

College of Eastern Idaho

AA/AS Microbiology Pathway



Name:

ID:

· A total of 60 credits are required for an AA or AS degree. For the graduation requirements, see below for a listing of courses offered that satisfy each Ways of Knowing area. Please see your faculty advisor for any questions relating to your progress and goals.

· For an **Associates of Arts (AA)** at least 2 additional courses must be from Humanistic and Artistic and/or Social and Behavioral Ways of Knowing

· For an **Associates of Science (AS)** at least 2 additional courses must be from Mathematical and/or Scientific Ways of Knowing

| GEM 1: Written Communication | | | |
|------------------------------|-----------------------------|----------|---|
| ENGL 101 | ◇ Writing and Rhetoric I | Required | 3 |
| ENGL 102 | ◇ Writing and Rhetoric II * | Required | 3 |

| GEM 2: Oral Communication | | | |
|---------------------------|--------------------------------------|----------|---|
| COMM 101 | ◇ Fundamentals of Oral Communication | Required | 3 |

| GEM 3: Mathematical Ways of Knowing | | | |
|-------------------------------------|------------------------------------|-------------|---|
| Choose 1 Course | | | |
| MATH 123 | ◇ Math in Modern Society * | | 3 |
| MATH 143 | ◇ College Algebra * | Recommended | 3 |
| MATH 147 | ◇ College Algebra & Trigonometry * | | 5 |
| MATH 153 | ◇ Statistical Reasoning * | Optional | 3 |
| MATH 170 | ◇ Calculus I * | Required | 4 |

| GEM 5: Humanistic and Artistic Ways of Knowing | | | |
|--|--|--|---|
| Choose 2 from different disciplines | | | |
| ART 101 | ◇ Art History I | | 3 |
| ART 102 | ◇ Art History II | | 3 |
| CUL 207 | ◇ Introduction to American Indian Literature | | 3 |
| ENGL 175 | ◇ Literature and Ideas | | 3 |
| ENGL 215 | ◇ Survey of World Mythology * | | 3 |
| HUM 101 | ◇ Introduction to Humanities I | | 3 |
| HUM 102 | ◇ Introduction to Humanities II | | 3 |
| MUSI 108 | ◇ Survey of Jazz and Pop Music | | 3 |
| PHIL 101 | ◇ Introduction to Philosophy | | 3 |
| PHIL 103 | ◇ Introduction to Ethics | | 3 |
| SPAN 101 | ◇ Elementary Spanish I | | 4 |
| SPAN 102 | Elementary Spanish II (GEM Pending) | | 4 |

| GEM 6: Social and Behavioral Ways of Knowing | | | |
|--|-------------------------------------|--|---|
| Choose 2 from different disciplines | | | |
| ANTH 101 | ◇ Physical Anthropology | | 3 |
| ANTH 102 | ◇ Cultural Anthropology | | 3 |
| CRJ 103 | ◇ Introduction to Law and Justice | | 3 |
| ECON 201 | ◇ Principles of Macroeconomics | | 3 |
| ECON 202 | ◇ Principles of Microeconomics | | 3 |
| HIST 101 | ◇ World History I | | 3 |
| HIST 102 | ◇ World History II | | 3 |
| HIST 111 | ◇ U.S. History I | | 3 |
| HIST 112 | ◇ U.S. History II | | 3 |
| POLS 101 | ◇ American National Government | | 3 |
| POLS 102 | ◇ Introduction to Political Science | | 3 |
| PSYC 101 | ◇ Introduction to Psychology | | 3 |
| SOC 101 | ◇ Introduction to Sociology | | 3 |
| SOC 102 | ◇ Social Problems | | 3 |

| GEM 4: Scientific Ways of Knowing | | | |
|--|---|----------|---|
| Choose 2 from different disciplines (at least 1 must have a lab) | | | |
| BIOL 100 | ◇ Concepts of Biology | | 4 |
| BIOL 120 | ◇ Environmental Science | | 4 |
| BIOL 201/L | ◇ Biology 1 & Lab | Required | 4 |
| BIOL 227/L | ◇ Human Anatomy & Physiology I & Lab | | 4 |
| BIOL 228/L | ◇ Human Anatomy & Physiology II & Lab * | | 4 |
| CHEM 100 | ◇ Concepts of Chemistry | | 4 |
| CHEM 101/L | ◇ Introduction to Chemistry & Lab | | 4 |
| CHEM 102/L | ◇ Essentials of Organic & Biochemistry & Lab * | | 4 |
| > CHEM 111 | ◇ General Chemistry I with Lab * | Required | 5 |
| GEOL 101/L | ◇ Physical Geology & Lab | | 4 |
| GEOL 102/L | Historical Geology & Lab (GEM Pending) † | | 4 |
| MICR 111/L | Introduction to Microbiology & Lab (GEM Pending) † | | 4 |
| > MICR 250/L | ◇ General Microbiology & Lab * † | Required | 4 |
| NUTR 239 | ◇ Human Nutrition | | 3 |
| PHYS 100/L | ◇ Survey of Physics & Lab | | 4 |
| PHYS 101/L | ◇ Introduction to Physics I & Lab | | 4 |
| PHYS 102/L | Introduction to Physics II & Lab (GEM Pending) † | | 4 |
| > PHYS 111/L | ◇ General Physics I & Lab * | Required | 4 |
| > PHYS 112/L | ◇ General Physics II & Lab * | Required | 4 |
| PHYS 211/L | Physics for Scientists & Engineers I & Lab * (GEM Pending) | | 5 |
| PHYS 212/L | Physics for Scientists & Engineers II & Lab * (GEM Pending) † | | 5 |

| GEM Stamped Course | | | |
|--------------------|---|--|---|
| Any GEM | ◇ MICR 250/L General Microbiology & Lab | | 4 |
| Any GEM | ◇ PHYS 112/L General Physics II & Lab | | 4 |

