

Jabalpur Engineering College, Jabalpur
(Declared Autonomous by MP Govt., Affiliated to RGPV, Bhopal)
(AICTE Model Curriculum Based Scheme)
Bachelor of Technology (B.Tech.) VII 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	AI71	PEC	Professional Elective Course-III	70	20	10	-	-	100	3	1	-	4
2	AI72	OEC	Open Elective Course-II	70	20	10	-	-	100	3	1	-	4
3	AI73	PCC	Big Data Analysis	70	20	10	30	20	150	3	-	2	4
4	AI74	PCC	Digital Image Processing	70	20	10	30	20	150	3	-	2	4
5	AI75	PCC	Statistical Data Analysis	70	20	10	30	20	150	3	-	2	4
6	AI76	MC	Industrial Training Evaluation	-	-	-	60	40	100	-	-	4	2
Total				350	100	50	150	100	750	15	2	10	22
7	AI77	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
8	AI78	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 AI77 for the award of Honours (Minor Specialization).									

- Note:** 01. Departmental BOS will decide list of three/four elective subjects for each PEC and OEC.
02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator
03. Industrial training presentation & viva shall take place in VII Sem. which students have already done in VI Sem.

Professional Elective Course-III		
S.No.	Subject Code	Subject Name
1	AI71A	AI-Natural Language Processing (NLP)
2	AI71B	Block Chain Technique
3	AI71C	Simulation & Modeling

Open Elective Course-II		
S.No.	Subject Code	Subject Name
1	AI72A	Cloud Computing
2	AI72B	Network Management
3	AI72C	Cyber Security

1 hour lecture (L) = 1 credit

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

PEC: Professional Elective Course, OEC: Open Elective Course, PCC: Professional Core 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.) VII 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	CE71	PEC	Professional Elective Course-III	70	20	10	-	-	100	3	1	-	4
2	CE72	OEC	Open Elective Course-II	70	20	10	-	-	100	3	1	-	4
3	CE73	PCC	Environmental Engg.-II	70	20	10	30	20	150	3	-	2	4
4	CE74	PCC	Estimation Costing & Tendering	70	20	10	30	20	150	3	-	2	4
5	CE75	PCC	Structural Design and Drawing-III (RCC)	70	20	10	30	20	150	3	-	2	4
6	CE76	MC	Industrial Training Evaluation	-	-	-	60	40	100	-	-	4	2
Total				350	100	50	150	100	750	15	2	10	22
7	CE77	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
8	CE78	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 CE77 for the award of Honours (Minor Specialization).									

- Note:** 01. Departmental BOS will decide list of three/four elective subjects for each PEC and OEC.
02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator
03. Industrial training presentation & viva shall take place in VII Sem. which students have already done in VI Sem.

Professional Elective Course-III		
S.No.	Subject Code	Subject Name
1	CE71A	Earthquake Resistant Design
2	CE71B	Advanced Foundation Design
3	CE71C	Bridge Engineering

Open Elective Course-II		
S.No.	Subject Code	Subject Name
1	CE72A	Project Management
2	CE72B	Computational Methods in Structural Engineering
3	CE72C	Environmental Impact Assessment

1 hour lecture (L) = 1 credit

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2 hour Practical (P) = 1 credit

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(AICTE Model Curriculum Based Scheme)
Bachelor of Technology (B.Tech.) VII 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	CS71	PEC	Professional Elective Course-III	70	20	10	-	-	100	3	1	-	4
2	CS72	OEC	Open Elective Course-II	70	20	10	-	-	100	3	1	-	4
3	CS73	PCC	Compiler Design	70	20	10	30	20	150	3	-	2	4
4	CS74	PCC	Internet of Things	70	20	10	30	20	150	3	-	2	4
5	CS75	PCC	Computer Vision	70	20	10	30	20	150	3	-	2	4
6	CS76	MC	Industrial Training Evaluation	-	-	-	60	40	100	-	-	4	2
Total				350	100	50	150	100	750	15	2	10	22
7	CS77	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
8	CS78	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 CS77 for the award of Honours (Minor Specialization).									

- Note:** 01. Departmental BOS will decide list of three/four elective subjects for each PEC and OEC.
02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator
03. Industrial training presentation & viva shall take place in VII Sem. which students have already done in VI Sem.

