

Master of Education Program in Biology

Research Focus

- Educational Management in Biology
- Instructional Development in Biology
- Holistic Student Development

Structure of the Program

1. Credit Requirements *

| Requirements | Option 1.2 | Option 2.1 |
|-----------------------------|------------|------------|
| Coursework | 24 | 30 |
| - Required Course | 3 | 3 |
| - Core Courses | 18 | 18 |
| - Electives | 3 | 9 |
| Required Non-credit Courses | 5 | 5 |
| Thesis | 12 | - |
| Independent Study | - | 6 |
| Total | 36 | 36 |

* Minimum credits required

2. Required Course

| Requirements | Option 1.2 | | Option 2.1 | |
|--------------------------------------|------------|----------|------------|----------|
| | Course No. | Cr. | Course No. | Cr. |
| Theoretical Foundations of Education | 366511 | 3 | 366511 | 3 |
| Total | 1 | 3 | 1 | 3 |

3. Core Courses

| Requirements | Option 1.2 | | Option 2.1 | |
|--|------------|-----------|------------|-----------|
| | Course No. | Cr. | Course No. | Cr. |
| Plant, Animal and Microbial Interactions | 257531 | 3 | 257531 | 3 |
| Biotechnology | 275511 | 3 | 275511 | 3 |
| Instrumentation in Biotechnology | 275572 | 3 | 275572 | 3 |
| Scientific Literacy and Curriculum Development | 378511 | 3 | 378511 | 3 |
| Research in Science Education | 378512 | 3 | 378512 | 3 |
| Development of Learning Management in Biology | 381501 | 3 | 381501 | 3 |
| Total | 6 | 18 | 6 | 18 |

4. Electives

| Requirements | Option 1.2 | | Option 2.1 | |
|--|------------|-----------|------------|-----------|
| | Course No. | Cr. | Course No. | Cr. |
| Plant Metabolism | 257511 | 3 | 257511 | 3 |
| Physiology of Environmental Adaptation | 257521 | 3 | 257521 | 3 |
| Comparative Vertebrate Anatomy | 257523 | 3 | 257523 | 3 |
| Population Ecology | 257532 | 3 | 257532 | 3 |
| Biological Sciences | 257541 | 3 | 257541 | 3 |
| Metabolism and Responses in Organism | 257542 | 3 | 257542 | 3 |
| Scientific Communication | 257543 | 3 | 257543 | 3 |
| Biosystematics | 257544 | 3 | 257544 | 3 |
| Advanced Molecular Bioscience | 275512 | 3 | 275512 | 3 |
| STEM Education | 378513 | 3 | 378513 | 3 |
| Organization of Science and Mathematics Camp | 378514 | 3 | 378514 | 3 |
| Total | ≥1 | ≥3 | ≥3 | ≥9 |

5. Required Non-credit Courses

| Requirements | Option 1.2 | | Option 2.1 | |
|---|------------|----------|------------|----------|
| | Course No. | Cr. | Course No. | Cr. |
| Research Methodology in Social Sciences | 366513 | 3 | 366513 | 3 |
| Seminar 1 | 378581 | 1 | 378581 | 1 |
| Seminar 2 | 378582 | 1 | 378582 | 1 |
| Total | 3 | 5 | 3 | 5 |

6. Thesis/Independent Study Credit Requirements

| Requirements | Option 1.2 | | Option 2.1 | |
|----------------------|------------|-----------|------------|----------|
| | Course No. | Cr. | Course No. | Cr. |
| Thesis 1, Option 1.2 | 378583 | 6 | - | - |
| Thesis 2, Option 1.2 | 378584 | 6 | - | - |
| Independent Study 1 | - | - | 378591 | 2 |
| Independent Study 2 | - | - | 378592 | 2 |
| Independent Study 3 | - | - | 378593 | 2 |
| Total | 2 | 12 | 3 | 6 |