



**Dr. Ambedkar Institute of Technology, Bengaluru**  
(Estd. 1980 (An Autonomous Institution affiliated to VTU, Belagavi,  
Accredited by NAAC with 'A' Grade)

**OFFICE OF THE DEAN (ACADEMIC)**

Dr.AIT/Dean (A)/811 /2021-22

04.10.2021

**CIRCULAR**

The departments (UG & PG) offering IDE subjects for V & VII semester for the academic year 2021-22 are hereby informed to start the registration process from 04<sup>th</sup> October 2021 at their department level and limit to 75 students per subject. Complete the registration process by 9<sup>th</sup> October 2021 and submit the list (both hard & soft) to the Dean's (A) office positively by 11<sup>th</sup> October 2021. The list of IDE subjects is enclosed.

*Anil K.N.*  
4/10/21

**Dean (Academic)**

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Dr. Ambedkar Institute of Technology  
Bengaluru-560 056.



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**ACADEMIC YEAR 2021-2022**

**LIST OF INTER DEPARTMENTAL ELECTIVE SUBJECTS  
ODD SEMESTER (V & VII)**

**1. COMPUTER SCIENCE AND ENGINEERING**

Sl. No.	Sem.	Name of the Subject	Subject code	No. of credits	Prerequisite	Depts. For which the course can be offered	Room No.	Teaching Dept.	No. of Sections
1	5 <sup>th</sup>	OOPS with C++	18CS561	3	C Programming knowledge	Mech,IEM, Civil,EEE	C-326	CSE	1
2	5 <sup>th</sup>	Python Programming	18CS562	3	Previous experience in all programming language and other basics	All Branches Other than CSE	C-116	CSE	1
3	5 <sup>th</sup>	Unix shell Programming	18CS563	3	Programming Basics	All branches other than CSE, ISE	C-119	CSE	1
4	5 <sup>th</sup>	Object Oriented Modeling and Design	18CS564	3	Object Oriented concepts	EC,ISE	C-122	CSE	1
5	5 <sup>th</sup>	Software Testing	18CS565	3	C Programming knowledge	All Branches Other than CSE	C-326	CSE	1

Sl. No.	Sem	Name of the Subject	Subject code	No. of credits	Prerequisite	Depts. For which the course can be offered	Room No.	Teaching Dept.	No. of Sections
1	7 <sup>th</sup>	Artificial Intelligence with Prolog Programming	18CS751	3	Engg. Maths, Analytical Skills	EC,TC,ML,EE E & ISE	C-326	CSE	1
2	7 <sup>th</sup>	Machine Learning	18CS752	3	Engg. Maths Programming skills	All Branches Other than CSE	C-116	CSE	1

3	7 <sup>th</sup>	Internet of Things	18CS753	3	Computer Networks concepts	All branches Other than CSE	C-119	CSE	1
4	7 <sup>th</sup>	Software Engineering	18CS754	3	Programming skills,DB applications	EC,TC,EEE	C-122	CSE	1
5	7 <sup>th</sup>	Agile Methodology	18CS755	3	Nil	All Branches Other than CSE	C-116	CSE	1
6	7 <sup>th</sup>	Cloud Computing	18CS756	3	Knowledge of parallelism distributed systems	EC,TC,EEE	C-119	CSE	1

## 2. TELECOMMUNICATION

Sl. No.	Sem	Name of the Subject	Subject code	No. of credits	Prerequisite	Depts. For which the course can be offered	Room No.	Teaching Dept.	No. of Sections
1	5 <sup>th</sup>	Embedded System Design	18ET561		Basic Concepts of Computer, Digital Design Concepts	ECE, EEE, CSE, ISE, ML, EIE	C-410	ETE	1
2	7 <sup>th</sup>	Multimedia Communication	18TE452		Basic Concepts of Computer networks & Protocols, Basics of Analog & Digital Communication	ECE, CSE, ISE, EIE	E-415	ETE	1

## 3. MASTER OF COMPUTER APPLICATION (MCA)

Sl. No.	Sem	Name of the Subject	Subject code	No. of credits	Prerequisite	Depts. For which the course can be offered	Room No.	Teaching Dept.	No. of Sections
1	5 <sup>th</sup>	Data Science using python	20MCAE01	3	NIL	All Department	D204	MCA	1

## 4. INDUSTRIAL ENGINEERING & MANAGEMENT

Sl.No	Sem	Sub. Title	Sub. Code	No. of Credits	prerequisite	Depts. For which the Course can be offered	No of section	Teaching Dept.	Room no.
1.	5 <sup>th</sup>	Operation Research	18IME01	3	Maths	All (Except Mech & IEM)	1	IEM	A-309
2.	7 <sup>th</sup>	Human Resource Management	18IME03	3	None	All	1	IEM	A-309

### 5. ELECTRICAL & ELECTRONICS ENGINEERING

Sl.No	Sem.	Sub. Title	Sub. Code	No. of Credits	prerequisite	Depts. For which the Course can be offered	No of section	Teaching Dept.	Room no.
1	5 <sup>th</sup>	Renewable Energy Sources	18EEE01	3	NIL	All Departments	1	EEE	A214
2	7 <sup>th</sup>	Energy Auditing	EEE03	3	NIL	All Departments	1	EEE	A216

