

# Jabalpur Engineering College, Jabalpur

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

(AICTE Model Curriculum Based Scheme)

Bachelor of Technology (B.Tech.) IV Semester (Civil Engg.)

For batches admitted in July 2017 & July 2018 (w.e.f. July 2018)

For batches admitted in July 2017 & July 2018 (w.c.f. July 2018)													
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	CE401	BSC	Material Science	70	20	10	-	-	100	3	1	-	4
2	CE402	PCC	Transportation Engineering	70	20	10	30	20	150	3	-	2	4
3	CE403	PCC	Geotechnical Engineering-I	70	20	10	30	20	150	3	-	2	4
4	CE404	PCC	Fluid Mechanics	70	20	10	30	20	150	3	-	2	4
5	CE405	PEC	Advance Surveying	70	20	10	-	-	100	3	1	-	4
6	CE406	ESC	Software Lab-I	-	-	-	60	40	100	-	-	2	1
7	CE407	MC	Industrial Training	Minimum Four Weeks Duration. Evaluation will be done in 5th semester									
Total				350	100	50	150	100	750	15	2	8	21
8	CE408	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	4
NSS/NCC/Swachhata Abhiyan/Rural Outreach				Qualifier / -									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum two additional courses in subject code CE408 for the award of Honours (Minor Specialization).									
Note: I Departmental BOS will decide list of three optional subjects there amongst them one will be MOOC													

**Note:** 1 Departmental BOS will decide list of three optional subjects those are available in MOOC as well for PEC.

2 Industrial training should be apart from laboratory work undertaken in the college rather it should have industrial orientation and practical aspects/field work. Report to be submitted at the beginning of 5th semester and students have to give a presentation in the department. Evaluation will be done in 5th semester.

1 hour lecture (L) = 1 credit

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

MOOC/DLC Courses	CE408A Problem Solving and Critical Thinking Skills	CE408B Science and Engineering Ethics	CE408C Building with Nature
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*Principal*  
Jabalpur Engineering College  
Jabalpur - 482 011 (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.) IV Semester (Computer Science & Engg.)

For batches admitted in July 2017 & July 2018 (w.e.f. July 2018)

For batches admitted in July 2017 & July 2018 (w.e.f. July 2018)													
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	MA401	BSC	Discrete Structure	70	20	10	-	-	100	3	1	-	4
2	CS402	PCC	Computer Organization and Architecture	70	20	10	30	20	150	3	-	2	4
3	CS403	PCC	Operating Systems	70	20	10	30	20	150	3	-	2	4
4	CS404	PCC	Design and Analysis of Algorithms	70	20	10	30	20	150	3	-	2	4
5	CS405	PEC	Management-I (Organizational Behaviour/Finance & Accounting)	70	20	10	-	-	100	3	1	-	4
6	CS406	ESC	Software Lab-II (PYTHON)	-	-	-	60	40	100	-	-	2	1
7	CS407	MC	Industrial Training	Minimum Four Weeks Duration. Evaluation will be done in 5th semester									
Total				350	100	50	150	100	750	15	2	8	21
8	CS408	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	4
NSS/NCC/Swachhata Abhiyan/Rural Outreach				Qualifier / -									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum two additional courses in subject code CS408 for the award of Honours (Minor Specialization).									
Note:1 Departmental BOS will decide list of three optional subjects to be opted by the students.													

**Note:** 1 Departmental BOS will decide list of three optional subjects those are available in MOOC as well for PEC.

2 Industrial training should be apart from laboratory work undertaken in the college rather it should have industrial orientation and practical aspects/field work. Report to be submitted at the beginning of 5th semester and students have to give a presentation in the department. Evaluation will be done in 5th semester.

1 hour lecture (L) = 1 credit

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

MOOC Courses	CS408A Privacy and Security in Online Social Media	CS408B Randomized Algorithms	CS408C Parallel Algorithms
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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.) IV Semester (Electrical Engg.)

