

| BERGEN COMMUNITY COLLEGE | | NEW YORK INSTITUTE OF TECHNOLOGY | |
|---|---------------|---|---------------|
| <i>Associate in Science Natural Sciences and Mathematics, Biotechnology Option</i> | | <i>Bachelor of Science in Biotechnology</i> | |
| Course | Credit | Course | Credit |
| First Semester (17 credits) | | | |
| BIO-101 General Biology I | 4 | BIOL 110 General Biology I | 4 |
| CHM-140 General Chemistry I | 3 | CHEM 110 General Chemistry I | 4 |
| CHM-141 General Chemistry Laboratory I | 1 | | |
| WRT-101 English Composition I | 3 | FCWR 101 Writing I | 3 |
| Humanities Elective | 3 | Equivalent Elective | 3 |
| Social Science Elective: Restricted to Psychology (PSY), Sociology (SOC), or Anthropology (ANT) | 3 | Behavioral Science Equivalent | 3 |
| Second Semester (17 credits) | | | |
| BIO-203 General Biology II | 4 | BIOL 150 General Biology II | 4 |
| CHM-240 General Chemistry II | 3 | CHEM 150 General Chemistry II | 4 |
| CHM-241 General Chemistry Laboratory II | 1 | | |
| MAT-150 Elementary Statistics | 3 | Equivalent Elective | 3 |
| WRT-201 English Composition II | 3 | FCWR 151 Writing II | 3 |
| Humanities Elective: Restricted to History (HIS) | 3 | FCIQ 101 Foundations of Inquiry* | 3 |
| Third Semester (14 credits) | | | |
| BIO-210 Introduction to Biotechnology | 4 | BIOL 355 Recombinant DNA Lab | 3 |
| MAT-180 Precalculus: College Algebra and Trig | 4 | MATH 141 Precalculus | 4 |
| Humanities Elective: Restricted to Literature (LIT) | 3 | Literature Equivalent | 3 |
| Social Science Elective: Restricted to Economics (ECO) or Political Science (POL) | 3 | Social Science Equivalent | 3 |
| Fourth Semester (16 credits) | | | |
| BIO-211 Introduction to Bioinformatics | 3 | Biology Elective | 3 |
| COM-100 Speech Communication | 3 | FCSP 105 Found of Speech Communication | 3 |
| MAT-280 Calculus I | 4 | MATH 161 Applied Calculus | 3 |
| Humanities Elective: Restricted to Philosophy and Religion (PHR) | 3 | Philosophy Equivalent | 3 |
| General Education or Free Elective: Restricted to BUS-201 Marketing Principles | 3 | MRKT 102 Introduction to Marketing | 3 |
| TOTAL | 64 | TOTAL | 62 |

**Transfer substitution awarded on the basis of this agreement. If course recommendations are not followed, transfer credit award may vary.*

PLAN OF STUDY

Approved by James Simon, Dean
College of Arts and Sciences, NYIT

- *Effective as of 2016*

Program of study at New York Institute of Technology:
Bachelor of Science in Biotechnology

Courses to be completed at NYIT:

Courses required at NYIT may be adjusted based on classes completed at Bergen CC

| <u>Major Courses:</u> | | Credits |
|---|---|-----------|
| <u>Biology</u> | | |
| BIOL 235 | Microbiology | 4 |
| BIOL 331 | Virology | 3 |
| BIOL 335 | Genetics | 4 |
| BIOL 340 | Biochemistry | 4 |
| BIOL 341 | Genetic Engineering | 3 |
| BIOL 395 | Introduction to Research Design | 3 |
| BIOL 431 | Cell Biology | 4 |
| BIOL 441 | Contemporary Biotechnology | 3 |
| BIOL 442 | Bioprocessing | 3 |
| BIOL 493 | Independent Research III | 4 |
| BIOL 494 | Independent Research IV | 4 |
| <u>Chemistry</u> | | |
| CHEM 210 | Organic Chemistry I | 4 |
| CHEM 250 | Organic Chemistry II | 4 |
| CHEM 320 | Environmental Chemistry | 3 |
| CHEM 420 | Pharmaceutical Chemistry | 3 |
| <u>Physics</u> | | |
| PHYS 140 | Physics for Life Sciences I | 3 |
| PHYS 141 | Physics I Lab | 1 |
| PHYS 160 | Physics for Life Sciences II | 3 |
| PHYS 161 | Physics II Lab | 1 |
| <u>Core and Additional Requirements:</u> | | |
| FCSC 101 | Foundations of Scientific Process | 3 |
| FCWR 304 | Communication for Technical Professions | <u>3</u> |
| Total credits at New York Institute of Technology | | <u>67</u> |

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