

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

B.Tech. I Semester (Chemical Engineering) For batches admitted in academic session 2022-23

| S. No. | Subject Code | Category Code | Subject Name | Maximum Marks Allotted | | | | | | | Total Marks | Contact Hours per week | | | Total Credits | Mode of Teaching | Mode of Exam | Duration of Exam |
|---|--------------|---------------------------|--|------------------------|--------------------------------|----------------|------------------|----------------|----------------------|--------------------------|-------------|------------------------|----------|----------|---------------|------------------|--------------|------------------|
| | | | | Theory Slot | | | | Practical Slot | | | | L | T | P | | | | |
| | | | | End Sem. | | Mid Sem. Exam. | Quiz/ Assignment | End Sem | Lab Work & Sessional | Skill Based Mini Project | | | | | | | | |
| | | | | End Term Evaluation | Proficiency in subject /course | | | | | | | | | | | | | |
| 1. | 2100020 | ESC | Basic Civil Engineering & Mechanics | 50 | 10 | 20 | 20 | - | - | - | 100 | 2 | 1 | - | 3 | Blended | PP | 2Hrs |
| 2. | 2100021 | ESC | Basic Mechanical Engineering | 50 | 10 | 20 | 20 | - | - | - | 100 | 2 | 1 | - | 3 | Blended | MCQ | 1.5 Hrs |
| 3. | 2100022 | ESC | Basic Electrical & Electronics Engineering | 50 | 10 | 20 | 20 | 60 | 20 | 20 | 200 | 2 | 1 | 2 | 4 | Blended | MCQ | 1.5 Hrs |
| 4. | 2100024 | ESC | Manufacturing Practices | - | - | - | - | 60 | 20 | 20 | 100 | - | - | 2 | 1 | Offline | SO | - |
| 5. | 2170121 | DC | Fuel Technology | 50 | 10 | 20 | 20 | 60 | 20 | 20 | 200 | 2 | 1 | 2 | 4 | Blended | PP | 2Hrs |
| 6. | 2170122 | DC | Computer Programming | 50 | 10 | 20 | 20 | 60 | 20 | 20 | 200 | 2 | 1 | 2 | 4 | Blended | AO | 2Hrs |
| Total | | | | 250 | 50 | 100 | 100 | 240 | 80 | 80 | 900 | 10 | 5 | 8 | 19 | - | - | - |
| 7. | 3000004 | Natural Sciences & Skills | Language | 50 | 10 | 20 | 20 | 30 | 10 | 10 | 150 | 1 | - | 2 | GRADE | Blended | MCQ | 1.5 Hrs |
| Induction program of first three weeks (MC):Physical activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visit / Virtual Visit to local Areas, Familiarization to Dept./Branch & Innovations § proficiency in course/subject-includes the weightage towards ability/skill/competence/knowledge level/ expertise attained etc. in that particular course/subject. | | | | | | | | | | | | | | | | | | |

§Proficiency in course/subject – includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in that particular course/subject

Natural Sciences & Skills: Engineering Physics / Engineering Chemistry / Environmental Science/ Language (Credits of Natural Sciences & Skills will be added in the VI Semester)

MCQ: Multiple Choice Question AO: Assignment + Oral OB: Open Book PP: Pen Paper SO: Submission + Oral

| Mode of Teaching | | | | Mode of Examination | | | | Total Credits |
|------------------|--------|---------|---------|---------------------|--------|--------|--------|---------------|
| Theory | | | Lab | Theory | | | Lab | |
| Offline | Online | Blended | Offline | PP | AO | MCQ | SO | |
| - | - | 15 | 4 | 06 | 03 | 06 | 04 | 19 |
| - | - | 78.94% | 21.05% | 31.57% | 15.78% | 31.57% | 21.05% | Credits % |

