

Jabalpur Engineering College, Jabalpur
(Declared Autonomous by MP Govt., Affiliated to RGPV, Bhopal)
(AICTE Model Curriculum Based Scheme)
Bachelor of Technology (B.Tech.) VI 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 | CE61 | PEC | Professional Elective Course-II | 70 | 20 | 10 | - | - | 100 | 3 | 1 | - | 4 |
| 2 | CE62 | OEC | Open Elective Course-I | 70 | 20 | 10 | - | - | 100 | 3 | 1 | - | 4 |
| 3 | CE63 | PCC | Structural Analysis-II | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 4 | CE64 | PCC | Structural Design & Drawing-II (Steel) | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 5 | CE65 | PCC | Environmental Engineering-I | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 6 | CE66 | PI | Minor Project | - | - | - | 60 | 40 | 100 | - | - | 4 | 2 |
| 7 | | MC | Industrial Training | Minimum Four weeks Duration. Evaluation will be done in 7th semester. | | | | | | | | | |
| Total | | | | 350 | 100 | 50 | 150 | 100 | 750 | 15 | 2 | 10 | 22 |
| 8 | CE67 | DLC | Self-Learning Presentation (SWAYAM/NPTEL/MOOC) | - | - | - | - | - | - | - | - | - | 8 |
| 9 | CE68 | 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 CE67 for the award of Honours (Minor Specialization). | | | | | | | | | |

- Note:** 01. Departmental BOS will decide list of three/four optional subjects those are available in MOOC, OEC as well for PEC.
02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator.
03. 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 7th semester and students have to give a presentation in the Department. Evaluation will be done in 7th semester.

| Professional Elective Course-II | | |
|---------------------------------|--------------|--|
| S.No. | Subject Code | Subject Name |
| 1 | CE61A | Geographical Information System |
| 2 | CE61B | Natural Disaster Mitigation and Management |
| 3 | CE61C | Pre-Stressed Concrete Structure Design |

1 hour lecture (L) = 1 credit


| Open Elective Course-I | | |
|------------------------|--------------|-------------------------------------|
| S.No. | Subject Code | Subject Name |
| 1 | CE62A | Advanced Water Resource Engineering |
| 2 | CE62B | Waste Management |
| 3 | CE62C | Elements of FEM |

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

PEC: Professional Elective Course, OEC: Open Elective Course, PCC: Professional Core Course, PI: Project and Internship, DLC: Distance Learning Course, MC: Mandatory Course




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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.) VI 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 | ME61 | PEC | Professional Elective Course-II | 70 | 20 | 10 | - | - | 100 | 3 | 1 | - | 4 |
| 2 | ME62 | OEC | Open Elective Course-I | 70 | 20 | 10 | - | - | 100 | 3 | 1 | - | 4 |
| 3 | ME63 | PCC | Heat and Mass Transfer | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 4 | ME64 | PCC | Metal Cutting & Machine Tools | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 5 | ME65 | PCC | Industrial Engineering | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 6 | ME66 | PI | Minor Project | - | - | - | 60 | 40 | 100 | - | - | 4 | 2 |
| 7 | | MC | Industrial Training | Minimum Four weeks Duration. Evaluation will be done in 7th semester. | | | | | | | | | |
| Total | | | | 350 | 100 | 50 | 150 | 100 | 750 | 15 | 2 | 10 | 22 |
| 8 | ME67 | DLC | Self-Learning Presentation (SWAYAM/NPTEL/MOOC) | - | - | - | - | - | - | - | - | - | 8 |
| 9 | ME68 | 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 ME67 for the award of Honours (Minor Specialization). | | | | | | | | | |

- Note:** 01. Departmental BOS will decide list of three/four optional subjects those are available in MOOC, OEC as well for PEC.
02. MOOC/NPTEL subjects shall be taken with permission of HOD/Coordinator.
03. 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 7th semester and students have to give a presentation in the Department. Evaluation will be done in 7th semester.

