

MEWAR UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
SCHEMES OF M. TECH. (DATA SCIENCE)

SEMESTER-1 SCHEMES

| COURSE CODE | COURSE TITLE | CONTACT HOURS | | CREDIT HOURS | INTERNAL ASSESMENT OR EXAMINATION | | EXTERNAL EXAMINATION OR VIVA MARKS | TOTAL MARKS |
|-------------|--------------------------------|---------------|---|--------------|-----------------------------------------|---------------------------|------------------------------------|-------------|
| | | L | P | | TOTAL CREDIT | ASSIGNMENT OR LAB RECORDS | | |
| M-DS-01 | INTRODUCTION TO DATA SCIENCE | 4 | - | 4 | 30 | 10 | 60 | 100 |
| M-DS-02 | MATHEMATICS FOR DATA SCIENCE | 4 | - | 4 | 30 | 10 | 60 | 100 |
| M-DS-03 | INTRODUCTION TO ML | 4 | - | 4 | 30 | 10 | 60 | 100 |
| M-DS-04 | DATA STRUCTURE & ALGORITHM | 4 | - | 4 | 30 | 10 | 60 | 100 |
| M-DS-17-20 | ELECTIVE-1 | 4 | - | 4 | 30 | 10 | 60 | 100 |
| M-DS-05 | DATA SCIENCE USING R LAB | - | 3 | 3 | 15 | 10 | 50 | 75 |
| M-DS-06 | DATA STRUCTURE & ALGORITHM LAB | - | 3 | 3 | 15 | 10 | 50 | 75 |
| | | TOTAL | | 26 | | | TOTAL | 650 |

SEMESTER-2 SCHEMES

| COURSE CODE | COURSE TITLE | CONTACT HOURS | | CREDIT HOURS | INTERNAL ASSESMENT OR EXAMINATION | | EXTERNAL EXAMINATION OR VIVA MARKS | TOTAL MARKS |
|-------------|---------------------------------------|---------------|---|--------------|-----------------------------------------|---------------------|------------------------------------|-------------|
| | | L | P | | ASSIGNMENT OR LAB RECORDS | TEACHERS EVALUATION | | |
| M-DS-07 | DATA MINING | 4 | - | 4 | 30 | 10 | 60 | 100 |
| M-DS-10 | BUSINESS ANALYTRICS | 4 | - | 4 | 30 | 10 | 60 | 100 |
| M-DS-08 | STASTICAL FOUNDATION FOR DATA SCIENCE | 4 | - | 4 | 30 | 10 | 60 | 100 |
| M-DS-09 | MATRIX COMPUTATION | 4 | - | 4 | 30 | 10 | 60 | 100 |
| M-DS-21-24 | ELECTIVE -2 | 4 | - | 4 | 30 | 10 | 60 | 100 |
| M-DS-11 | DATA MINING S LAB | - | 3 | 3 | 15 | 10 | 50 | 75 |
| M-DS-12 | BUSINESS ANALYTICS LAB | - | 3 | 3 | 15 | 10 | 50 | 75 |
| | | TOTAL | | 26 | | | TOTAL | 650 |

SCHEMESTER-3 SCHEMES

| COURSE CODE | COURSE TITLE | CONTACT HOURS | | CREDIT HOURS | INTERNAL ASSESMENT OR EXAMINATION | | EXTERNAL EXAMINATION OR VIVA MARKS | TOTAL MARKS |
|-------------|-------------------------|---------------|----|--------------|-----------------------------------------|---------------------|------------------------------------|-------------|
| | | L | P | | ASSIGNMENT OR LAB RECORDS | TEACHERS EVALUATION | | |
| M-DS-13 | SEMINAR | - | 6 | 6 | - | - | 150 | 150 |
| M-DS-14 | MINOR PROJECT | - | 10 | 10 | - | - | 250 | 250 |
| M-DS-15 | ELECTIVE-3 | - | 4 | 4 | 30 | 10 | 60 | 100 |
| M-DS-15 | OPTIMIZATION TECHNIQUES | - | 4 | 4 | 30 | 10 | 60 | 100 |

| | | | | | | | |
|--|--|--------------|----|--|--|--------------|-----|
| | | TOTAL | 24 | | | TOTAL | 400 |
|--|--|--------------|----|--|--|--------------|-----|