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

B.Tech. (Chemical Engineering) II Semester *For batches admitted in academic session 2023-24*

| S. No. | Subject Code | Category Code | Subject Name | Maximum Marks Allotted | | | | | | | Total Marks | Contact Hours per week | | | Total Credits | Mode of Teaching | Mode of Exam | Duration of Exam |
|--------------|--------------|---------------------------|-------------------------------|------------------------|---|----------------|------------------|----------------|----------------------|--------------------------|-------------|------------------------|----------|----------|---------------|------------------|--------------|------------------|
| | | | | Theory Slot | | | | Practical Slot | | | | L | T | P | | | | |
| | | | | End Sem. | | Mid Sem. Exam. | Quiz/ Assignment | End Sem | Lab Work & Sessional | Skill Based Mini Project | | | | | | | | |
| | | | | End Term Evaluation | [§] Proficiency in subject /course | | | | | | | | | | | | | |
| 1. | 2100011 | BSC | Engineering Mathematics – I | 50 | 10 | 20 | 20 | - | - | - | 100 | 3 | 1 | - | 4 | Offline | pp | 2 Hrs |
| 2. | 2100014 | ESC | Engineering Graphics | 50 | 10 | 20 | 20 | - | - | - | 100 | 3 | - | - | 3 | Offline | AO | 2 Hrs |
| 3. | 2170221 | DC | Chemical Process Calculations | 50 | 10 | 20 | 20 | - | - | - | 200 | 2 | 1 | - | 3 | Blended | pp | 2 Hrs |
| 4. | 2170222 | DC | Python Programming | 50 | 10 | 20 | 20 | 60 | 20 | 20 | 100 | 2 | 1 | 2 | 4 | Blended | MCQ | 1.5 Hrs |
| 5. | 2170223 | DC | Fluid Particle Mechanics | 50 | 10 | 20 | 20 | 60 | 20 | 20 | 100 | 2 | 1 | 2 | 4 | Blended | pp | 2 Hrs |
| 6. | 2100018 | ESC | Eg. Graphics Lab | - | - | - | - | 60 | 20 | 20 | 100 | - | - | 2 | 1 | Offline | SO | - |
| Total | | | | 250 | 50 | 100 | 100 | 180 | 60 | 60 | 800 | 12 | 4 | 6 | 19 | - | - | - |
| 7. | 3000003 | Natural Sciences & Skills | Environmental Engineering | 50 | 10 | 20 | 20 | 30 | 10 | 10 | 150 | 1 | - | 2 | GRADE | Blended | MCQ | 1.5 Hrs |

Summer Internship Project – I (Institute Level) (Qualifier): Minimum two-week duration: Evaluation in III Semester.

[§]Proficiency in course/subject – includes the weightage towards ability/ skill/ competency /knowledge level /expertise attained etc. in that particular course/subject

Natural Sciences & Skills: Engineering Physics / Engineering Chemistry / Environmental Science/ Language (Credits of Natural Sciences & Skills will be added in the VI Semester)

MCQ: Multiple Choice Question AO: Assignment + Oral OB: Open Book PP: Pen Paper SO: Submission + Oral

| Mode of Teaching | | | | Mode of Examination | | | | Total Credits |
|------------------|--------|---------|---------|---------------------|--------|--------|--------|---------------|
| Theory | | | Lab | Theory | | | Lab | |
| Offline | Online | Blended | Offline | PP | AO | MCQ | SO | |
| 07 | - | 09 | 03 | 10 | 03 | 03 | 03 | 19 |
| 36.84% | - | 47.36% | 15.78% | 52.63 | 15.78% | 15.78% | 15.78% | Credits % |

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(Deemed to be University)

NAAC Accredited with A++ Grade
Department of Chemical Engineering
Scheme of Evaluation