| Professional Elective Course-II | | |
|---------------------------------|--------------|---------------------------|
| S.No. | Subject Code | Subject Name |
| 1 | ME61A | Mechanics of Materials-II |
| 2 | ME61B | Robotic Engineering |
| 3 | ME61C | Finite Element Method |

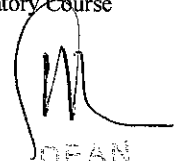
1 hour lecture (L) = 1 credit

| Open Elective Course-I | | |
|------------------------|--------------|-----------------------------|
| S.No. | Subject Code | Subject Name |
| 1 | ME62A | Power Plant Engineering |
| 2 | ME62B | Intellectual Property Right |
| 3 | ME62C | Automotive Fuels & Emission |

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

PEC: Professional Elective Course, OEC: Open Elective Course, PCC: Professional Core Course, PI: Project and Internship, DLC: Distance Learning Course, MC: Mandatory Course


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(AICTE Model Curriculum Based Scheme)
Bachelor of Technology (B.Tech.) VI 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 | EE61 | PEC | Professional Elective Course-II | 70 | 20 | 10 | - | - | 100 | 3 | 1 | - | 4 |
| 2 | EE62 | OEC | Open Elective Course-I | 70 | 20 | 10 | - | - | 100 | 3 | 1 | - | 4 |
| 3 | EE63 | PCC | Microprocessor & Microcontroller | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 4 | EE64 | PCC | Power Electronics-II | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 5 | EE65 | PCC | Modern Power System | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 6 | EE66 | PI | Minor Project | - | - | - | 60 | 40 | 100 | - | - | 4 | 2 |
| 7 | | MC | Industrial Training | Minimum Four weeks Duration. Evaluation will be done in 7th semester. | | | | | | | | | |
| Total | | | | 350 | 100 | 50 | 150 | 100 | 750 | 15 | 2 | 10 | 22 |
| 8 | EE67 | DLC | Self-Learning Presentation (SWAYAM/NPTEL/MOOC) | - | - | - | - | - | - | - | - | - | 8 |
| 9 | EE68 | 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 EE67 for the award of Honours (Minor Specialization). | | | | | | | | | |

- Note:** 01. Departmental BOS will decide list of three/four optional subjects those are available in MOOC, OEC as well for PEC.
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| Professional Elective Course-II | | |
|---------------------------------|--------------|-------------------------------|
| S.No. | Subject Code | Subject Name |
| 1 | * EE61A | Advance Digital Communication |
| 2 | EE61B | Fundamental of Robotics |
| 3 | * EE61C | Wind and Solar Energy Systems |

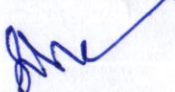
1 hour lecture (L) = 1 credit

| Open Elective Course-I | | |
|------------------------|--------------|--------------------------------------|
| S.No. | Subject Code | Subject Name |
| 1 | EE62A | Engineering Economics and Management |
| 2 | * EE62B | Digital Control System |
| 3 | EE62C | Data Structure |

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.) VI 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 | EC61 | PEC | Professional Elective Course-II | 70 | 20 | 10 | - | - | 100 | 3 | 1 | - | 4 |
| 2 | EC62 | OEC | Open Elective Course-I | 70 | 20 | 10 | - | - | 100 | 3 | 1 | - | 4 |
| 3 | EC63 | PCC | Digital Signal Processing | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 4 | EC64 | PCC | Analog & Digital VLSI Design | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 5 | EC65 | PCC | Microwave & Radar Engg. | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 6 | EC66 | PI | Minor Project | - | - | - | 60 | 40 | 100 | - | - | 4 | 2 |
| 7 | | MC | Industrial Training | Minimum Four weeks Duration. Evaluation will be done in 7th semester. | | | | | | | | | |
| Total | | | | 350 | 100 | 50 | 150 | 100 | 750 | 15 | 2 | 10 | 22 |
| 8 | EC67 | DLC | Self-Learning Presentation (SWAYAM/NPTEL/MOOC) | - | - | - | - | - | - | - | - | - | 8 |
| 9 | EC68 | 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 EC67 for the award of Honours (Minor Specialization). | | | | | | | | | |

