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						
				End. Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Lab Work		L	T	P	
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,

DEAN
Academic
JEC, Jabalpur (M.P.)

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. 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	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/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 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

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

DEAN
Academic
JEC, Jabalpur (M.P.)

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 (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						
				End. Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Lab Work		L	T	P	
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

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

DEAN
Academic
JEC, Jabalpur (M.P.)

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 (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						
				End. Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Lab Work		L	T	P	
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/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 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

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

DEAN
Academic
JEC, Jabalpur (M.P.)

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 (Electrical Engineering)

w.e.f. Juy 2023

S.No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours Per Week			Total Credits
				Theory			Practical						
				End. Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Lab Work		L	T	P	
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 System-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	Wind and Solar Energy
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

PEC: Professional Elective Course, PCC: Professional Core Course, DLC: Distance Learning Course, MC: Mandatory Course,

DEAN
Academic
JEC, Jabalpur (M.P.)

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 (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.

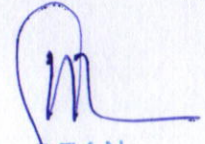02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator.

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

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, DLC: Distance Learning Course, MC: Mandatory Course,

DEAN
Academic
JEC, Jabalpur (M.P.)

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. Juy 2023

S.No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours Per Week			Total Credits
				Theory			Practical						
				End. Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Lab Work		L	T	P	
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

PEC: Professional Elective Course, PCC: Professional Core Course, DLC: Distance Learning Course, MC: Mandatory Course

DEAN
Academic
JEC, Jabalpur (M.P.)

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. Juy 2023

S.No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours Per Week			Total Credits
				Theory			Practical						
				End. Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Lab Work		L	T	P	
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

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

DEAN
Academic
JEC, Jabalpur (M.P.)

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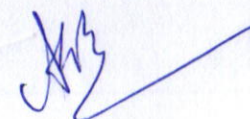
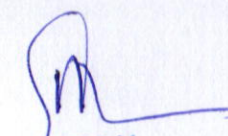| Professional Elective Course-I		
S.No.	Subject Code	Subject Name
1	MT51A	Finite Element Methods
2	MT51B	Fluid Mechanics
3	MT51C	Machine Design

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,

DEAN
Academic
JEC, Jabalpur (M.P.)