For batches admitted in July 2017 & July 2018 (w.e.f. July 2018)

For batches admitted in July 2017 & July 2018 (w.e.f. July 2018)													
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					
			Electrical										
1	EE401	BSC	Engineering Materials	70	20	10	-	-	100	3	1	-	4
2	EE402	PCC	Electrical Machines-I	70	20	10	30	20	150	3	-	2	4
3	EE403	PCC	Power System-I	70	20	10	30	20	150	3	-	2	4
4	EE404	PCC	Electrical and Electronic Instrumentation	70	20	10	30	20	150	3	-	2	4
5	EE405	PEC	Electromagnetic Theory, Field Theory	70	20	10	-	-	100	3	1	-	4
6	EE406	ESC	Software Lab-II	-	-	-	60	40	100	-	-	2	1
7	EE407	MC	Industrial Training	Minimum Four Weeks Duration. Evaluation will be done in 5th semester									
Total				350	100	50	150	100	750	15	2	8	21
8	EE408	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	4
NSS/NCC/Swachhata Abhiyan/Rural Outreach				Qualifier / -									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum two additional courses in subject code EE408 for the award of Honours (Minor Specialization).									
Note:1 Departmental BOS will decide list of three optional subjects, these can be taken up till 1st MOOC													

**Note:1** Departmental BOS will decide list of three optional subjects those are available in MOOC as well for PEC.

**2** Industrial training should be apart from laboratory work undertaken in the college rather it should have industrial orientation and practical aspects/field work. Report to be submitted at the beginning of 5th semester and students have to give a presentation in the department. Evaluation will be done in 5th semester.

1 hour lecture (L) = 1 credit

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

MOOC Courses	EE408A Bio Medical Signal Processing	EE408B Electronic Systems for Cancer Diagnosis	EE408C Advance Power Electronics and Control	EE408D Electromagnetic Waves in Guided and Wireless Medium
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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.) IV Semester (E&TC Engg.)

For batches admitted in July 2017 & July 2018 (w.e.f. July 2018)

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	EC401	PCC	Electromagnetic Theory	70	20	10	-	-	100	3	1	-	4
2	EC402	PCC	Analog Integrated Circuits	70	20	10	30	20	150	3	-	2	4
3	EC403	PCC	Digital Circuits & Systems	70	20	10	30	20	150	3	-	2	4
4	EC404	PCC	Analog Communication	70	20	10	30	20	150	3	-	2	4
5	EC405	PEC	Mobile Communication	70	20	10	-	-	100	3	1	-	4
6	EC406	ESC	Software Lab-II	-	-	-	60	40	100	-	-	2	1
7	EC407	MC	Industrial Training	Minimum Four Weeks Duration. Evaluation will be done in 5th semester									
Total				350	100	50	150	100	750	15	2	8	21
8	EC408	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	4
NSS/NCC/Swachhata Abhiyan/Rural Outreach				Qualifier / —									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum two additional courses in subject code EC408 for the award of Honours (Minor Specialization).									

**Note:** 1 Departmental BOS will decide list of three optional subjects those are available in MOOC as well for PEC.

2 Industrial training should be apart from laboratory work undertaken in the college rather it should have industrial orientation and practical aspects/field work. Report to be submitted at the beginning of 5th semester and students have to give a presentation in the department. Evaluation will be done in 5th semester.

1 hour lecture (L) = 1 credit

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

MOOC Courses	EC408A Introduction to Acoustics	EC408B Principles of Electronics Biosensors	EC408C Interfacing with Arduino	EC408D Smartphone Emerging Technology
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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.) IV Semester (Industrial & Production Engineering)

For batches admitted in July 2017 & July 2018 (w.e.f. July 2018)