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

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03. Industrial training should be apart from laboratory work unertaken in the college rather it should have industrial orientation and practical aspects/field work. Report to be sbmitted at the beginning of 7th semester and students have to give a presentation in the Department. Evaluation will be done in 7th semester.

| Professional Elective Course-II | | |
|---------------------------------|--------------|---------------------------|
| S.No. | Subject Code | Subject Name |
| 1 | EC61A | Data Comm. & Computer N/W |
| 2 | EC61B | Satellite Communication |
| 3 | EC61C | Mobile Standards |

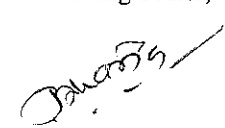
1 hour lecture (L) = 1 credit

| Open Elective Course-I | | |
|------------------------|--------------|-----------------------------|
| S.No. | Subject Code | Subject Name |
| 1 | EC62A | Wireless Communication |
| 2 | EC62B | Information Theory & Coding |
| 3 | EC62C | Robotics |

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.) VI 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 | CS61 | PEC | Professional Elective Course-II | 70 | 20 | 10 | - | - | 100 | 3 | 1 | - | 4 |
| 2 | CS62 | OEC | Open Elective Course-I | 70 | 20 | 10 | - | - | 100 | 3 | 1 | - | 4 |
| 3 | CS63 | PCC | Computer Networks | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 4 | CS64 | PCC | Software Engineering | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 5 | CS65 | PCC | Cryptography and Network Security | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 6 | CS66 | PI | Minor Project | - | - | - | 60 | 40 | 100 | - | - | 4 | 2 |
| 7 | | MC | Industrial Training | Minimum Four weeks Duration. Evaluation will be done in 7th semester. | | | | | | | | | |
| Total | | | | 350 | 100 | 50 | 150 | 100 | 750 | 15 | 2 | 10 | 22 |
| 8 | CS67 | DLC | Self-Learning Presentation (SWAYAM/NPTEL/MOOC) | - | - | - | - | - | - | - | - | - | 8 |
| 9 | CS68 | 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 CS67 for the award of Honours (Minor Specialization). | | | | | | | | | |

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

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

03. 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 7th semester and students have to give a presentation in the Department. Evaluation will be done in 7th semester.

| Professional Elective Course-II | | |
|---------------------------------|--------------|-------------------------|
| S.No. | Subject Code | Subject Name |
| 1 | CS61A | Data Center Management |
| 2 | CS61B | Parallel Computing |
| 3 | CS61C | Blockchain Technologies |

1 hour lecture (L) = 1 credit

| Open Elective Course-I | | |
|------------------------|--------------|------------------|
| S.No. | Subject Code | Subject Name |
| 1 | CS62A | Image Processing |
| 2 | CS62B | Mobile Computing |
| 3 | CS62C | Robotics |

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.) VI 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 | IT61 | PEC | Professional Elective Course-II | 70 | 20 | 10 | - | - | 100 | 3 | 1 | - | 4 |
| 2 | IT62 | OEC | Open Elective Course-I | 70 | 20 | 10 | - | - | 100 | 3 | 1 | - | 4 |
| 3 | IT63 | PCC | Network Management | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 4 | IT64 | PCC | Data Mining | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 5 | IT65 | PCC | Cloud Computing | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 6 | IT66 | PI | Minor Project | - | - | - | 60 | 40 | 100 | - | - | 4 | 2 |
| 7 | | MC | Industrial Training | Minimum Four weeks Duration. Evaluation will be done in 7th semester. | | | | | | | | | |
| Total | | | | 350 | 100 | 50 | 150 | 100 | 750 | 15 | 2 | 10 | 22 |
| 8 | IT67 | DLC | Self-Learning Presentation (SWAYAM/NPTEL/MOOC) | - | - | - | - | - | - | - | - | - | 8 |
| 9 | IT68 | 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 IT67 for the award of Honours (Minor Specialization). | | | | | | | | | |