B. Tech. III Semester *For batches admitted in academic session 2023-24*

| S. No. | Subject Code | Category Code | Subject Name | Maximum Marks Allotted | | | | | | | Total Marks | Contact Hours per week | | | Total Credits | Mode of Teaching (Online, Offline, Blended) | Mod e of Exam. |
|--------------|--------------|---------------------------|---|------------------------|---------------------------------|-----------------------|-----------------|----------------|-----------------------|--------------------------|-------------|------------------------|----------|-----------|---------------|---|----------------|
| | | | | Theory Slot | | | | Practical Slot | | | | L | T | P | | | |
| | | | | End Term Evaluation | | Continuous Evaluation | | End Sem. Exam. | Continuous Evaluation | | | | | | | | |
| | | | | End Sem. Exam | \$Proficiency in subject/course | Mid Sem. Exam. | Quiz/Assignment | | Lab Work & Sessional | Skill Based Mini Project | | | | | | | |
| 1. | 3100025 | BSC | Engineering Mathematics-II | 50 | 10 | 20 | 20 | - | - | - | 100 | 3 | 1 | - | 4 | Offline | PP |
| 2. | 3170311 | DC | Fluid Mechanics | 50 | 10 | 20 | 20 | 40 | 30 | 30 | 200 | 2 | 1 | 2 | 4 | Blended | PP |
| 3. | 3170312 | DC | Organic Process Technology | 50 | 10 | 20 | 20 | - | - | - | 100 | 3 | - | - | 3 | Blended | PP |
| 4. | 3170313 | DC | Chemical Engineering Thermodynamics | 50 | 10 | 20 | 20 | - | - | - | 100 | 3 | - | - | 3 | Blended | PP |
| 5. | 3170314 | DC | Heat Transfer | 50 | 10 | 20 | 20 | 40 | 30 | 30 | 200 | 3 | - | 2 | 4 | Blended | PP |
| 6. | 3170315 | DLC | Chemical Synthesis Lab | - | - | - | - | 40 | 30 | 30 | 100 | - | - | 2 | 1 | Offline | SO |
| 7. | 3170316 | DLC | Self-learning/Presentation (SWAYAM/NPTEL/MOOC) | - | - | - | - | - | 40 | - | 40 | - | - | 2 | 1 | Online + Mentoring | SO |
| 8. | 200XXX | CLC | Novel Engaging Course (Informal Learning) | - | - | - | - | 50 | - | - | 50 | - | - | 2 | 1 | Interactive | SO |
| 9. | 3170317 | DLC | Skill Internship Project (Institute Level) (Evaluation) | - | - | - | - | 60 | - | - | 60 | - | - | 4 | 2 | Offline | SO |
| Total | | | | 250 | 50 | 100 | 100 | 230 | 130 | 90 | 950 | 14 | 2 | 14 | 23 | - | - |
| 10. | 3000002 | Natural Sciences & Skills | Engineering Chemistry | 50 | 10 | 20 | 20 | 30 | 10 | 10 | 150 | 1 | - | 2 | GRADE | Blended | MCQ |
| 11. | 1000001 | MAC | Indian Constitution & Traditional Knowledge | 50 | 10 | 20 | 20 | - | - | - | 100 | 2 | - | - | GRADE | Blended | MCQ |

\$ proficiency in course/subject-includes the weightage towards ability/skill/competence/knowledge level/ expertise attained etc. in that particular course/subject.

Natural Sciences & Skills: Engineering Physics / Engineering Chemistry / Environmental Science/ Language (Credits of Natural Sciences & Skills will be added in the VI Semester)

\$\$MCQ: Multiple Choice Question \$\$AO: Assignment + Oral \$\$PP: Pen Paper \$\$SO: Submission + Oral

| | | |
|------------------|---------------------|---------------|
| Mode of Teaching | Mode of Examination | Total Credits |
|------------------|---------------------|---------------|

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
(Deemed to be University)
NAAC Accredited with A++ Grade

| Theory | | | Lab | Theory | | | Lab | |
|---------|--------|---------|---------|--------|----|-----|--------|-----------|
| Offline | Online | Blended | Offline | PP | AO | MCQ | SO | |
| 18 | - | 02 | 03 | 18 | - | - | 05 | 23 |
| 78.26% | - | 8.7% | 13.04% | 78.26% | - | - | 21.74% | Credits % |



