**Bachelor of Science Program in Biochemistry**

**Name of Degree:** Bachelor of Science (Biochemistry)

**Abbreviation:** B.Sc. (Biochemistry)

**Curriculum**

**Total Credits** **133 Credits**

**Curriculum structure**

1. General Education Courses (000 xxx) **30** credits
2. Courses **97** credits

2.1) General Science Courses 36 credits

2.2) Specific Courses

2.2.1) Core Courses 48 credits

2.2.2) Elective Courses 13 credits

1. Free Elective Courses **6** credits

|  |  |  |
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| **First Year , 1st Semester** | | **Number of Credit** |
| **Course Number** | **Course Title** |
| 000 101 | English for Communication | 3(3-0-6) |
| 000 130 | Information Literacy Skills | 3(3-0-6) |
| 311 101 | Biology I | 3(3-0-6) |
| 311 102 | Biology Laboratory I | 1(0-3-2) |
| 312 101 | General Chemistry I | 3(3-0-6) |
| 312 102 | General Chemistry Laboratory I | 1(0-3-2) |
| 315 102 | General Physics I | 3(3-0-6) |
| 315 181 | General Physics Laboratory I | 1(0-3-2) |
| 314 123 | Calculus for Biological Science I | 3(3-0-6) |
| **Total** | | **21** |

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| **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) |
| 311 103 | Biology II | 3(3-0-6) |
| 311 104 | Biology Laboratory II | 1(0-3-2) |
| 312 103 | General Chemistry II | 3(3-0-6) |
| 312 104 | General Chemistry Laboratory II | 1(0-3-2) |
| 315 103 | General Physics II | 3(3-0-6) |
| 315 182 | General Physics Laboratory II | 1(0-3-2) |
| 314 124 | Calculus for Biological Science II | 3(3-0-6) |
| **Total** | | **21** |

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| **Second Year , 1st Semester** | | **Number of Credit** |
| **Course Number** | **Course Title** |
| 000 103 | English for Academic Purposes II | 3(3-0-6) |
| 312 215 | Organic Chemistry I | 3(3-0-3) |
| 312 216 | Organic Chemistry Laboratory I | 1(0-3-0) |
| 312 233 | Physical Chemistry | 3(2-3-6) |
| 312 242 | Analytical Chemistry II | 2(2-0-0) |
| 312 243 | Analytical Chemistry Laboratory II | 1(0-3-2) |
| 316 204 | Elementary Statistics | 3(3-0-0) |
| 000 xxx | General Education Courses | 6 |
| **Total** | | **22** |

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| **Second Year , 2nd Semester** | | **Number of Credit** |
| **Course Number** | **Course Title** |
| 050 108 | English for Science | 3(3-0-6) |
| 312 217 | Organic Chemistry II | 3(3-0-0) |
| 312 218 | Organic Chemistry Laboratory II | 1(0-3-2) |
| 317 211 | General Microbiology | 3(3-0-6) |
| 317 212 | General Microbiology Laboratory | 1(0-3-3) |
| 318 201 | Structure and Function of Cell Organelles | 2(2-0-4) |
| 311 244 | Elementary Genetics | 3(3-0-6) |
| 311 245 | Elementary Genetics Laboratory | 1(0-3-2) |
| 000 xxx | General Education Courses | 3 |
| **Total** | | **20** |

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| **Third Year , 1st Semester** | | **Number of Credit** |
| **Course Number** | **Course Title** |
| 318 305 | Biochemistry | 3(3-0-6) |
| 318 306 | Biochemistry Laboratory | 1(0-3-2) |
| 318 315 | Biochemical Techniques | 3(3-0-6) |
| 318 316 | Biochemical Technique Laboratory | 2(0-6-3) |
| 362 328 | Immunology | 3(2-3-5) |
| 318 xxx | Elective in Biochemistry | 3 |
| 000 xxx | General Education Courses | 3 |
| **Total** | | **18** |

|  |  |  |
| --- | --- | --- |
| **Third Year , 2nd Semester (Regular Plan)** | | **Number of Credit** |
| **Course Number** | **Course Title** |
| 318 402 | Intensive Biochemistry I | 3(3-0-6) |
| 318 491 | Biochemical Seminar I | 1(0-3-2) |
| 318 xxx | Elective in Biochemistry | 4 |
| xxx xxx | Free electives | 6 |
| xxx xxx | Elective in Science Course | 2 |
| **Total** | | **16** |

