

Jabalpur Engineering College, Jabalpur
 (Declared Autonomous by MP Govt., Affiliated to RGPV, Bhopal)
 (AICTE Model Curriculum Based Scheme)
Bachelor of Technology (B.Tech.) V Semester (Artificial Intelligence & Data Science)

w.e.f. July 2023

S.No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours Per Week			Total Credits
				Theory			Practical			L	T	P	
				End. Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Lab Work					
1	AI51	PEC	Professional Elective Course-I	70	20	10	-	-	100	3	1	-	4
2	AI52	PCC	Deep Learning	70	20	10	30	20	150	3	-	2	4
3	AI53	PCC	Data Science	70	20	10	30	20	150	3	-	2	4
4	AI54	PCC	Digital & Wireless Communication	70	20	10	30	20	150	3	-	2	4
5	BT51	HSMC	Professional Ethics	70	20	10	-	-	100	3	1	-	4
Total				350	100	50	90	60	650	15	2	6	20
6	AI56	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
7	AI57	MC	NSS/NCC/Swatchhata Abhiyan/Rural Outreach	Qualifier									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum 8 credits against additional MOOC courses in subject code AI56 for the award of Honours (Minor Specialization).									

- Note:** 01. Departmental BOS will decide list of three/four optional subjects those are available in MOOC as well for PEC.
 02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator.

Professional Elective Course-I		
S.No.	Subject Code	Subject Name
1	AI51A	Probability and Random Process
2	AI51B	Theory of Computation
3	AI51C	Information Theory & Coding


1 hour lecture (L) = 1 credit

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

PEC: Professional Elective Course, PCC: Professional Core Course, HSMC: Humanities and Social Sciences including Management Course, DLC: Distance Learning Course, MC: Mandatory Course,

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Jabalpur Engineering College, Jabalpur
(Declared Autonomous by MP Govt., Affiliated to RGPV, Bhopal)
(AICTE Model Curriculum Based Scheme)
Bachelor of Technology (B.Tech.) V Semester (Civil Engineering)

w.e.f. Jul 2023

S.No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours Per Week			Total Credits
				Theory			Practical			L	T	P	
				End. Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Lab Work					
1	CE51	PEC	Professional Elective Course-I	70	20	10	-	-	100	3	1	-	4
2	CE52	PCC	Structural Analysis-I	70	20	10	30	20	150	3	-	2	4
3	CE53	PCC	Geotechnical Engineering-II	70	20	10	30	20	150	3	-	2	4
4	CE54	PCC	Structural Design & Drawing-I (RCC)	70	20	10	30	20	150	3	-	2	4
5	BT52	HSMC	Engineering Economics & Management	70	20	10	-	-	100	3	1	-	4
Total				350	100	50	90	60	650	15	2	6	20
6	CE56	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
7	CE57	MC	NSS/NCC/Swachhata Abhiyan/Rural Outreach	Qualifier									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum 8 credits against additional MOOC courses in subject code CE56 for the award of Honours (Minor Specialization).									

- Note:** 01. Departmental BOS will decide list of three/four optional subjects those are available in MOOC as well for PEC.
02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator.

Professional Elective Course-I		
S.No.	Subject Code	Subject Name
1	CE51A	Elements of Environmental Engineering
2	CE51B	Water Resource Conservation
3	CE51C	Water Resource Engineering

1 hour lecture (L) = 1 credit

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

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(Declared Autonomous by MP Govt., Affiliated to RGPV, Bhopal)
(AICTE Model Curriculum Based Scheme)
Bachelor of Technology (B.Tech.) V Semester (Computer Science & Engineering)

w.e.f. July 2023

S.No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours Per Week			Total Credits
				Theory			Practical			L	T	P	
				End. Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Lab Work					
1	CS51	PEC	Professional Elective Course-I	70	20	10	-	-	100	3	1	-	4
2	CS52	PCC	Deep Learning	70	20	10	30	20	150	3	-	2	4
3	CS53	PCC	Operating Systems	70	20	10	30	20	150	3	-	2	4
4	CS54	PCC	Computer Graphics & Multimedia	70	20	10	30	20	150	3	-	2	4
5	BT51	HSMC	Professional Ethics	70	20	10	-	-	100	3	1	-	4
Total				350	100	50	90	60	650	15	2	6	20
6	CS56	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
7	CS57	MC	NSS/NCC/Swatchhata Abhiyan/Rural Outreach	Qualifier									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum 8 credits against additional MOOC courses in subject code CS56 for the award of Honours (Minor Specialization).									

- Note:** 01. Departmental BOS will decide list of three/four optional subjects those are available in MOOC as well for PEC.
02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator.

