**Bachelor of Science (Materials Science and Nanotechnology)**

**Name of Degree:** Bachelor of Science (Materials Science and Nanotechnology)

**Abbreviation:** B.Sc. (Materials Science and Nanotechnology)

**Curriculum**

**Total Credits** **128 Credits**

|  |  |  |
| --- | --- | --- |
| **First Year , 1st Semester** | | **Number of Credit** |
| **Course number** | **Course title** |
| 000 101 | English for Communication | 3(3-0-6) |
| 311 111 | Biology for Physical Science | 3(3-0-6) |
| 311 112 | Biology for Physical Science Laboratory | 1(0-3-2) |
| 312 101 | General Chemistry I | 3(3-0-6) |
| 312 102 | General Chemistry Laboratory I | 1(0-3-2) |
| 314 121 | Calculus for Physical Science I | 3(3-0-6) |
| 315 102 | General Physics I | 3(3-0-6) |
| 315 181 | General Physics Laboratory I | 1(0-3-2) |
| **Total credits** | | **18** |

|  |  |  |
| --- | --- | --- |
| **First Year , 2nd Semester** | | **Number of Credit** |
| **Course number** | **Course title** |
| 000 102 | English for Academic Purposes I | 3(3-0-6) |
| 000 132 | Life and Aesthetics | 3(3-0-6) |
| 312 103 | General Chemistry II | 3(3-0-6) |
| 312 104 | General Chemistry Laboratory II | 1(0-3-2) |
| 314 122 | Calculus for Physical Science II | 3(3-0-6) |
| 315 103 | General Physics II | 3(3-0-6) |
| 315 182 | General Physics Laboratory II | 1(0-3-2) |
| 315 205 | Introduction to Materials Sciences 3(3-0-6) | 3(3-0-6) |
| **Total credits** | | **20** |

|  |  |  |
| --- | --- | --- |
| **Second Year , 1st Semester** | | **Number of Credit** |
| **Course number** | **Course title** |
| 000 103 | English for Academic Purposes II | 3(3-0-6) |
| 000 130 | Information Literacy Skills | 3(3-0-6) |
| 301 201 | Structures and Properties of Materials I | 3(3-0-6) |
| 301 281 | Materials Science Laboratory I | 1(0-3-2) |
| 301 303 | Nanoscience and Nanotechnology I | 3(3-0-6) |
| 314 231 | Differential Equations | 3(3-0-6) |
| 316 202 | Basic Statistics | 3(3-0-6) |
| **Total credits** | | **19** |

|  |  |  |
| --- | --- | --- |
| **Second Year , 2nd Semester** | | **Number of Credit** |
| **Course number** | **Course title** |
| 050 108 | English for Sciences | 3(3-0-6) |
| 000 146 | Happiness of Life | 3(3-0-6) |
| 301 202 | Structures and Properties of Materials II | 3(3-0-6) |
| 301 203 | Crystallography | 3(3-0-6) |
| 301 204 | Materials Characterization | 3(3-0-6) |
| 301 205 | Materials Processing | 3(3-0-6) |
| 301 282 | Materials Science Laboratory II | 1(0-3-2) |
| **Total credits** | | **19** |

|  |  |  |
| --- | --- | --- |
| **Third Year , 1st Semester** | | **Number of Credit** |
| **Course number** | **Course title** |
| 000 145 | Leadership and Management | 3(3-0-6) |
| 301 301 | Thermodynamics of Materials | 3(3-0-6) |
| 301 302 | Metals and Alloys | 3(3-0-6) |
| 301 305 | Ceramics | 3(3-0-6) |
| 301 306 | Polymers | 3(3-0-6) |
| 301 391 | Materials Science Laboratory III | 1(0-3-2) |
| **Total credits** | | **16** |

|  |  |  |
| --- | --- | --- |
| **Third Year , 2nd Semester** | | **Number of Credit** |
| **Course number** | **Course title** |
| 000 169 | Creative Thinking | 3(3-0-6) |
| 050 106 | Basic Writing | 3(3-0-6) |
| 301 304 | Nanoscience and Nanotechnology II | 3(3-0-6) |
| 301 392 | Materials Science Laboratory IV | 1(0-3-2) |
| 301 xxx\*\* | Electives in Materials Science | 6 |
| **Total credits** | | **16** |

**Regular Plan**

|  |  |  |
| --- | --- | --- |
| **Fourth Year , 1st Semester** | | **Number of Credit** |
| **Course number** | **Course title** |
| 301 491 | Seminar in Materials Science and Nanotechnology | 1(1-0-2) |
| 301 492 | Project in Materials Science and Nanotechnology | 4(0-12-6) |
| 301 xxx\*\* | Electives in Materials Science | 6 |
| **Total credits** | | **11** |

|  |  |  |
| --- | --- | --- |
| **Fourth Year , 2nd Semester** | | **Number of Credit** |
| **Course number** | **Course title** |
| 301 xxx\*\* | Electives in Materials Science | 3 |
| xxx xxx | Free Electives | 6 |
| **Total credits** | | **9** |

**Co-operative Education Plan**

|  |  |  |
| --- | --- | --- |
| **Fourth Year , 1st Semester** | | **Number of Credit** |
| **Course number** | **Course title** |
| 301 491 | Seminar in Materials Science and Nanotechnology | 1(1-0-2) |
| 301 xxx\*\* | Electives in Materials Science | 6 |
| xxx xxx | Free Electives | 6 |
| **Total credits** | | **13** |

|  |  |  |
| --- | --- | --- |
| **Fourth Year , 2nd Semester** | | **Number of Credit** |
| **Course number** | **Course title** |
| 301 493 | Cooperative Education in Materials Science and Nanotechnology | 7 |
| **Total credits** | | **7** |

**Program Lecturers**

1. Assoc. Prof. Dr. Sutham Srilomsak
2. Asst. Prof. Dr. Sriprajak Krongsuk
3. Asst. Prof. Dr. Pairot Moontrakool
4. Asst. Prof. Dr. Pornjak Srepusharawoot
5. Asst. Prof. Dr. Prasit Thongbai
6. Asst. Prof. Dr. Apichoke Tangtrakarn
7. Asst. Prof. Dr. Supree Pinitsoontorn
8. Asst. Prof. Dr. Nonglak Meethong
9. Asst. Prof. Dr. Pawinee Klangtakai
10. Asst. Prof. Dr. Viyada Harnchana
11. Dr. Wirat Jarernboon
12. Dr. Theerapong Puangmali
13. Dr. Rattakarn Yensano
14. Dr. Sujitra Daengsakul