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

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

03. Industrial training should be apart from laboratory work unertaken in the college rather it should have industrial orientation and practical aspects/field work. Report to be sbmitted at the beginning of 7th semester and students have to give a presentation in the Department. Evaluation will be done in 7th semester.

| Professional Elective Course-II | | |
|---------------------------------|--------------|-------------------------------|
| S.No. | Subject Code | Subject Name |
| 1 | IT61A | Information Theory and Coding |
| 2 | IT61B | E-Commerce and E-Governance |
| 3 | IT61C | Artificial Intelligence |

1 hour lecture (L) = 1 credit

| Open Elective Course-I | | |
|------------------------|--------------|---|
| S.No. | Subject Code | Subject Name |
| 1 | IT62A | Microprocessor and Interfacing Coding |
| 2 | IT62B | Intellectual Property Rights-Governance |
| 3 | IT62C | Digital Signal and Image Processing |

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.) VI 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 | IP61 | PEC | Professional Elective Course-II | 70 | 20 | 10 | - | - | 100 | 3 | 1 | - | 4 |
| 2 | IP62 | OEC | Open Elective Course-I | 70 | 20 | 10 | - | - | 100 | 3 | 1 | - | 4 |
| 3 | IP63 | PCC | Operations Research | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 4 | IP64 | PCC | Manufacturing Technology | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 5 | IP65 | PCC | Turbo Machines | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 6 | IP66 | PI | Minor Project | - | - | - | 60 | 40 | 100 | - | - | 4 | 2 |
| 7 | | MC | Industrial Training | Minimum Four weeks Duration. Evaluation will be done in 7th semester. | | | | | | | | | |
| Total | | | | 350 | 100 | 50 | 150 | 100 | 750 | 15 | 2 | 10 | 22 |
| 8 | IP67 | DLC | Self-Learning Presentation (SWAYAM/NPTEL/MOOC) | - | - | - | - | - | - | - | - | - | 8 |
| 9 | IP68 | MC | NSS/NCC/Swathhata Abhayan/Rural Outreach | Qualifier | | | | | | | | | |
| Additional Course for Honours or Minor Specialization | | | | Permitted to opt for maximum 8 credits against additional MOOC courses in subject code IP67 for the award of Honours (Minor Specialization). | | | | | | | | | |

- Note:** 01. Departmental BOS will decide list of three/four optional subjects those are available in MOOC, OEC as well for PEC.
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03. 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 7th semester and students have to give a presentation in the Department. Evaluation will be done in 7th semester.

| Professional Elective Course-II | | |
|---------------------------------|--------------|---|
| S.No. | Subject Code | Subject Name |
| 1 | IP61A | Operation Management |
| 2 | IP61B | Industrial Psychology & Human Behaviour |
| 3 | IP61C | Finite Element Methods |

1 hour lecture (L) = 1 credit

| Open Elective Course-I | | |
|------------------------|--------------|-----------------------------------|
| S.No. | Subject Code | Subject Name |
| 1 | IP62A | Applied Thermodynamics |
| 2 | IP62B | IPR (Intellectual Property Right) |
| 3 | IP62C | Product Design and Development |

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

PEC: Professional Elective Course, OEC: Open Elective Course, PCC: Professional Core Course, PI: Project and Internship, DLC: Distance Learning Course, MC: Mandatory Course

[Signature]


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(AICTE Model Curriculum Based Scheme)