Professional Elective Course-I		
S.No.	Subject Code	Subject Name
1	CS51A	Theory of Computation
2	CS51B	Advance Computer Architecture
3	CS51C	Virtual Reality


1 hour lecture (L) = 1 credit

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

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(AICTE Model Curriculum Based Scheme)
Bachelor of Technology (B.Tech.) V Semester (Electrical Engineering)

w.e.f. July 2023

S.No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours Per Week			Total Credits
				Theory			Practical			L	T	P	
				End. Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Lab Work					
1	EE51	PEC	Professional Elective Course-I	70	20	10	-	-	100	3	1	-	4
2	EE52	PCC	Control System	70	20	10	30	20	150	3	-	2	4
3	EE53	PCC	Electrical Machine-II	70	20	10	30	20	150	3	-	2	4
4	EE54	PCC	Power Electronics-I	70	20	10	30	20	150	3	-	2	4
5	EE55	PCC	Power Sysem-II	70	20	10	-	-	100	3	1	-	4
Total				350	100	50	90	60	650	15	2	6	20
6	EE56	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
7	EE57	MC	NSS/NCC/Swatchhata Abhiyan/Rural Outreach	Qualifier									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum 8 credits against additional MOOC courses in subject code EE56 for the award of Honours (Minor Specialization).									

- Note:** 01. Departmental BOS will decide list of three/four optional subjects those are available in MOOC as well for PEC.
02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator.

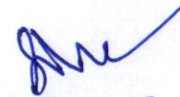
Professional Elective Course-I		
S.No.	Subject Code	Subject Name
1	EE51A	Fundamental of IoT
2	EE51B	Electrical Energy Conservation & Auditing
3	EE51C	Signal & Systems

1 hour lecture (L) = 1 credit

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

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Professor & Head, Electrical Engg. Dept.
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(AICTE Model Curriculum Based Scheme)

Bachelor of Technology (B.Tech.) V Semester (Electronics & Tele Communication Engineering)

w.e.f. July 2023

S.No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours Per Week			Total Credits
				Theory			Practical			L	T	P	
				End. Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Lab Work					
1	EC51	PEC	Professional Elective Course-I	70	20	10	-	-	100	3	1	-	4
2	EC52	PCC	Digital Communication	70	20	10	30	20	150	3	-	2	4
3	EC53	PCC	Linear Control Theory	70	20	10	30	20	150	3	-	2	4
4	EC54	PCC	Microprocessor, Microcontroller & Embedded System	70	20	10	30	20	150	3	-	2	4
5	EC55	PCC	Mobile Communication and Networks	70	20	10	-	-	100	3	1	-	4
	BT51	HSMC	Professional Ethics (Audit Subject)	-	-	-	-	-	-	2	-	-	-
Total				350	100	50	90	60	650	17	2	6	20
6	EC56	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
7	EC57	MC	NSS/NCC/Swathhata Abhiyan/Rural Outreach	Qualifier									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum 8 credits against additional MOOC courses in subject code EC57 for the award of Honours (Minor Specialization).									

- Note:** 01. Departmental BOS will decide list of three/four optional subjects those are available in MOOC as well for PEC.
02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator.

Professional Elective Course-I		
S.No.	Subject Code	Subject Name
1	EC51A	VLSI Technology
2	EC51B	Industrial Electronics
3	EC51C	Biomedical Instrumentation

1 hour lecture (L) = 1 credit

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

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(AICTE Model Curriculum Based Scheme)
Bachelor of Technology (B.Tech.) V Semester (Industrial & Production Engineering)

w.e.f. July 2023

S.No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours Per Week			Total Credits
				Theory			Practical			L	T	P	
				End. Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Lab Work					
1	IP51	PEC	Professional Elective Course-I	70	20	10	-	-	100	3	1	-	4
2	IP52	PCC	Tool Engineering & Machine Tools	70	20	10	30	20	150	3	-	2	4
3	IP53	PCC	Metal Cutting Science	70	20	10	30	20	150	3	-	2	4
4	IP54	PCC	Work Study and Ergonomics	70	20	10	30	20	150	3	-	2	4
5	IP55	PCC	Fluid Mechanics	70	20	10	-	-	100	3	1	-	4
Total				350	100	50	90	60	650	15	2	6	20
6	IP56	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
7	IP57	MC	NSS/NCC/Swatchhata Abhiyan/Rural Outreach	Qualifier									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum 8 credits against additional MOOC courses in subject code IP56 for the award of Honours (Minor Specialization).									

- Note:** 01. Departmental BOS will decide list of three/four optional subjects those are available in MOOC as well for PEC.
02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator.