Department of Chemical Engineering

B. Tech. IV Semester For batches admitted in academic session 2023-24

| S. No. | Subject Code | Category Code | Subject Name | Maximum Marks Allotted | | | | | | | Total Marks | Contact Hours per week | | | Total Credits | Mode of Teaching | Mod e of Exam. |
|--------------|--------------|---------------------------|---|------------------------|--------------------------------|-----------------------|------------------|----------------|-----------------------|--------------------------|-------------|------------------------|-----------|----------|---------------|------------------|----------------|
| | | | | Theory Slot | | | | Practical Slot | | | | L | T | P | | | |
| | | | | End Term Evaluation | | Continuous Evaluation | | End Sem. Exam | Continuous Evaluation | | | | | | | | |
| | | | | End Sem. Exam. | Proficiency in subject /course | Mid Sem. Exam | Quiz/ Assignment | | Lab Work & Sessional | Skill Based Mini Project | | | | | | | |
| 1. | 3100028 | BSC | Engineering Mathematics-III | 50 | 10 | 20 | 20 | - | - | - | 100 | 3 | 1 | - | 4 | Blended | PP |
| 2. | 3170411 | DC | Instrumentation & Process Control | 50 | 10 | 20 | 20 | - | - | - | 100 | 3 | - | - | 3 | Blended | PP |
| 3. | 3170412 | DC | Mass Transfer –I | 50 | 10 | 20 | 20 | 60 | 20 | 20 | 200 | 3 | - | 2 | 4 | Blended | PP |
| 4. | 3170413 | DC | Mechanical Design of Process Equipment | 50 | 10 | 20 | 20 | - | - | - | 100 | 3 | - | - | 3 | Blended | AO |
| 5. | 3170414 | DC | Inorganic Process Technology | 50 | 10 | 20 | 20 | - | - | - | 100 | 3 | - | - | 3 | Blended | PP |
| 6. | 3100009 | MC | Cyber Security | 50 | 10 | 20 | 20 | - | - | - | 100 | 2 | - | - | 2 | Blended | MCQ |
| 7. | 3170415 | DLC | Process Control Lab | - | - | - | - | 60 | 20 | 20 | 100 | - | - | 2 | 1 | Offline | SO |
| 8. | 200XXX | CLC | Novel Engaging Course (Informal Learning) | - | - | - | - | 50 | - | - | 50 | - | - | 2 | 1 | Interactive | SO |
| Total | | | | 250 | 50 | 100 | 100 | 230 | 60 | 60 | 850 | 16 | 01 | 8 | 21 | - | - |
| 9. | 3000002 | Natural Sciences & Skills | Engineering Physics | 50 | 10 | 20 | 20 | - | - | - | 100 | 2 | - | - | Grade | Online | MCQ |
| 10. | 1000005 | MAC | Project Management & Financing | 50 | 10 | 20 | 20 | - | - | - | 100 | 2 | - | - | Grade | Online | MCQ |

Summer Internship Project-II (Soft skills Based) for two weeks duration: Evaluation in V Semester

Proficiency in course/subject-includes the weightage towards ability/skill/competence/knowledge level/ expertise attained etc. in that particular course/subject.

Natural Sciences & Skills: Engineering Physics / Engineering Chemistry / Environmental Science/ Language (Credits of Natural Sciences & Skills will be added in the VI Semester)

MCQ: Multiple Choice Question AO: Assignment + Oral PP: Pen Paper SO: Submission + Oral

| Mode of Teaching | Mode of Examination | Total Credits |
|------------------|---------------------|---------------|
|------------------|---------------------|---------------|



माधव प्रौद्योगिकी एवं विज्ञान संस्थान, ग्वालियर
MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR
Deemed University

(Declared under Distinct Category by Ministry of Education, Government of India)

NAAC ACCREDITED WITH A++ Grade

Gola Ka Mandir, Gwalior (M.P.) - 474005, INDIA

Ph.:+91-751-2409300, E-mail: vicechancellor@mitsgwalior.in, Website: www.mitsgwalior.in



MITS

| Theory | | | Lab | Theory | | | Lab | |
|---------|--------|---------|---------|--------|--------|-------|--------|-----------|
| Offline | Online | Blended | Offline | PP | AO | MCQ | SO | |
| - | - | 18 | 03 | 13 | 03 | 02 | 03 | 21 |
| - | - | 85.71% | 14.29% | 61.90% | 14.29% | 9.52% | 14.29% | Credits % |