For batches admitted in July 2017 & July 2018 (w.e.f. July 2018)													
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	IP401	PCC	Material Science & Metellurgy	70	20	10	-	-	100	3	1	-	4
2	IP402	PCC	Production Process	70	20	10	30	20	150	3	-	2	4
3	IP403	PCC	Theory of Machines & Mechanism	70	20	10	30	20	150	3	-	2	4
4	IP404	PCC	Fluid Mechanics	70	20	10	30	20	150	3	-	2	4
5	IP405	PEC	Machine Design	70	20	10	-	-	100	3	1	-	4
6	IP406	ESC	Software Lab-II	-	-	-	60	40	100	-	-	2	1
7	IP407	MC	Industrial Training	Minimum Four Weeks Duration. Evaluation will be done in 5th semester									
Total				350	100	50	150	100	750	15	2	08	21
8	IP408	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	4
NSS/NCC/Swachhata Abhiyan/Rural Outreach				Qualifier									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum two additional courses in subject code IP408 for the award of Honours (Minor Specialization).									
Departmental BOS will decide list of these optional courses.													

**Note:1** Departmental BOS will decide list of three optional subjects those are available in MOOC as well for PEC. **Online courses under MOOC will be taken with permission of HOD.**

**2** Industrial training should be apart from laboratory work undertaken in the college rather it should have industrial orientation and practical aspects/field work. Report to be submitted at the beginning of 5th semester and students have to give a presentation in the department. Evaluation will be done in 5th semester.

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.) IV Semester (Information Technology)

For batches admitted in July 2017 & July 2018 (w.e.f. July 2018)													
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	MA401	BSC	Discrete Structure	70	20	10	-	-	100	3	1	-	4
2	IT402	PCC	Analysis & Design of Algorithm	70	20	10	30	20	150	3	-	2	4
3	IT403	PCC	Computer Architecture	70	20	10	30	20	150	3	-	2	4
4	IT404	PCC	Principles of Communication	70	20	10	30	20	150	3	-	2	4
5	IT405	PEC	Structured System Analysis & Design	70	20	10	-	-	100	3	-	2	4
6	IT406	ESC	Software Lab-II	-	-	-	60	40	100	-	-	2	1
7	IT407	MC	Industrial Training	Minimum Four Weeks Duration. Evaluation will be done in 5th semester									
Total				350	100	50	150	100	750	15	2	08	21
8	IT408	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	4
NSS/NCC/Swachhata Abhiyan/Rural Outreach				Qualifier / -									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum two additional courses in subject code IT408 for the award of Honours (Minor Specialization).									
Note:1 Departmental BOS will decide list of three optional subjects those are available in MOOC as well for PEC Industrial training should be done for 4 weeks.													

Note: 1 Departmental BOS will decide list of three optional subjects those are available in MOOC as well for PEC.

2 Industrial training should be apart from laboratory work undertaken in the college rather it should have industrial orientation and practical aspects/field work. Report to be submitted at the beginning of 5th semester and students have to give a presentation in the department. Evaluation will be done in 5th semester.

1 hour lecture (L) = 1 credit

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

MOOC Courses	IT408A	IT408B	IT408C
	Configuring LINUX Web Servers	Two Speed IT: BCG Perspective	Portfolio Management, Governance & the PMO

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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.) IV Semester (Mechanical Engg.)

For batches admitted in July 2017 & July 2018 (w.e.f. July 2018)

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	ME401	PCC	Machine Design-I	70	20	10	-	-	100	3	1	-	4
2	ME402	PCC	Fluid Mechanics	70	20	10	30	20	150	3	-	2	4
3	ME403	PCC	Machine Drawing & CAD	70	20	10	30	20	150	3	-	2	4
4	ME404	PCC	Theory of Machines & Mechanisms	70	20	10	30	20	150	3	-	2	4
5	ME405	PEC	Energy Conversion System	70	20	10	-	-	100	3	1	-	4
6	ME406	ESC	Software Lab-II	-	-	-	60	40	100	-	-	2	1
7	ME407	MC	Industrial Training	Minimum Four Weeks Duration. Evaluation will be done in 5th semester									
Total				350	100	50	150	100	750	15	02	08	21
8	ME408	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	4
NSS/NCC/Swachhata Abhiyan/Rural Outreach				Qualifier / -									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum two additional courses in subject code ME408 for the award of Honours (Minor Specialization).									