Professional Elective Course-III		
S.No.	Subject Code	Subject Name
1	CS71A	Distributed System and Cloud Computing
2	CS71B	Information Retrieval
3	CS71C	Wireless Sensor Networks

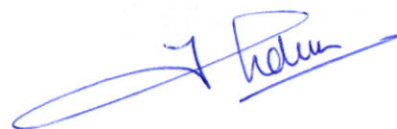
Open Elective Course-II		
S.No.	Subject Code	Subject Name
1	CS72A	Advance Mobile Communication
2	CS72B	Optimization Techniques
3	CS72C	Entrepreneurship Development & Management


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
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(AICTE Model Curriculum Based Scheme)
Bachelor of Technology (B.Tech.) VII 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	EE71	PEC	Professional Elective Course-III	70	20	10	-	-	100	3	1	-	4
2	EE72	OEC	Open Elective Course-II	70	20	10	-	-	100	3	1	-	4
3	EE73	PCC	High Voltage Engineering	70	20	10	30	20	150	3	-	2	4
4	EE74	PCC	Electrical Drives	70	20	10	30	20	150	3	-	2	4
5	EE75	PCC	Switchgear & Protection	70	20	10	30	20	150	3	-	2	4
6	EE76	MC	Industrial Training Evaluation	-	-	-	60	40	100	-	-	4	2
Total				350	100	50	150	100	750	15	2	10	22
7	EE77	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
8	EE78	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 EE77 for the award of Honours (Minor Specialization).									

- Note:** 01. Departmental BOS will decide list of three/four elective subjects for each PEC and OEC.
02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator
03. Industrial training presentation & viva shall take place in VII Sem. which students have already done in VI Sem.

Professional Elective Course-III		
S.No.	Subject Code	Subject Name
1	EE71A	Power Quality
2	* EE71B	Digital Image Processing
3	EE71C	Elements of Smart Grid

1 hour lecture (L) = 1 credit

Open Elective Course-II		
S.No.	Subject Code	Subject Name
1	* EE72A	Electrical and Hybrid Vehicles
2	EE72B	AI & Machine Learning
3	* EE72C	Computer Networks

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

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Professor & Head, Electrical Engg. Dept.
Government Engineering College, Jabalpur


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Bachelor of Technology (B.Tech.) VII 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	EC71	PEC	Professional Elective Course-III	70	20	10	-	-	100	3	1	-	4
2	EC72	OEC	Open Elective Course-II	70	20	10	-	-	100	3	1	-	4
3	EC73	PCC	T.V & Digital Display Devices	70	20	10	30	20	150	3	-	2	4
4	EC74	PCC	Optical Communication	70	20	10	30	20	150	3	-	2	4
5	EC75	PCC	Antenna & Wave Propagation	70	20	10	30	20	150	3	-	2	4
6	EC76	MC	Industrial Training Evaluation	-	-	-	60	40	100	-	-	4	2
Total				350	100	50	150	100	750	15	2	10	22
7	EC77	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
8	EC78	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 EC77 for the award of Honours (Minor Specialization).									

- Note:** 01. Departmental BOS will decide list of three/four elective subjects for each PEC and OEC.
02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator
03. Industrial training presentation & viva shall take place in VII Sem. which students have already done in VI Sem.

Professional Elective Course-III		
S.No	Subject Code	Subject Name
1	EC71A	Advanced Communication
2	EC71B	Mixed Signal Design
3	EC71C	Fuzzy Logic & Neural Network


1 hour lecture (L) = 1 credit

Open Elective Course-II		
S.No.	Subject Code	Subject Name
1	EC72A	Digital Image Processing
2	EC72B	Internet of Things
3	EC72C	Cyber Security

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

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Jabalpur Engineering College, Jabalpur
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(AICTE Model Curriculum Based Scheme)
Bachelor of Technology (B.Tech.) VII 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	IP71	PEC	Professional Elective Course-III	70	20	10	-	-	100	3	1	-	4
2	IP72	OEC	Open Elective Course-II	70	20	10	-	-	100	3	1	-	4
3	IP73	PCC	Industrial Robotics & Mechatronics	70	20	10	30	20	150	3	-	2	4
4	IP74	PCC	Computer Aided Design	70	20	10	30	20	150	3	-	2	4
5	IP75	PCC	Industrial Engineering	70	20	10	30	20	150	3	-	2	4
6	IP76	MC	Industrial Training Evaluation	-	-	-	60	40	100	-	-	4	2
Total				350	100	50	150	100	750	15	2	10	22
7	IP77	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
8	IP78	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 IP77 for the award of Honours (Minor Specialization).									

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02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator
03. Industrial training presentation & viva shall take place in VII Sem. which students have already done in VI Sem.

