term report (softcopy) submission, Seminar/Viva-voce, Group Discussion or Quiz. In the comprehensive exam, the evaluation will be on Project report, Seminar and Viva-voce.

### **6.5.1. Project Report (Compulsory)**

A Project Report is a written presentation of the work done by the students on a given assignment. It is important to bear in mind that even though the project report is submitted only at the end of given assignment, in reality it is the culmination of a continuous effort on the part of Students.

The project report is judged on the following points:

- (i) Knowledge and comprehension of the problem.
- (ii) Ability to analyze and comprehend the subject and aim of the study.
- (iii) Logical sequencing, organization and handling of the data in the problem.
- (iv) Findings, observations and concluding remarks in terms of the objectives set earlier and the future scope of the project.
- (v) Organization of the report.

### **6.5.2. Seminar/Viva-Voce**

The seminar evaluates the students in terms of the following:

- (i) Knowledge of basic concepts and physical principles and the ability to apply them.
- (ii) Additional knowledge acquired.
- (iii) Ability to analyze a given problem or situation.
- (iv) Logical development of the subject. Effective oral communication.
- (v) Self-reliance, co-operation & moderation.

### **6.5.3. Group Discussion**

The Group Discussion evaluates the student in terms of the following:

- (i) Knowledge and comprehension of the problem/topic introduced for Group Discussions.
- (ii) Level of participation.
- (iii) Ability to lead the discussion in the correct direction and co-operate with fellow members.
- (iv) Ability to re-initiate the topic when the discussion drops due to lack of participation.
- (v) Ability to suggest new ideas for extending and improving the discussion.
- (vi) Ability to moderate discussions.
- (vii) Ability to create good impression on observers and members.

#### **6.5.4. Quiz**

Quiz evaluates the students in terms of the following:

- (i) Orientation of the student with the internship organization.
- (ii) Knowledge of basic concepts and physical principles and the ability to apply them.
- (iii) Additional knowledge acquired.
- (iv) Ability to analyze a given problem or situation.
- (v) Ability to follow logical path in problem solving efforts.

#### **6.5.5. Evaluation through Observation**

During Internship Program, students are evaluated through observations by the faculty and project guide for the following traits:

- (i) Regularity and ability to meet deadlines.
- (ii) Sense of responsibility.
- (iii) Initiative, leadership and cooperation.
- (iv) Industry and diligence.
- (v) Social sense and adaptability to practical situations.

Finally at the end of IP duration student will report to the IP Coordinator and appear for Internship Project presentation. The final evaluation will depend on:

- (i) Project Report
- (ii) Presentation performance
- (iii) Other attributes as mentioned above

#### **6.5.6. Diary**

Further, a student is expected to maintain a diary which is an attempt to cultivate the habit of documentation, enabling the student to develop his/her own thought process and reasoning abilities. ICFAI technical school faculty will check and sign the diary periodically. Here, the student is tested for the following attributes.

- (i) Data procurement, calculations and presentation.
- (ii) Thought process.
- (iii) Regularity.

#### **6.6. Internship Transcript**

At the time of graduation, in addition to the Graduation Certificate, each student is given an 'Internship Transcript', which contains among other things, a rating sheet summarizing the assessment of a student's professional personality obtained by the above process by the ICFAI Technical School faculty and resident at the internship station.

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**PART - VII**  
**Academic Administration and Infrastructure**

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### **7.1. Faculty**

A team of competent and committed faculty members steers the ICFAI Technical School of IUT. The Faculty plays a significant role in ensuring quality education through interactive teaching, continuous multiple criteria evaluation and constructive feedback mechanism. The faculties bring their extensive knowledge, professional experience and advanced education to their task at IUT. The University is endowed with teachers drawn from the industry, leading institutions, practicing professionals and academicians to augment the quality of academic delivery at ICFAI Technical School.

### **7.2. Library Facilities**

The University has a well-stocked library containing reference materials, magazines and Indian/International books and Journals. The University subscribes to the industry information database to make available large research resources and publications with search facilities to students and faculty. In addition, the library contains directories, industry reports and statistical compilations that provide timely and concise information for project works. Library is open to all students and faculty members and is continuously updated with latest books and journals under the supervision and advice of the library committee. Books are provided to the students by 'Book Bank' for a semester.

### **7.3. Computer Facilities**

IUT provides the latest hardware and software infrastructure to cater to all the computing needs of the students and faculty. The University is equipped with powerful servers and multiple terminals with multiple operating systems enabling a client-server environment. The students are guided by well experienced faculty to handle the computer labs. Leased internet facility is available for undertaking research activities.