Professional Elective Course-I		
S.No.	Subject Code	Subject Name
1	IP51A	Metrology & Quality Control
2	IP51B	Strategic Management
3	IP51C	Quality Engineering

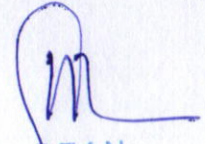
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1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

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Jabalpur Engineering College, Jabalpur
(Declared Autonomous by MP Govt., Affiliated to RGPV, Bhopal)
(AICTE Model Curriculum Based Scheme)
Bachelor of Technology (B.Tech.) V Semester (Information Technology)

w.e.f. July 2023

S.No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours Per Week			Total Credits
				Theory			Practical			L	T	P	
				End. Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Lab Work					
1	IT51	PEC	Professional Elective Course-I	70	20	10	-	-	100	3	1	-	4
2	IT52	PCC	Computer Network	70	20	10	30	20	150	3	-	2	4
3	IT53	PCC	Operating System	70	20	10	30	20	150	3	-	2	4
4	IT54	PCC	Data Base Management System	70	20	10	30	20	150	3	-	2	4
5	IT55	PCC	Internet and Web Technology	70	20	10	-	-	100	3	1	-	4
	BT51	HSMC	Professional Ethics (Audit Subject)	-	-	-	-	-	-	2	-	-	-
Total				350	100	50	90	60	650	17	2	6	20
6	IT56	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
7	IT57	MC	NSS/NCC/Swatchhata Abhiyan/Rural Outreach	Qualifier									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum 8 credits against additional MOOC courses in subject code IT56 for the award of Honours (Minor Specialization).									

- Note:** 01. Departmental BOS will decide list of three/four optional subjects those are available in MOOC as well for PEC.
02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator.

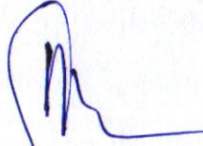
Professional Elective Course-I		
S.No.	Subject Code	Subject Name
1	IT51A	Automata and Compiler Design
2	IT51B	Computer Graphics and Multimedia
3	IT51C	Management Information System

1 hour lecture (L) = 1 credit

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

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Jabalpur Engineering College, Jabalpur
(Declared Autonomous by MP Govt., Affiliated to RGPV, Bhopal)
(AICTE Model Curriculum Based Scheme)
Bachelor of Technology (B.Tech.) V Semester (Mechanical Engineering)

w.e.f. July 2023

S.No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours Per Week			Total Credits
				Theory			Practical			L	T	P	
				End. Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Lab Work					
1	ME51	PEC	Professional Elective Course-I	70	20	10	-	-	100	3	1	-	4
2	ME52	PCC	Internal Combustion Engines	70	20	10	30	20	150	3	-	2	4
3	ME53	PCC	Turbo Machines	70	20	10	30	20	150	3	-	2	4
4	ME54	PCC	Dynamics of Machines	70	20	10	30	20	150	3	-	2	4
5	BT53	HSMC	Entrepreneurship & Management Concepts	70	20	10	-	-	100	3	1	-	4
Total				350	100	50	90	60	650	15	2	6	20
6	ME56	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
7	ME57	MC	NSS/NCC/Swatchhata Abhiyan/Rural Outreach	Qualifier									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum 8 credits against additional MOOC courses in subject code ME56 for the award of Honours (Minor Specialization).									

- Note:** 01. Departmental BOS will decide list of three/four optional subjects those are available in MOOC as well for PEC.
02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator.

Professional Elective Course-I		
S.No.	Subject Code	Subject Name
1	ME51A	Instrumentation Measurement & Control
2	ME51B	Solar Energy
3	ME51C	Mechanics of Composite Materials

1 hour lecture (L) = 1 credit

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

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Jabalpur Engineering College, Jabalpur
(Declared Autonomous by MP Govt., Affiliated to RGPV, Bhopal)
(AICTE Model Curriculum Based Scheme)
Bachelor of Technology (B.Tech.) V Semester (Mechatronics Engineering)

w.e.f. July 2023

S.No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours Per Week			Total Credits
				Theory			Practical			L	T	P	
				End. Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Lab Work					
1	MT51	PEC	Professional Elective Course-I	70	20	10	-	-	100	3	1	-	4
2	MT52	PCC	Thermodynamics & Applications	70	20	10	30	20	150	3	-	2	4
3	MT53	PCC	Internet of Things	70	20	10	30	20	150	3	-	2	4
4	MT54	PCC	Analog & Digital Communication	70	20	10	30	20	150	3	-	2	4
5	BT51	HSMC	Professional Ethics	70	20	10	-	-	100	3	1	-	4
Total				350	100	50	90	60	650	15	2	6	20
6	MT56	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
7	MT57	MC	NSS/NCC/Swathhata Abhiyan/Rural Outreach	Qualifier									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum 8 credits against additional MOOC courses in subject code MT56 for the award of Honours (Minor Specialization).									

Note: 01. Departmental BOS will decide list of three/four optional subjects those are available in MOOC as well for PEC.

02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator.

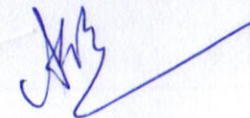
Professional Elective Course-I		
S.No.	Subject Code	Subject Name
1	MT51A	Finite Element Methods
2	MT51B	Fluid Mechanics
3	MT51C	Machine Design

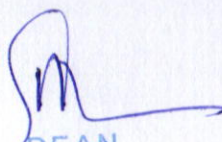
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1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

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