

M.Sc. Plant Biotechnology

Semester I

| Course code* | Course Title | Type | Teaching Scheme | | | Evaluation Scheme | | | | | | Minimum Passing | | | | | Credit | | |
|--------------------|--------------------------------------|-------|-----------------|---|----|-------------------|-----|-----|----------|-----|------|-----------------|----------|----|----|----------|--------|-------|----|
| | | | | | | Internal | | | External | | | Total | Internal | | | External | | Total | |
| | | | | | | L | T | P | CA | MSE | TW | | ESE | PR | CA | MSE | | | TW |
| (Mandatory) | | | | | | | | | | | | | | | | | | | |
| MPT- 611 | Plant cell, Tissue and Organ Culture | Core | 3 | | | 20 | 20 | 20 | 90 | | 150 | | | | 36 | | 60 | 3 | |
| MPT- 612 | Biochemistry | Core | 3 | | | 20 | 20 | 20 | 90 | | 150 | | | | 36 | | 60 | 3 | |
| MPT-613 | Molecular Cell Biology | Minor | 2 | | | 10 | 20 | 10 | 60 | | 100 | | | | 24 | | 40 | 2 | |
| MPT- 614 | Plant Physiology and Deveelopment | Minor | 2 | | | 10 | 20 | 10 | 60 | | 100 | | | | 24 | | 40 | 2 | |
| PGL- 611 | Plant Science Lab (Practical) | Core | | | 6 | 20 | 25 | 15 | | 90 | 150 | | | | 36 | | 60 | 3 | |
| PGL- 612 | Plant Lab (Practical) | Core | | | 6 | 20 | 25 | 15 | | 90 | 150 | | | | 36 | | 60 | 3 | |
| MNP -613 | Mini Project | MNP | | | 6 | 20 | 25 | 15 | | 90 | 150 | | | | 36 | | 60 | 3 | |
| OEC- 614 | Open Elective Course | OEC | | | 2 | 10 | 15 | 15 | | 60 | 100 | | | | 24 | | 40 | 2 | |
| | Total | | 10 | 2 | 20 | 130 | 170 | 120 | 300 | 330 | 1050 | | | | | | | 21 | |

Semester II

| Course code* | Course Title | Type | Teaching Scheme | | | Evaluation Scheme | | | | | | Minimum Passing | | | | | Credit | | |
|--------------------|--|-------|-----------------|---|----|-------------------|-----|-----|----------|-----|------|-----------------|----------|----|----|----------|--------|-------|----|
| | | | | | | Internal | | | External | | | Total | Internal | | | External | | Total | |
| | | | | | | L | T | P | CA | MSE | TW | | ESE | PR | CA | MSE | | | TW |
| (Mandatory) | | | | | | | | | | | | | | | | | | | |
| MPT- 621 | Protein Engineering for Industrial Plant Biotech | Core | 3 | | | 20 | 20 | 20 | 90 | | 150 | | | | 36 | | 60 | 3 | |
| MPT- 622 | Gene Technology, synthetic Biology, Genome Editing and Engineering | Core | 3 | | | 20 | 20 | 20 | 90 | | 150 | | | | 36 | | 60 | 3 | |
| MPT- 623 | Bioinformatics and Functional Genomics | Minor | 2 | | | 10 | 20 | 10 | 60 | | 100 | | | | 24 | | 40 | 2 | |
| MPT- 624 | Natural Products from Plants | Minor | 3 | | | 20 | 20 | 20 | 90 | | 150 | | | | 36 | | 60 | 3 | |
| PGL- 621 | Biomolecular Technologies (Practical) | Core | | | 6 | 20 | 25 | 15 | | 90 | 150 | | | | 36 | | 60 | 3 | |
| PGL- 622 | Culture Laboratory (Practical) | Core | | | 6 | 20 | 25 | 15 | | 90 | 150 | | | | 36 | | 60 | 2 | |
| MNP- 623 | Micro Project | MIP | | | 6 | 20 | 25 | 15 | | 90 | 150 | | | | 36 | | 60 | 3 | |
| ACT- 624 | Academic Tutorials | AT | | 2 | | 10 | 20 | 10 | 60 | | 100 | | | | | | 40 | 2 | |
| SEM- 625 | Seminar | RBS | 2 | | | 10 | 10 | | 30 | | 50 | | | | | | 20 | 1 | |
| OEC- 626 | Open Elective Course | OEC | | | 4 | 10 | 15 | 15 | | 60 | 100 | | | | 24 | | 40 | 2 | |
| | Total | | 13 | 2 | 22 | 160 | 200 | 140 | 420 | 330 | 1250 | | | | | | | 24 | |