SCHEMESTER-4 SCHEMES

| COURSE CODE | COURSE TITLE | CONTACT HOURS | | CREDIT HOURS | INTERNAL ASSESMENT OR EXAMINATION | | EXTERNAL EXAMINATION OR VIVA MARKS | TOTAL MARKS |
|-------------|--------------|---------------|----|--------------|-----------------------------------------|---------------------|------------------------------------|-------------|
| | | L | P | | ASSIGNMENT OR LAB RECORDS | TEACHERS EVALUATION | | |
| M-DS-15 | DESRTATION | - | 16 | 16 | - | - | 400 | 400 |
| | | TOTAL | | 16 | | | TOTAL | 400 |

LIST OF ELECTIVE PAPERS

| ELECTIVE-1 [M-DS-16-19] | ELECTIVE-2 [M-DS-20-24] | ELECTIVE-3[M-DS-25-29] |
|-------------------------|-----------------------------|------------------------|
| ARTIFICIAL INTELLIGENCE | NEURAL NETWORK | HCI |
| CLOUD COMPUTING | IOT | HPCA |
| GIS & RS | NATURAL LANGUAGE PROCESSING | SOFT COMPUTING |
| BIO INFORMATICS | BIG DATA | PERVESIVE COMPUTING |

Course of study for M. Pharm. (Pharmaceutical Quality Assurance)

| Course Code | Course | Credit Hours | Credit Points | Hrs./wk | Marks |
|-------------|-----------------------------------------------|--------------|---------------|---------|-------|
| Semester I | | | | | |
| MQA101T | Modern Pharmaceutical Analytical Techniques | 4 | 4 | 4 | 100 |
| MQA102T | Quality Management System | 4 | 4 | 4 | 100 |
| MQA103T | Quality Control and Quality Assurance | 4 | 4 | 4 | 100 |
| MQA104T | Product Development and Technology Transfer | 4 | 4 | 4 | 100 |
| MQA105P | Pharmaceutical Quality Assurance Practical I | 12 | 6 | 12 | 150 |
| - | Seminar/Assignment | 7 | 4 | 7 | 100 |
| | Total | 35 | 26 | 35 | 650 |
| Semester II | | | | | |
| MQA201T | Hazards and Safety Management | 4 | 4 | 4 | 100 |
| MQA202T | Pharmaceutical Validation | 4 | 4 | 4 | 100 |
| MQA203T | Audits and Regulatory Compliance | 4 | 4 | 4 | 100 |
| MQA204T | Pharmaceutical Manufacturing Technology | 4 | 4 | 4 | 100 |
| MQA205P | Pharmaceutical Quality Assurance Practical II | 12 | 6 | 12 | 150 |
| - | Seminar/Assignment | 7 | 4 | 7 | 100 |
| | Total | 35 | 26 | 35 | 650 |

Course of study for M. Pharm. III Semester (Common for All Specializations)

| CourseCode | Course | CreditHours | CreditPoints |
|------------|---------------------------------------------------|-------------|--------------|
| MRM 301T | Research Methodology and Biostatistics* | 4 | 4 |
| - | Journal club | 1 | 1 |
| - | Discussion / Presentation (Proposal Presentation) | 2 | 2 |
| - | Research Work | 28 | 14 |
| | Total | 35 | 21 |

Course of study for M. Pharm. IV Semester (Common for All Specializations)

| CourseCode | Course | CreditHours | CreditPoints |
|------------|-------------------------------|-------------|--------------|
| - | Journal Club | 1 | 1 |
| - | Research Work | 31 | 16 |
| - | Discussion/Final Presentation | 3 | 3 |
| | Total | 35 | 20 |

Mewar University, Chittorgarh

Scheme for B.Sc. (Hons.) Microbiology (CBCS Scheme)

