

Jabalpur Engineering College, Jabalpur

(Declared Autonomous by MP Govt., Affiliated to RGPV, Bhopal)

(AICTE Model Curriculum Based Scheme) with Provision for Internship

Bachelor of Technology (B.Tech.) VII Semester (Artificial Intelligence & Data Science)

w.e.f. July 2024

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	AI701M	PCC	Big Data Analysis	70	20	10	30	20	150	3	-	2	4
2	AI702M	PCC	Digital Image Processing	70	20	10	30	20	150	3	-	2	4
3	AI703M	PCC	Statistical Data Analysis	70	20	10	30	20	150	3	-	2	4
4	AI704M	PEC	Professional Elective Course-II	70	20	10	-	-	100	3	1	-	4
5	AI705M	OEC	Open Elective Course-III	70	20	10	-	-	100	3	1	-	4
6	AI706M	MC	Industrial Training Evaluation	-	-	-	60	40	100	-	-	4	2
7	AI707M	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
Total				350	100	50	150	100	750	15	2	10	22
8	AI708M	MC	NSS/NCC/Swachhata Abhiyan/Rural Outreach	Qualifier									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum three additional courses in subject code AI707M 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-II		
S.No.	Subject Code	Subject Name
1	AI704M A	AI-Natural Language Processing
2	AI704M B	Block Chain Technique
3	AI704M C	Simulation & Modelling

Open Elective Course-III		
S.No.	Subject Code	Subject Name
1	AI705M A	Cloud Computing
2	AI705M B	Network Management
3	AI705M C	Cyber Security

PEC: Professional Elective Course (Branch Specific), OEC: Open Elective Course (Interdisciplinary), PCC: Professional Core Course, DLC: Distance Learning Course,

MC: Mandatory Course

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) with Provision for Internship
Bachelor of Technology (B.Tech.) VII Semester (Civil Engineering)

w.e.f. July 2024

w.e.f. July 2024

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	CE701M	PCC	Environmental Engg.-II	70	20	10	30	20	150	3	-	2	4
2	CE702M	PCC	Structural Design & Drawing-III (RCC)	70	20	10	30	20	150	3	-	2	4
3	CE703M	PCC	Estimation Costing & Tendering	70	20	10	30	20	150	3	-	2	4
4	CE704M	PEC	Professional Elective Course-II	70	20	10	-	-	100	3	1	-	4
5	CE705M	OEC	Open Elective Course-III	70	20	10	-	-	100	3	1	-	4
6	CE706M	MC	Industrial Training Evaluation	-	-	-	60	40	100	-	-	4	2
7	CE707M	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
Total				350	100	50	150	100	750	15	2	10	22
8	CE708M	MC	NSS/NCC/Swachhata Abhiyan/Rural Outreach	Qualifier									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum three additional courses in subject code CE707M 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-II		
S.No.	Subject Code	Subject Name
1	CE704M A	Advanced Water Resources Engineering
2	CE704M B	Advanced Foundation Design
3	CE704M C	Bridge Engineering

Open Elective Course-III		
S.No.	Subject Code	Subject Name
1	CE705M A	Project Management
2	CE705M B	Computational Methods in Structural Engineering
3	CE705M C	Environmental Impact Assessment

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1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

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(AICTE Model Curriculum Based Scheme) with Provision for Internship
Bachelor of Technology (B.Tech.) VII Semester (Electronics & Telecommunication Engineering)

w.e.f. July 2024

w.e.f. July 2024													
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	EC701M	PCC	Optical Communication	70	20	10	30	20	150	3	-	2	4
2	EC702M	PCC	CMOS VLSI Design	70	20	10	30	20	150	3	-	2	4
3	EC703M	PCC	Antenna Wave Propagation	70	20	10	30	20	150	3	-	2	4
4	EC704M	PEC	Professional Elective Course-II	70	20	10	-	-	100	3	1	-	4
5	EC705M	OEC	Open Elective Course-III	70	20	10	-	-	100	3	1	-	4
6	EC706M	MC	Industrial Training Evaluation	-	-	-	60	40	100	-	-	4	2
7	EC707M	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
Total				350	100	50	150	100	750	15	2	10	22
8	EC708M	MC	NSS/NCC/Swachhata Abhiyan/Rural Outreach	Qualifier									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum three additional courses in subject code EC707M for the award of Honours (Minor Specialization).									
Note: 01. Departmental PCCs will hold the final exam 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-II		
S.No.	Subject Code	Subject Name
1	EC704M A	Wireless Communication
2	EC704M B	Information Theory & Coding
3	EC704M C	RFID