Semester III

| Course code* | Course Title | Type | Teaching Scheme | | | Evaluation Scheme | | | | | | Minimum Passing | | | | | Credit | | |
|--------------------|---|-------|-----------------|---|----|-------------------|-----|-----|----------|-----|------|-----------------|----------|----|----|----------|--------|-------|----|
| | | | | | | Internal | | | External | | | Total | Internal | | | External | | Total | |
| | | | | | | L | T | P | CA | MSE | TW | | ESE | PR | CA | MSE | | | TW |
| (Mandatory) | | | | | | | | | | | | | | | | | | | |
| MPT- 631 | Target Traits for Crop Improvement | Core | 3 | | | 20 | 20 | 20 | 90 | – | 150 | | | | 36 | | 60 | 3 | |
| MPT- 632 | molecular Breeding | Minor | 4 | | | 20 | 40 | 20 | 120 | – | 200 | | | | 48 | | 80 | 4 | |
| PGL- 631 | Techniques in Molecular Biology (Practical) | Core | | | 6 | 20 | 25 | 15 | – | 90 | 150 | | | | | 36 | 60 | 3 | |
| MNP- 632 | Major Project | MRP | | | 14 | 45 | 45 | 50 | 140 | 210 | 350 | | | | | 56 | 140 | 7 | |
| ACT- 633 | Academic Tutorials | AT | | 2 | | 10 | 20 | 10 | 60 | | 100 | | | | | | 40 | 2 | |
| SEM- 634 | Seminar | RBS | 2 | | | 10 | 10 | | 30 | | 50 | | | | | | 20 | 1 | |
| BCL- 635 | Blended Course | BC | | | 4 | | | | 60 | 40 | 100 | | | | | | 40 | 2 | |
| | Total | | 9 | 2 | 24 | 125 | 160 | 115 | 500 | 340 | 1100 | | | | | | | 22 | |

Semester IV

| Course code* | Course Title | Type | Teaching Scheme | | | Evaluation Scheme | | | | | | Minimum Passing | | | | | Credit | | |
|--------------------|------------------------|-------|-----------------|---|----|-------------------|----|----|----------|-----|-----|-----------------|----------|----|----|----------|--------|-------|----|
| | | | | | | Internal | | | External | | | Total | Internal | | | External | | Total | |
| | | | | | | L | T | P | CA | MSE | TW | | ESE | PR | CA | MSE | | | TW |
| (Mandatory) | | | | | | | | | | | | | | | | | | | |
| MPT- 641 | Ethics/ Biosafety/ IPR | Minor | 3 | | | 20 | 20 | 20 | 90 | | 150 | | | | 36 | | | 3 | |
| BIL- 642 | Big Idea | MRP | | | 20 | | | | 360 | 240 | 600 | | | | | 96 | 240 | 12 | |
| BCL- 643 | Blended Course | BC | | | 4 | | | | 60 | 40 | 100 | | | | | | 40 | 2 | |
| | Total | | 3 | 0 | 24 | 20 | 20 | 20 | 510 | 280 | 850 | 0 | 0 | 0 | 36 | 96 | 280 | 17 | |

L- Lecture, T-Tutorial, P-Practical, CA- Continuous Assessment, MSE- Mid Semester Examination, ESE- End Semester Examination, PR-Practical, TW-Term Work