2021-22

B.Sc. - I SEMESTER

| S.No. | Type of Course | Paper Code | COURSE NAME | Credits | End Term Exam Part-I | End Term Exam Part-II | Teacher Assesment | Total Marks |
|--------------|-----------------------------------------|------------|-----------------------------------------|-----------|----------------------|-----------------------|-------------------|-------------|
| 1 | Core Course 1 | B1MB-CT01 | Biochemistry | 4 | 35 | 50 | 15 | 100 |
| 2 | Core Course 2 | B1MB-CT02 | Cell Biology | 4 | 35 | 50 | 15 | 100 |
| 3 | Generic Elective 1 | B1MB-GET01 | Any one from the given list | 4 | 35 | 50 | 15 | 100 |
| 4 | Ability Enhancement Compulsory Course 1 | B1MB-AEC01 | Any one from the given list | 2 | 25 | 15 | 10 | 50 |
| 5 | Core Course Practical 1 | B1MB-CP01 | Biochemistry Lab | 2 | 50 | | | 50 |
| 6 | Core Course Practical 2 | B1MB-CP02 | Cell Biology Lab | 2 | 50 | | | 50 |
| 7 | Generic Elective Practical 2 | B1MB-GEP01 | Based on choice of Generic Elective Lab | 2 | 50 | | | 50 |
| Total | | | | 20 | | | | 500 |

B.Sc. - II SEMESTER

| S.No. | Type of Course | Paper Code | COURSE NAME | Credits | End Term Exam Part-I | End Term Exam Part-II | Teacher Assesment | Total Marks |
|-------|-----------------------------------------|------------|-------------------------------------|---------|----------------------|-----------------------|-------------------|-------------|
| 1 | Core Course 3 | B2MB-CT03 | Bacteriology | 4 | 35 | 50 | 15 | 100 |
| 2 | Core Course 4 | B2MB-CT04 | Microbial Physiology and Metabolism | 4 | 35 | 50 | 15 | 100 |
| 3 | Generic Elective 2 | B2MB-GET02 | Any one from the given list | 4 | 35 | 50 | 15 | 100 |
| 4 | Ability Enhancement Compulsory Course 2 | B2MB-AEC02 | Any one from the given list | 2 | 25 | 15 | 10 | 50 |
| 5 | Core Course Practical 3 | B2MB-CP03 | Bacteriology Lab | 2 | 50 | | | 50 |

| | | | | | | |
|--------------|------------------------------|------------|-----------------------------------------|-----------|----|------------|
| 6 | Core Course Practical 4 | B2MB-CP04 | Microbial Physiology and Metabolism Lab | 2 | 50 | 50 |
| 7 | Generic Elective Practical 2 | B2MB-GEP02 | Based on choice of Generic Elective Lab | 2 | 50 | 50 |
| Total | | | | 20 | | 500 |

B.Sc. - III SEMESTER

| S.No. | Type of Course | Paper Code | COURSE NAME | Credits | End Term Exam Part-I | End Term Exam Part-II | Teacher Assesment | Total Marks |
|--------------|------------------------------|------------|-----------------------------------------|-----------|----------------------|-----------------------|-------------------|-------------|
| 1 | Core Course 5 | B3MB-CT05 | Virology | 4 | 35 | 50 | 15 | 100 |
| 2 | Core Course 6 | B3MB-CT06 | Instrumentation and Biotechniques | 4 | 35 | 50 | 15 | 100 |
| 3 | Core Course 7 | B3MB-CT07 | Molecular Biology | 4 | 35 | 50 | 15 | 100 |
| 4 | Generic Elective 3 | B3MB-GET03 | Any one from the given list | 4 | 35 | 50 | 15 | 100 |
| 5 | Skill Enhancement Courses 1 | B3MB-SEC01 | Any one from the given list | 2 | 25 | 15 | 10 | 50 |
| 6 | Core Course Practical 5 | B3MB-CP05 | Virology Lab | 2 | 50 | | | 50 |
| 7 | Core Course Practical 6 | B3MB-CP06 | Instrumentation and Biotechniques Lab | 2 | 50 | | | 50 |
| 8 | Core Course Practical 7 | B3MB-CP07 | Molecular Biology Lab | 2 | 50 | | | 50 |
| 9 | Generic Elective Practical 3 | B3MB-GEP03 | Based on choice of Generic Elective Lab | 2 | 50 | | | 50 |
| Total | | | | 26 | | | | 650 |