**Note:1** Departmental BOS will decide list of three optional subjects those are available in MOOC as well for PEC.

**2** Industrial training should be apart from laboratory work undertaken in the college rather it should have industrial orientation and practical aspects/field work. Report to be submitted at the beginning of 5th semester and students have to give a presentation in the department. Evaluation will be done in 5th semester.

1 hour lecture (L) = 1 credit

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

MOOC Courses	ME408A Basics of Finite Element Analysis-I	ME408B Introduction to Machining and Machining Fluids	ME408C Steam and Gas Power Systems	ME408D Introduction to Research
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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.) IV Semester Mechatronics Engineering

For batches admitted (w.e.f. July 2021)

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	MT-401	PCC	Electronics Drives and Devices	70	20	10	-	-	100	3	1	-	4
2	MT-402	PCC	Manufacturing Processes	70	20	10	30	20	150	3	-	2	4
3	MT-403	PCC	Theory of Machines	70	20	10	30	20	150	3	-	2	4
4	MT-404	PCC	Microcontroller Theory and Design	70	20	10	30	20	150	3	-	2	4
5	MT-405	PEC	Linear Control Theory	70	20	10	-	-	100	3	1	-	4
6	MT-406	ESC	CAD and Kinematics SimulationLab	-	-	-	60	40	100	-	-	2	1
7	MT-407	MC	Industrial Training	Minimum Four Weeks Duration. Evaluation will be done in 5th semester									
Total				350	100	50	150	100	750	15	1	8	21
8	MT408	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	4
NSS/NCC/Swachhata Abhiyan/Rural Outreach				Qualifier / -									
Additional Course for Honours or Minor Specialization				Permitted to opt for maximum two additional courses in subject code ..... for the award of Honours (Minor Specialization).									

**Note:1** Departmental BOS will decide list of three optional subjects those are available in MOOC as well for PEC.

**2** Industrial training should be apart from laboratory work undertaken in the college rather it should have industrial orientation and practical aspects/field work. Report to be submitted at the beginning of 5th semester and students have to give a presentation in the department. Evaluation will be done in 5th semester.

1 hour lecture (L) = 1 credit

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

MOOC/DLC Courses	MT408A Introduction to Internet of Things	MT408B Concept of Thermodynamics	MT408C Enclosure Design of Electronics Equipments	MT408D BioMEMS and Microfluidics
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*P. M. K. Singh*

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Dean (Academic),  
Jabalpur Engineering College  
Jabalpur



# Jabalpur Engineering College, Jabalpur

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

(AICTE Model Curriculum Based Scheme)

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

w.e.f. July 2022

w.e.f. July 2022													
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	MA401	BSC	Discrete Structure	70	20	10	-	-	100	3	1	-	4
2	AI402	PCC	Database Management System	70	20	10	30	20	150	3	-	2	4
3	AI403	PCC	Operating System	70	20	10	30	20	150	3	-	2	4
4	AI404	PCC	Introduction in Artificial Intelligence and Machine Learning	70	20	10	30	20	150	3	-	2	4
5	AI405	PCC	Microprocessor and Microcontroller	70	20	10	-	-	100	3	1	-	4
6	AI406	ESC	Software Lab-II R-Programming	-	-	-	60	40	100	-	-	2	1
7	AI407	MC	Industrial Training	Minimum Four Weeks Duration. Evaluation will be done in 5th semester									
Total				350	100	50	150	100	750	15	2	8	21
8	AI408	DLC	Self-Learning Presentation (SWAYAM/NPTEL/MOOC)	-	-	-	-	-	-	-	-	-	8
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 AI408 for the award of Honours (Minor Specialization).									
Note:1 Departmental BOS will decide list of three optional subjects those are available in MOOC													

**Note:1** Departmental BOS will decide list of three optional subjects those are available in MOOC.

**2** Industrial training should be apart from laboratory work undertaken in the college rather it should have industrial orientation and practical aspects/field work. Report to be submitted at the beginning of 5th semester and students have to give a presentation in the department. Evaluation will be done in 5th semester.

1 hour lecture (L) = 1 credit

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

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