Open Elective Course-III		
S.No.	Subject Code	Subject Name
1	EC705M A	Digital Image Processing
2	EC705M B	Artificial Intelligence
3	EC705M C	Robotics

PEC: Professional Elective Course (Branch Specific), OEC: Open Elective Course (Interdisciplinary), PCC: Professional Core Course, DLC: Distance Learning Course, MC: Mandatory Course

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) with Provision for Internship
Bachelor of Technology (B.Tech.) VII Semester (Electrical Engineering)

w.e.f. July 2024

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	EE701M	PCC	High Voltage Engineering	70	20	10	30	20	150	3	-	2	4
2	EE702M	PCC	Electrical Drives	70	20	10	30	20	150	3	-	2	4
3	EE703M	PCC	Power System Control	70	20	10	30	20	150	3	-	2	4
4	EE704M	PEC	Professional Elective Course-II	70	20	10	-	-	100	3	1	-	4
5	EE705M	OEC	Open Elective Course-III	70	20	10	-	-	100	3	1	-	4
6	EE706M	MC	Industrial Training Evaluation	-	-	-	60	40	100	-	-	4	2
7	EE707M	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
Total				350	100	50	150	100	750	15	2	10	22
8	EE708M	MC	NSS/NCC/Swachhata Abhiyan/Rural Outreach	Qualifier									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum three additional courses in subject code EE707M for the award of Honour (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-II		
S.No.	Subject Code	Subject Name
1	EE704M A	Power System Planning & Reliability
2	EE704M B	Soft Computing Techniques
3	EE704M C	Advance Digital Communication

Open Elective Course-III		
S.No.	Subject Code	Subject Name
1	EE705M A	Generalized Theory of Electric Machines
2	EE705M B	Digital Control System
3	EE705M C	Advanced Industrial Electronics


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2 hour Practical (P) = 1 credit




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(AICTE Model Curriculum Based Scheme) with Provision for Internship

Bachelor of Technology (B.Tech.) VII Semester (Industrial & Production Engineering)

w.e.f. July 2024

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	IP701M	PCC	Industrial Robotics & Mechatronics	70	20	10	30	20	150	3	-	2	4
2	IP702M	PCC	Industrial Engineering	70	20	10	30	20	150	3	-	2	4
3	IP703M	PCC	Advance Manufacturing Process	70	20	10	30	20	150	3	-	2	4
4	IP704M	PEC	Professional Elective Course-II	70	20	10	-	-	100	3	1	-	4
5	IP705M	OEC	Open Elective Course-III	70	20	10	-	-	100	3	1	-	4
6	IP706M	MC	Industrial Training Evaluation	-	-	-	60	40	100	-	-	4	2
7	IP707M	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
Total				350	100	50	150	100	750	15	2	10	22
8	IP708M	MC	NSS/NCC/Swachhata Abhiyan/Rural Outreach	Qualifier									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum three additional courses in subject code IP707M 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-II		
S.No.	Subject Code	Subject Name
1	IP704M A	Vibration & Maintenance Engineering
2	IP704M B	Project Management
3	IP704M C	Automobile Engineering
4	IP704M D	Computer Aided Production Planning

Open Elective Course-III		
S.No.	Subject Code	Subject Name
1	IP705M A	Material Management & Product Design
2	IP705M B	Manufacturing System Design
3	IP705M C	Product Life Cycle Management
4	IP705M D	Rapid Prototyping

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MC: Mandatory Course

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2 hour Practical (P) = 1 credit

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(Declared Autonomous by MP Govt., Affiliated to RGPV, Bhopal)
(AICTE Model Curriculum Based Scheme) with Provision for Internship
Bachelor of Technology (B.Tech.) VII Semester (Information Technology)

w.e.f. July 2024

w.e.f. July 2024													
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	IT701M	PCC	Cloud Computing	70	20	10	30	20	150	3	-	2	4
2	IT702M	PCC	Information Retrieval	70	20	10	30	20	150	3	-	2	4
3	IT703M	PCC	Machine Learning	70	20	10	30	20	150	3	-	2	4
4	IT704M	PEC	Professional Elective Course-II	70	20	10	-	-	100	3	1	-	4
5	IT705M	OEC	Open Elective Course-III	70	20	10	-	-	100	3	1	-	4
6	IT706M	MC	Industrial Training Evaluation	-	-	-	60	40	100	-	-	4	2
7	IT707M	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
Total				350	100	50	150	100	750	15	2	10	22
8	IT708M	MC	NSS/NCC/Swachhata Abhiyan/Rural Outreach	Qualifier									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum three additional courses in subject code IT707M 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-II		
S.No.	Subject Code	Subject Name
1	IT704M A	Simulation and Modelling
2	IT704M B	Advanced Computer Architecture
3	IT704M C	Real Time Systems