B.Sc.- IV SEMESTER

| S.No. | Type of Course | Paper Code | COURSE NAME | Credits | End Term Exam Part-I | End Term Exam Part-II | Teacher Assesment | Total Marks |
|-------|--------------------|------------|-----------------------------|---------|----------------------|-----------------------|-------------------|-------------|
| 1 | Core Course 8 | B4MB-CT08 | Microbial Genetics | 4 | 35 | 50 | 15 | 100 |
| 2 | Core Course 9 | B4MB-CT09 | Environmental Microbiology | 4 | 35 | 50 | 15 | 100 |
| 3 | Core Course 10 | B4MB-CT10 | Food and Dairy Microbiology | 4 | 35 | 50 | 15 | 100 |
| 4 | Generic Elective 4 | B4MB-GET04 | Any one from the given list | 4 | 35 | 50 | 15 | 100 |

| 5 | Skill Enhancement Courses 2 | B4MB-SEC02 | Any one from the given list | 2 | 25 | 15 | 10 | 50 |
|---------------------------|------------------------------------------|------------|-----------------------------------------|-----------|----------------------|-----------------------|-------------------|-------------|
| 6 | Core Course Practical 8 | B4MB-CP08 | Microbial Genetics Lab | 2 | 50 | | | 50 |
| 7 | Core Course Practical 9 | B4MB-CP09 | Environmental Microbiology Lab | 2 | 50 | | | 50 |
| 8 | Core Course Practical 10 | B4MB-CP10 | Food and Dairy Microbiology Lab | 2 | 50 | | | 50 |
| 9 | Generic Elective Practical 4 | B4MB-GEP04 | Based on choice of Generic Elective Lab | 2 | 50 | | | 50 |
| Total | | | | 26 | | | | 650 |
| B.Sc.- V SEMESTER | | | | | | | | |
| S.No. | Type of Course | Paper Code | COURSE NAME | Credits | End Term Exam Part-I | End Term Exam Part-II | Teacher Assesment | Total Marks |
| 1 | Core Course 11 | B5MB-CT11 | Industrial Microbiology | 4 | 35 | 50 | 15 | 100 |
| 2 | Core Course 12 | B5MB-CT12 | Immunology | 4 | 35 | 50 | 15 | 100 |
| 3 | Discipline Specific Elective 1 | B5MB- ET01 | Any one from the given list | 4 | 35 | 50 | 15 | 100 |
| 4 | Discipline Specific Elective 2 | B5MB- ET02 | Any one from the given list | 4 | 35 | 50 | 15 | 100 |
| 5 | Core Course Practical 11 | B5MB-CP11 | Industrial Microbiology Lab | 2 | 50 | | | 50 |
| 6 | Core Course Practical 12 | B5MB-CP12 | Immunology Lab | 2 | 50 | | | 50 |
| 7 | Discipline Specific Elective Practical 1 | B5MB-DEP01 | Based on choice of DSE Lab | 2 | 50 | | | 50 |
| 8 | Discipline Specific Elective Practical 2 | B5MB-DEP02 | Based on choice of DSE Lab | 2 | 50 | | | 50 |
| Total | | | | 24 | | | | 600 |
| B.Sc.- VI SEMESTER | | | | | | | | |
| S.No. | Type of Course | Paper Code | COURSE NAME | Credits | End Term Exam Part-I | End Term Exam Part-II | Teacher Assesment | Total Marks |
| 1 | Core Course 13 | B6MB-CT13 | Medical Microbiology | 4 | 35 | 50 | 15 | 100 |
| 2 | Core Course 14 | B6MB-CT14 | Recombinant DNA Technology | 4 | 35 | 50 | 15 | 100 |
| 3 | Discipline Specific Elective 3 | B6MB-ET03 | Any one from the given list | 4 | 35 | 50 | 15 | 100 |
| 4 | Discipline Specific Elective 4 | B6MB-ET04 | Any one from the given list | 4 | 35 | 50 | 15 | 100 |
| 5 | Core Course Practical 13 | B6MB-CP13 | Medical Microbiology Lab | 2 | 50 | | | 50 |
| 6 | Core Course Practical 14 | B6MB-CP14 | Recombinant DNA Technology Lab | 2 | 50 | | | 50 |

| | | | | | | |
|--------------|------------------------------------------|------------|----------------------------|-----------|----|------------|
| 7 | Discipline Specific Elective Practical 3 | B6MB-DEP03 | Based on choice of DSE Lab | 2 | 50 | 50 |
| 8 | Discipline Specific Elective Practical 4 | B6MB-DEP04 | Based on choice of DSE Lab | 2 | 50 | 50 |
| Total | | | | 24 | | 600 |

| | |
|---------------------|------------|
| Total Credit | 140 |
|---------------------|------------|

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|--------------------|-------------|
| Total Marks | 3500 |
|--------------------|-------------|