### **7.4. Laboratory Facilities**

A central workshop with various machine tools and equipment including CNC machine supports hands-on training in various areas of workshop practices.

Extensive Laboratory facilities are available in all five departments. Physics, Chemistry, Environmental Science laboratories provide facilities for the students of all disciplines to acquire skills for measuring various parameters in science and technology. Few other laboratories like Concrete Technology, Geotechnical Engineering, Surveying, Transportation Engineering, Hydraulics etc. under Civil Engineering Department, IC Engine, Refrigeration & AC, Fluid Mechanics, Solid Mechanics lab under Mechanical Engineering Department, Digital Electronics, DSP, RF & Microwave, Advanced Communication, Electrical and Electronics Engineering and Instrumentation etc. under Electronics & Communication Engineering/Electrical & Electronics Engineering Department, Advanced JAVA, RDBMS, Latest version of Web Technology laboratory under Computer Science & Engineering Department need special mention. Apart from the above mentioned, there are few special laboratories like, FOSS, SakRobotix and Texas Instruments (TI).

## 7.5. Merit Scholarships

### 7.5.1. For B.Tech Program

To encourage meritorious students, ICFAI Technical School offers Merit Scholarships in the form of tuition fee concession to the students. Scholarships are available for the fresh students on the basis of their performance in 10+2 (or its equivalent), ranks achieved in JEE (Main), Tripura JEE and semester wise performance during the B.Tech Program. Up to 20% of the students of each batch are awarded these Merit Scholarships depending on the CGPA earned by them.

<b>B.Tech Program</b>	
<b>Particulars</b>	<b>Amount of Scholarship* (in Rs.)</b>
Scored 90% or above in 10+2 or equivalent (only regular mode) / JEE(Main) 2018 Rank < 30000 / Tripura JEE 2018 Rank < 1000	60,000
Scored 80% or above in 10+2 or equivalent (only regular mode) / JEE(Main) 2018 Rank 30001 to 40000/ Tripura JEE 2018 Rank 1001 to 1500	40,000
Scored 70% and above but less than 80% in 10+2 or equivalent (only regular mode)	20,000

\* Above scholarship amount will be disbursed equally in the first two

semesters. From 2<sup>nd</sup> semester onwards,

- **CGPA  $\geq$  9.0:** 50% of the Tuition fee as scholarship for the next semester
- **CGPA  $\geq$  8.0:** 25% of the Tuition fees as scholarship for the next semester

### 7.5.2. For UG-PG Program

ICFAI Technical School offers Merit Scholarships to the students pursuing BCA and BCA-MCA, MCA Integrated Program. These scholarships are based on performance in Class-XII/graduation (or equivalent) and Semester-wise performance during the respective program.

#### 7.5.2.1. Merit Scholarships for BCA based on past academic record:

Percentage of marks achieved in qualifying examination (Class-XII or its equivalent) for BCA will decide the amount of scholarship. The details are presented in the following table.

<b>BCA/BCA-MCA Integrated Program</b>	
<b>Particulars</b>	<b>Amount of Scholarship* (in Rs.)</b>
Scored 90% and above in Class XII or equivalent (only regular mode)	30,000
Scored 80% and above in Class XII or equivalent (only regular mode)	20,000
Scored 70% and above in Class XII or equivalent (only regular mode)	10,000

\* Above scholarship amount will be disbursed equally in the first two semesters.



### 7.5.2.2. Merit Scholarships for MCA based on past academic record:

Percentage of marks achieved in qualifying examination (graduation or equivalent) for MCA Program. The details are presented in the following table.

MCA Program	
Particulars	Amount of Scholarship* (in Rs.)
Scored 90% and above / CGPA $\geq$ 9 in graduation (only in regular mode) or Scored 700 and above marks in MAT 2020	60,000
Scored 80% and above / CGPA $\geq$ 8 in graduation (only in regular mode) or Scored 600 to 699 marks in MAT 2020	40,000
Scored 70% and above / CGPA $\geq$ 7 in graduation (only in regular mode) or Scored 500 to 599 marks in MAT 2020	20,000

\* Above scholarship amount will be disbursed equally in the first two semesters.

- **Based on Semester-wise Performance:**

Up to 10% of the students of the batch will be awarded merit scholarships based their Semester-wise performance in the preceding semester. This scholarship will be applicable from Semester III onwards. These scholarships are offered in addition to the scholarships based on the past-academic record as mentioned in the above Tables. The details of the scholarship are presented in the following table.