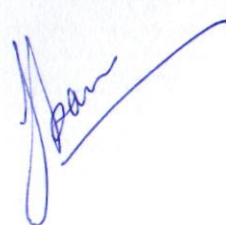
Open Elective Course-III		
S.No.	Subject Code	Subject Name
1	IT705M A	Wireless & Mobile Communication
2	IT705M B	Embedded Systems
3	IT705M C	Distributed Systems


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2 hour Practical (P) = 1 credit




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(AICTE Model Curriculum Based Scheme) with Provision for Internship
Bachelor of Technology (B.Tech.) VII Semester (Mechanical Engineering)

w.e.f. July 2024

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	ME701M	PCC	Refrigeration & Air Conditioning	70	20	10	30	20	150	3	-	2	4
2	ME702M	PCC	Vibration & Noise Control	70	20	10	30	20	150	3	-	2	4
3	ME703M	PCC	Advance Machine Design	70	20	10	30	20	150	3	-	2	4
4	ME704M	PEC	Professional Elective Course-II	70	20	10	-	-	100	3	1	-	4
5	ME705M	OEC	Open Elective Course-III	70	20	10	-	-	100	3	1	-	4
6	ME706M	MC	Industrial Training Evaluation	-	-	-	60	40	100	-	-	4	2
7	ME707M	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
Total				350	100	50	150	100	750	15	2	10	22
8	ME708M	MC	NSS/NCC/Swachhata Abhivan/Rural Outreach	Qualifier									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum three additional courses in subject code ME707M 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-II		
S.No.	Subject Code	Subject Name
1	ME704M A	Industrial Robotics
2	ME704M B	Product Design
3	ME704M C	Gas Dynamics and Jet Propulsion
4	ME704M D	Automobile Engineering

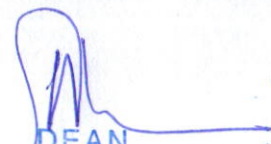
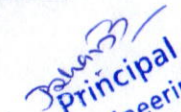
Open Elective Course-III		
S.No.	Subject Code	Subject Name
1	ME705M A	Renewable Energy Systems
2	ME705M B	Artificial Intelligence
3	ME705M C	Internet of Things
4	ME705M D	Operation Research & Supply Chain

PEC: Professional Elective Course (Branch Specific), OEC: Open Elective Course (Interdisciplinary), PCC: Professional Core Course, DLC: Distance Learning Course, MC: Mandatory Course

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) with Provision for Internship
Bachelor of Technology (B.Tech.) VII Semester (Mechatronics Engineering)

w.e.f. July 2024

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	MT701M	PCC	Mechatronics System Design	70	20	10	30	20	150	3	-	2	4
2	MT702M	PCC	EV and HV Technology	70	20	10	30	20	150	3	-	2	4
3	MT703M	PCC	AI & ML	70	20	10	30	20	150	3	-	2	4
4	MT704M	PEC	Professional Elective Course-II	70	20	10	-	-	100	3	1	-	4
5	MT705M	OEC	Open Elective Course-III	70	20	10	-	-	100	3	1	-	4
6	MT706M	MC	Industrial Training Evaluation	-	-	-	60	40	100	-	-	4	2
7	MT707M	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
Total				350	100	50	150	100	750	15	2	10	22
8	MT708M	MC	NSS/NCC/Swachhata Abhiyan/Rural Outreach	Qualifier									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum three additional courses in subject code MT707M 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-II		
S.No.	Subject Code	Subject Name
1	MT704M A	CAD/CAM
2	MT704M B	Mechanical Vibration & Noise
3	MT704M C	Power Plant Engineering


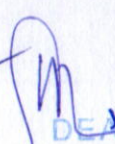
Open Elective Course-III		
S.No.	Subject Code	Subject Name
1	MT705M A	Wireless Sensor Networks
2	MT705M B	Aerial Robotics
3	MT705M C	Simulation & Modelling

PEC: Professional Elective Course (Branch Specific), OEC: Open Elective Course (Interdisciplinary), PCC: Professional Core Course, DLC: Distance Learning Course, MC: Mandatory Course

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