### 6. MECHANICAL ENGINEERING

Sl.No	Sem.	Sub. Title	Sub. Code	No. of Credits	Prerequisites	Dept. for which the course can be offered	No. of Section	Teaching dept.	Room No.
1	V	Product Design and Development	18ME561	03	EME	All departments	01	Mechanical	S-308
2	V	Renewable Energy Systems	18ME562	03	EME	EE, CV, IEM	01	Mechanical	S-309
3	V	Composite Materials Technology	18ME563	03	EME	All departments	01	Mechanical	S-310
4	VII	Power Plant Engineering	18ME751	03	EME, Engg. Maths	EE, CV, IEM, EC, IT	01	Mechanical	S-308
5	VII	Robotics	18ME752	03	Engg. Maths, Control systems	EC, EE, EI, IEM, CV, ML, TC	01	Mechanical	S-309
6	VII	Computer integrated manufacturing & Automation	18ME753	03	EME	EC, EE, EI, IEM, CV, ML, TC	01	Mechanical	S-310

### 7. INFORMATION SCIENCE & ENGINEERING

Sl.No	Sem.	Sub. Title	Sub. Code	No. of Credits	Prerequisites	Dept. for which the course can be offered	No of Section	Teaching dept.	Room No.
1	V	Machine Learning	18IS561	3	Basics of Programming	All depts. Except CS/IS. Note: Subject should not have been studied/offered in their respective dept.	1	ISE	D-109

2	V	Internet of Things	18IS562		Basics of Networking	All depts. Except ( S. Note: Subject should not have been studied/offered in their respective dept.	1	ISE	D-004
3	VII	Python Programming	18IS752	3	Basics of Programming	All depts. Except CS/IS. Note: Subject should not have been studied/offered in their respective dept.	1	ISE	D-004
4	VII	Artificial Intelligence	18IS753	3	Basics of Programming	All depts. Except CS/IS. Note: Subject should not have been studied/offered in their respective dept.	1	ISE	D-109

### 8. ELECTRONICS & INSTRUMENTATION TECHNOLOGY

Sl.No	Sem.	Sub. Title	Sub. Code	No. of Credits	Prerequisites	Dept. for which the course can be offered	No of Section	Teaching dept.	Room No.
1	V	Sensors & Application	18EIE561	3	NIL	ALL Depts.	1	EIE	C-403
2	V	Virtual Instrumentation	18EIE562	3	NIL	ALL Depts.	1	EIE	C-404
3	VII	Instrumentation & Measurement Techniques	18EI752	3	NIL	ALL Depts.	1	EIE	C-404

### 9. CIVIL ENGINEERING

Sl. No	Sem.	Sub. Title	Sub. Code	No. of Credits	Prerequisites	Dept. for which the course can be offered	No of Section	Teaching dept.	Room No.
1	V	Air Pollution and control	18CV561	3	Environmental Science	All B.E UG programme	1	Civil	S-009
2	V	Integrated Solid Waste Management	18CV562	3	Environmental Science	All B.E UG programme	1	Civil	S-108
3	VII	Ecology and Environmental Impact Assessment	18CV751	3	Environmental Science	All B.E UG programme	1	Civil	S-109
4	VII	Photo Geology and Remote Sensing	18CV753	3	Digital Image Processing	All B.E UG programme	1	Civil	S-110

### 10. MATHEMATICS

Sl.No	Sem.	Sub. Title	Sub. Code	No. of Credits	Prerequisites	Dept. for which the course can be offered	No of Section	Teaching dept.	Room No.
1	V	Advanced Numerical Methods	18MAE01	3	NIL	All Departments	1	Mathematics	
2	V	Applied Linear Algebra	18MAE02	3	NIL	All Departments	1	Mathematics	
3	V	Mathematical Transforms & Tensor Analysis	18MAE03	3	NIL	All Departments	1	Mathematics	

### 11. ELECTRONICS AND COMMUNICATION

Sl.No	Sem.	Sub. Title	Sub. Code	No. of Credits	Prerequisites	Dept. for which the course can be offered	No of Section	Teaching dept.	Room No.
1	V	Real Time Operating System	18EC561	3	Basic Concepts of Computer Systems and Processors	CS, IS, EI, ML	1	ECE	C-219
2	V	Mechatronics	18EC562	3	Basics Concepts of mechanical Engg. and Electronics Engg.	CS, IS, EI, ML, ME, IEM, EEE	1	ECE	C-309
3	VII	Internet of Things	18EC751	3	Basic Concepts of Computer Fundamentals	CS, IS, EI, EE, ML, ME, IEM, EEE, CV	1	ECE	C-313
4	VII	Cryptography	18EC752	3	Basic Concepts of Mathematics and Computer Fundamentals	CS, IS, ML, ETE, EI, EEE	2	ECE	C-319, C-322
5	VII	Bio-Mechatronics	18EC754	3	Basic concepts of mechanical Eng and electronics Engg.	CS, IS, EI, ETE, ML, ME, IEM, EEE, CV	1	ECE	C-302