Semester Performance for BCA/BCA-MCA Integrated Program		
	CGPA $\geq$ 9.0	CGPA $\geq$ 8.0
% of the Semester Fee awarded as Scholarship	50%	25%

Semester Performance for MCA Program		
	CGPA $\geq$ 9.0	CGPA $\geq$ 8.0
% of the Semester Fee awarded as Scholarship	40%	20%

### 7.6. Awards

All students who successfully complete the prescribed course work and examinations will receive the B. Tech. degree from the ICFAI University, Tripura. Gold and Silver medals will be awarded to the students scoring the first rank and second rank, respectively on completion of the B.Tech, UG-PG Program.

A student against whom disciplinary action has been taken or who had any backlog of course(s) will not be eligible to get merit scholarship/medals.

### 7.7. IUT Alumni Association

IUT has established the IUT Alumni Association (IUTAA). All students are required to seek membership in IUTAA. The provisional membership in the alumni body entitles the students to participate in seminars, workshops, conferences and local chapter activities organized by IUTAA.

## 7.8. Co-curricular Activities

Emphasis is laid at IUT on the need to balance classroom and out-of-classroom situations. The University endeavors to build up personal growth and maturity in the students by providing a variety of opportunities for participation and initiation in co-curricular activities. The activities have been intended to support the educational purpose of the University by working to create experimental learning options outside the classroom and encourage the students to actively participate in the greater educational arena.

The students learn to value collaborative and collective learning through diverse activities, such as organizing seminars on contemporary issues, guest lectures and other inter-college competitions. Students are also encouraged to form informal groups and clubs based on their areas of interests, and share information and exchange ideas. Students also organize annual meets, which offer a wide array of opportunities to develop closer interaction with other colleges.

IUT encourages student involvement in several co-curricular activities like:

- |                     |                  |                          |
|---------------------|------------------|--------------------------|
| ⊗ Group Discussions | ⊗ Academic Meets | ⊗ Seminars               |
| ⊗ Debating          | ⊗ Sports Meets   | ⊗ Publications/Magazines |
| ⊗ Elocution         | ⊗ Cultural Meets | ⊗ Technical Group        |
| ⊗ Quizzes           | ⊗ Skits & Plays  |                          |

These co-curricular activities help the students to:

- Improve communication skills
- Develop the right attitude
- Discover and develop one's uniqueness and intelligence
- Enhance leadership qualities and abilities
- Manage stress and work under pressure
- Emerge as a team player
- Refine interpersonal/group skills
- Improve creativity
- Set ambitious targets.

## 7.9. Placements

IUT gives utmost importance to ensure that the successful B.Tech, UG-PG graduates receive suitable placements. In this context, the ICFAI University is uniquely placed to leverage on the industry network developed by the ICFAI University and its constituents.

For the past several years the IUT and its sister organization like IBS have developed a strong placement network among blue chip companies in manufacturing sector, engineering sector, financial services sector, information technology sector, consultancy, etc. A number of national and multi-national companies specializing in computer software, VLSI design and Cement manufacture, Infrastructure development etc. have recruited the students of ICFAI TECHNICAL SCHOOL through campus placements. This has been achieved through constant interaction with the industry by way of seminars, internships, research projects and on-campus and off-campus initiatives.

As a part of the placement efforts, IUT placement teams has been visiting a number of potential employers and consultants and apprise them of the level of knowledge and practical application skills acquired by

their graduates in their respective areas of specialization. The profiles of the students seeking placement assistance are made available to the prospective employers.

Placement meets and personality development workshops are organized as a part of the placement program. All students will be provided guidance in career planning as they progress to higher levels of the program.

IUT believes that the entire placement exercise is a joint effort between the University and the students. While University provides guidance, support and network with potential employers, the students have the responsibility to put in the maximum possible efforts to obtain suitable placements.

#### **7.10. Guest Lectures and Seminars**

Guest lectures and seminars play an important role in the development process of the students at IUT. Eminent academicians and practicing professionals are invited for guest lecturers that give the students an opportunity to interact closely with them and understand the practical applications in various industries.

#### **7.11. Medical Facility**

Medical facility is provided to the students and the faculty members as and when required. A doctor is available in campus to attend any health complications. Students are referred to corporate hospitals in case of severe complications and emergency. 24x7 ambulance facility is available.

#### **7.12. Students' Activity Council**

Students' Activity Council consisting of Student Representatives interacts with the faculty members for necessary guidance. Students' Activity Council meets regularly to decide and organize various activities on and off the campus.