Professional Elective Course-III		
S.No.	Subject Code	Subject Name
1	IP71A	Vibration & Maintenance Engineering
2	IP71B	Project Management
3	IP71C	Automobile Engineering
4	IP71D	Computer Aided Production Planning

Open Elective Course-II		
S.No.	Subject Code	Subject Name
1	IP72A	Advance Manufacturing Process
2	IP72B	Rapid Prototyping
3	IP72C	Research Methodology & Optimization Techniques
4	IP72D	Manufacturing System Design

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
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(AICTE Model Curriculum Based Scheme)
Bachelor of Technology (B.Tech.) VII 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	IT71	PEC	Professional Elective Course-III	70	20	10	-	-	100	3	1	-	4
2	IT72	OEC	Open Elective Course-II	70	20	10	-	-	100	3	1	-	4
3	IT73	PCC	Information and Cyber Security	70	20	10	30	20	150	3	-	2	4
4	IT74	PCC	Introduction to Artificial Intelligence & Machine Learning	70	20	10	30	20	150	3	-	2	4
5	IT75	PCC	Internet of Things	70	20	10	30	20	150	3	-	2	4
6	IT76	MC	Industrial Training Evaluation	-	-	-	60	40	100	-	-	4	2
Total				350	100	50	150	100	750	15	2	10	22
7	IT77	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
8	IT78	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 IT77 for the award of Honours (Minor Specialization).									

- Note:** 01. Departmental BOS will decide list of three/four elective subjects for each PEC and OEC.
02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator
03. Industrial training presentation & viva shall take place in VII Sem. which students have already done in VI Sem.

Professional Elective Course-III		
S.No.	Subject Code	Subject Name
1	IT71A	Simulation and Modeling
2	IT71B	Advance Computer Architecture
3	IT71C	Real Time Operating Systems

Open Elective Course-II		
S.No.	Subject Code	Subject Name
1	IT72A	Wireless and Mobile Communication
2	IT72B	Embedded Systems
3	IT72C	Distributed Systems

1 hour lecture (L) = 1 credit

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

PEC: Professional Elective Course, OEC: Open Elective Course, PCC: Professional Core 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.) VII 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	ME71	PEC	Professional Elective Course-III	70	20	10	-	-	100	3	1	-	4
2	ME72	OEC	Open Elective Course-II	70	20	10	-	-	100	3	1	-	4
3	ME73	PCC	Machine Design-II	70	20	10	30	20	150	3	-	2	4
4	ME74	PCC	Vibration & Noise Control	70	20	10	30	20	150	3	-	2	4
5	ME75	PCC	Refrigeration & Air Conditioning	70	20	10	30	20	150	3	-	2	4
6	ME76	MC	Industrial Training Evaluation	-	-	-	60	40	100	-	-	4	2
Total				350	100	50	150	100	750	15	2	10	22
7	ME77	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
8	ME78	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 ME77 for the award of Honours (Minor Specialization).									

- Note:** 01. Departmental BOS will decide list of three/four elective subjects for each PEC and OEC.
02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator
03. Industrial training presentation & viva shall take place in VII Sem. which students have already done in VI Sem.

Professional Elective Course-III		
S.No.	Subject Code	Subject Name
1	ME71A	Operation Research & Supply Chain
2	ME71B	Automobile Engineeing
3	ME71C	Gas Dynamics and Jet Propulsion


Open Elective Course-II		
S.No.	Subject Code	Subject Name
1	ME72A	Renewable Energy Systems
2	ME72B	Product Design
3	ME72C	Artificial Intelligence

1 hour lecture (L) = 1 credit

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

PEC: Professional Elective Course, OEC: Open Elective Course, PCC: Professional Core 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.) VII 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	MT71	PEC	Professional Elective Course-III	70	20	10	-	-	100	3	1	-	4
2	MT72	OEC	Open Elective Course-II	70	20	10	-	-	100	3	1	-	4
3	MT73	PCC	Mechatronics System Design	70	20	10	30	20	150	3	-	2	4
4	MT74	PCC	EV and HV Technology	70	20	10	30	20	150	3	-	2	4
5	MT75	PCC	AI & ML	70	20	10	30	20	150	3	-	2	4
6	MT76	MC	Industrial Training Evaluation	-	-	-	60	40	100	-	-	4	2
Total				350	100	50	150	100	750	15	2	10	22
7	MT77	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
8	MT78	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 MT77 for the award of Honours (Minor Specialization).									

- Note:** 01. Departmental BOS will decide list of three/four elective subjects for each PEC and OEC.
02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator
03. Industrial training presentation & viva shall take place in VII Sem. which students have already done in VI Sem.

Professional Elective Course-III		
S.No.	Subject Code	Subject Name
1	MT71A	CAD/CAM
2	MT71B	Mechanical Vibration & Noise
3	MT71C	Power Plant Engineering

Open Elective Course-II		
S.No.	Subject Code	Subject Name
1	MT72A	Wireless Sensor Networks
2	MT72B	Aerial Robotics
3	MT72C	Simulation & Modelling

1 hour lecture (L) = 1 credit

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

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

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