Bachelor of Technology (B.Tech.) VI 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 | AI61 | PEC | Professional Elective Course-II | 70 | 20 | 10 | - | - | 100 | 3 | 1 | - | 4 |
| 2 | AI62 | OEC | Open Elective Course-I | 70 | 20 | 10 | - | - | 100 | 3 | 1 | - | 4 |
| 3 | AI63 | PCC | Compiler Design | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 4 | AI64 | PCC | Internet of Things (I.O.T.) | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 5 | AI65 | PCC | Robotics Technology | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 6 | AI66 | PI | Minor Project | - | - | - | 60 | 40 | 100 | - | - | 4 | 2 |
| 7 | | MC | Industrial Training | Minimum Four weeks Duration. Evaluation will be done in 7th semester. | | | | | | | | | |
| Total | | | | 350 | 100 | 50 | 150 | 100 | 750 | 15 | 2 | 10 | 22 |
| 8 | AI67 | DLC | Self-Learning Presentation (SWAYAM/NPTEL/MOOC) | - | - | - | - | - | - | - | - | - | 8 |
| 9 | AI68 | 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 AI67 for the award of Honours (Minor Specialization). | | | | | | | | | |

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

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

03. 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 7th semester and students have to give a presentation in the Department. Evaluation will be done in 7th semester.

| Professional Elective Course-II | | |
|---------------------------------|--------------|----------------------------|
| S.No. | Subject Code | Subject Name |
| 1 | AI61A | Application of AI |
| 2 | AI61B | Optimization Methods in AI |
| 3 | AI61C | Information Retrieval |

1 hour lecture (L) = 1 credit

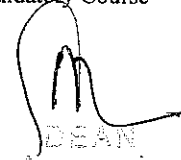
| Open Elective Course-I | | |
|------------------------|--------------|---------------------------|
| S.No. | Subject Code | Subject Name |
| 1 | AI62A | Economics & Social Issues |
| 2 | AI62B | Software Engineering |
| 3 | AI62C | Quantum Computing |

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

PEC: Professional Elective Course, OEC: Open Elective Course, PCC: Professional Core Course, PI: Project and Internship, DLC: Distance Learning Course, MC: Mandatory Course

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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.) VI 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 | MT61 | PEC | Professional Elective Course-II | 70 | 20 | 10 | - | - | 100 | 3 | 1 | - | 4 |
| 2 | MT62 | OEC | Open Elective Course-I | 70 | 20 | 10 | - | - | 100 | 3 | 1 | - | 4 |
| 3 | MT63 | PCC | Industry 4.0 | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 4 | MT64 | PCC | Data Communication & Computer Networks | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 5 | MT65 | PCC | Robotics and Automation | 70 | 20 | 10 | 30 | 20 | 150 | 3 | - | 2 | 4 |
| 6 | MT66 | PI | Minor Project | - | - | - | 60 | 40 | 100 | - | - | 4 | 2 |
| 7 | | MC | Industrial Training | Minimum Four weeks Duration. Evaluation will be done in 7th semester. | | | | | | | | | |
| Total | | | | 350 | 100 | 50 | 150 | 100 | 750 | 15 | 2 | 10 | 22 |
| 8 | MT67 | DLC | Self-Learning Presentation (SWAYAM/NPTEL/MOOC) | - | - | - | - | - | - | - | - | - | 8 |
| 9 | MT68 | 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 MT67 for the award of Honours (Minor Specialization). | | | | | | | | | |

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

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

03. Industrial training should be apart from laboratory work unertaken in the college rather it should have industrial orientation and practical aspects/field work. Report to be sbmitted at the beginning of 7th semester and students have to give a presentation in the Department. Evaluation will be done in 7th semester.

| Professional Elective Course-II | | |
|---------------------------------|--------------|------------------------|
| S.No. | Subject Code | Subject Name |
| 1 | MT61A | Automobile Engineering |
| 2 | MT61B | Dynamics of Machines |
| 3 | MT61C | Heat and Mass Transfer |

1 hour lecture (L) = 1 credit

| Open Elective Course-I | | |
|------------------------|--------------|------------------------|
| S.No. | Subject Code | Subject Name |
| 1 | MT62A | Data Analytics |
| 2 | MT62B | Industrial Management |
| 3 | MT62C | Industrial Electronics |

1 hour Tutorial (T) = 1 credit

2 hour Practical (P) = 1 credit

PEC: Professional Elective Course, OEC: Open Elective Course, PCC: Professional Core Course, PI: Project and Internship, DLC: Distance Learning Course, MC: Mandatory Course

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