#### **7.13. Disciplinary Committee**

Students must adhere to the "Campus Rules". Anyone found violating any of these would come under the purview of Disciplinary Committee of the University and would be liable for punishment given by the committee. A few guidelines are mentioned below:

- Ragging is strictly prohibited as per Government Acts.
- Good behavior, discipline and respect towards the faculty, staff and fellow- students are expected.
- Cell phones are strictly prohibited in classrooms, laboratories, library, computer center, examination halls etc.
- Decent dress code must be maintained within the college campus.
- Utmost care must be taken to avoid any damage while handling the property of the University.
- Unfair means in tests/examinations and other components of evaluation are strictly punishable.
- Students should carry their identity cards always.
- Smoking, gambling, consumption of alcohol, drugs and other narcotics in the campus/hostel premises are strictly prohibited.
- Gossiping or eating in the classrooms, library, computer center and labs is not allowed even if the rooms are vacant.
- The students should strive to keep the campus clean and avoid littering.
- A student should not be involved in any case of violence or nuisance within or outside the campus.

- Hostellers should abide by the rules and regulations of the hostel.
- They should necessarily avail the mess facilities of the hostel.
- Hostellers should take prior permission for going out of the hostel except for classes.
- They should not cause disturbance to their neighbors and fellow students.
- The students should not keep any valuables in their hostel rooms.
- Students are not allowed to entertain any person of the opposite sex within their hostel rooms.
- Recreational facilities provided to the students should be strictly followed at the specified timings.
- All hostel dues including the mess bills, service charges etc., should be cleared in time.
- Students must take advice of the University's Medical Officer before seeking medical treatment outside the campus.

These guidelines are not exhaustive. Students must adhere to all the rules of the University.

#### **7.14. Prohibition of Ragging**

Students are prohibited from indulging in any disorderly conduct whether by spoken words or written or by an act to the effect of teasing, treating or handling with rudeness, any other students. Indulging in unruly or undisciplined activities which cause or are likely to cause annoyance, hardship or psychological harm or to raise fear or apprehension thereof in any student, junior or senior, or asking the student to do any act or perform something which such a student will not do in the ordinary course and which has the effect of causing or generating a sense of shame or embarrassment so as to adversely affect the physique or psyche of the student is prohibited. Any student violating the above and thus indulging in any act of ragging will be severely dealt with.

#### **7.15. Students' Club**

There are five students' clubs, which provide platforms to the students to showcase their talent in different arena beyond their academic potentiality. The activities of these clubs like Vibrato (Music Club), The Mandali (Dance & Drama Club), The Shutter Bug (Photography Club), House of Coders (Coding Club) and the Robotics Club (Science forum) often play a vital role to inculcate friendly but competitive attitude among the students.

## **Do's and Don'ts**

### Do's

1. Students must abide by the rules and regulations of the University.
2. They must behave with decorum with the faculty, staff, students and guests of the University.
3. They have to be regular and punctual in attending classes and all activities connected with the University.
4. Students must read notices/circulars displayed on the ICFAI technical school Notice Board. Ignorance of not reading any notice/circular thus displayed shall not be accepted as an excuse for failing to comply with the directions contained in it.
5. Vehicles should be parked in the allotted place.
6. While representing University in any program or event, students should conduct themselves in such a way as to earn credit to themselves and to the institution.

7. The students are expected to take up all assignments, tests and examinations of this University seriously and try to perform the best.
8. Every student of this University must always possess Student Identity Card whenever they step inside the University campus.
9. Use the resources of the University namely library books, computers, equipments, transport, communications, power, etc. judiciously and effectively.

#### Don'ts

1. Students shall desist from indulging in violence.
2. Shall not talk or act in any manner in a way that would bring disrepute to the University.
3. Gathering in groups at roads, entrance, exit and pathways is strictly prohibited.
4. Smoking, consumption of any kind of alcoholic drinks/drugs inside the University is strictly prohibited.
5. Damaging the building or any other property of the University in any way is strictly prohibited.
6. Indulging in Ragging and Eve Teasing are crimes and strictly prohibited. If any student indulges in any form of ragging or Eve-Teasing inside the University premises or outside, he/she will be summarily expelled from the University.
7. Misconduct during examination, production of false information or documents for admission purpose and the failure to return materials taken on loan from the University would be seriously dealt with.
8. Use of mobile phones/other electronic gadgets such as ipod, etc. within the classrooms, laboratories, seminar halls and auditoriums are strictly banned.
9. Students should not involve themselves either directly or indirectly in any form of politics either inside or outside the University during their period of study.

## Important Contact Numbers

Designation	Name	Contact Number
<b>Dean (ICFAI TECHNICAL SCHOOL )</b>	Dr. P. R. Borthakur	+91 9436128180
<b>Principal (ITS)</b>	Dr. K. K. Rao	+91 9440314926
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<b>HOD, CSE, BCA, BCA-MCA, MCA</b>	Prof. A. Biswas	+91 9612220712
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