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| --- | --- | --- |
| **Third Year , 2nd Semester (Co-operative Education Plan)** | | **Number of Credit** |
| **Course Number** | **Course Title** |
| 318 402 | Intensive Biochemistry I | 3(3-0-6) |
| 318 491 | Biochemical Seminar I | 1(0-3-2) |
| 318 xxx | Elective in Biochemistry | 4 |
| xxx xxx | Free electives | 6 |
| 300 202 | Orientation to Co-operative Education for Science Students | 1(0-2-2) |
| xxx xxx | Elective in Science Course | 1 |
| **Total** | | **16** |

|  |  |  |
| --- | --- | --- |
| **Fourth Year , 1st Semester (Regular Plan)** | | **Number of Credit** |
| **Course Number** | **Course Title** |
| 318 403 | Intensive Biochemistry II | 3(3-0-6) |
| 318 451 | Genetic Engineering | 3(3-0-6) |
| 318 452 | Genetic Engineering Laboratory | 2(0-6-3) |
| 318 492 | Biochemical Seminar II | 1(0-3-2) |
| 318 494 | Research Project I | 2(0-6-3) |
| **Total** | | **11** |

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| --- | --- | --- |
| **Fourth Year , 1st Semester (Co-operative Education Plan)** | | **Number of Credit** |
| **Course Number** | **Course Title** |
| 318 403 | Intensive Biochemistry II | 3(3-0-6) |
| 318 451 | Genetic Engineering | 3(3-0-6) |
| 318 452 | Genetic Engineering Laboratory | 2(0-6-3) |
| 318 492 | Biochemical Seminar II | 1(0-3-2) |
| **Total** | | **9** |

|  |  |  |
| --- | --- | --- |
| **Fourth Year , 2nd Semester (Regular Plan)** | | **Number of Credit** |
| **Course Number** | **Course Title** |
| 318 499 | Research Project II | 4(0-12-6) |
| **Total** | | **4** |

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| --- | --- | --- |
| **Fourth Year , 2nd Semester (Co-operative Education Plan)** | | **Number of Credit** |
| **Course Number** | **Course Title** |
| 318 495 | Co-operative Education inBiochemistry | 6(0-18-9) |
| **Total** | | **6** |

**Co-operative Education Plan**: Students are taking up actual practical training in industrial setups or industrial enterprise or government sectors which involve in the field of Biochemistry.

**Lecturers**

1. Assoc. Prof. Thanaset Senawong, Ph.D. (Molecular and Cellular Biology)
2. Assoc. Prof. Sompong Klaynongsruang, Ph.D. (Biochemistry)
3. Assoc. Prof. Yanee Trongpanich, Ph.D. (Biochemistry)
4. Assist. Prof. Nipa Milintawisamai, Ph.D. (Soil Sciences)
5. Assist. Prof. Suporn Nuchadomrong, Ph.D. (Biochemistry)
6. Assist. Prof. Prasarn Swatsitang, Ph.D. (Nutrition)
7. Assist. Prof. Komsorn Lomthaisong, Ph.D. (Biochemistry and Physiology)
8. Assist. Prof. Paweena Pongdontri, Ph.D. (Biochemistry)
9. Assist. Prof. Rina Patramanon, Ph.D. (Biological Chemistry)
10. Dr. Somporn Katekaew, Ph.D. (Biochemistry)
11. Dr. Chamaiporn Champasri, Ph.D. (Biochemistry)
12. Dr. Gulsiri Senawong, Ph.D. (Molecular Genetics-Genetic Engineering)