Total General Education Credits /36

| Degree GEM Courses | | | |
|---|---|--|---|
| A minimum total of 6 GEM credits. Specific to AA or AS (see notes above): | | | |
| Any GEM | ◇ CHEM 111 General Chemistry I with Lab | | 5 |
| Any GEM | ◇ Completed by BIOL or MICR lab credit | | 1 |

Total Degree GEM Credits /6

See other side for list of elective courses and requirements.

- PHYS 211 & 212 are options for the Physics requirements. See university requirements.

MATH 170 requires test placement or prerequisite courses. See current CEI catalog for additional information.

◇ - Indicates GEM Stamped course. Any GEM stamped course is transferrable to any public institution in the state of Idaho.

* - Indicates Prerequisite or placement applies. See current CEI catalog or advisor for more information.

† - Indicates courses that are pending future CEI catalog publications

Para obtener ayuda en español, llame al 208-524-3000.

Electives

A total of approximately 18 credits are required for electives, (60 overall credits) Credits may also come from other objective areas.

| | | | |
|-------------------|--|--------------------|----------|
| ACC 201 | Introduction to Financial Accounting | | 3 |
| ACC 202 | Introduction to Managerial Accounting * | | 3 |
| ART 105 | Design I | | 3 |
| ART 109 | Drawing I | | 3 |
| ART 231 | Introduction to Graphic Design | | 3 |
| BIOL 202/L | Biology 2 & Lab * | Required | 4 |
| BIOL 209/L | General Ecology & Lab | Recommended | 4 |
| BSN 101 | Introduction to Business | | 3 |
| BSN 201 | Business Communication * | | 3 |
| BSN 215 | Introduction to Information Science | | 3 |
| BSN 250 | Principles of Marketing | | 3 |
| BSN 255 | Leadership Development Skills | | 3 |
| BSN 261 | Legal Environments of Organizations | | 3 |
| CHEM 112 | General Chemistry II with Lab * | Required | 5 |
| COMM 233 | Interpersonal Communication | | 3 |
| CPSC 181 | Computer Science & Programming | | 3 |
| EAR 105 | Early Childhood Environments | | 3 |
| EDU 201 | Foundations of Education | | 3 |
| EDU 204 | Families, Communities, Culture | | 3 |
| EGR 105 | Engineering Graphics * | | 2 |
| EGR 120 | Introduction to Engineering * | | 2 |
| ENGL 203 | Effective Technical Communication * | Recommended | 3 |
| ENGL 206 | Introduction to Creative Writing * | | 3 |
| ENGL 235 | Introduction to Shakespeare * | | 2 |
| GEOL 107 | Real Monsters † | | 3 |
| GS 101 | Academic & Career Exploration | | 1 |
| GS 110 | Biology Career Exploration | | 1 |
| HCT 101 | Medical Terminology | | 2 |
| HIST 201 | Women in U.S. History | | 3 |
| HIST 291 | Historians Craft | | 3 |
| MATH 108 | Intermediate Algebra | | 3 |
| MATH 130 | Finite Mathematics * † | | 3 |
| MATH 144 | Trigonometry * | Recommended | 2 |
| MATH 175 | Calculus II * | Recommended | 4 |
| MATH 240 | Linear Algebra * † | Optional | 3 |
| MATH 256 | Arithmetic for Elementary Teachers * | | 3 |
| MATH 257 | Geometry & Probability for Elementary Teachers * | | 3 |
| MATH 275 | Calculus III * † | Optional | 4 |
| PHIL 201 | Introduction to Logic | | 3 |
| POLS 221 | Introduction to International Relations | | 3 |
| PSYC 120 | Careers in Psychology * | | 1 |
| PSYC 211 | Psychology of Death and Dying * | | 3 |
| PSYC 225 | Child Development * | | 3 |
| SOC 248 | Critical Analysis of Social Diversity | | 3 |
| SWK 271 | Introduction to Social Work | | 3 |
| SWK 272 | Human Behavior and the Social Environment | | 3 |
| ZOOL 280 | Pathophysiology * | | 3 |

Special Topics & Independent Study Electives

| | INDS 299 | Independent Study (Instructor Permission Required) | 1-2 |
|--|-----------------|--|---------------------|
| | BIOL 199 | | Optional 1-6 |
| | BSN 199 | | 3 |
| | ENGL 199 | | 3 |
| | GEOL 199 | | 1-6 |
| | HIST 299 | | 3 |
| | MATH 199 | | 1-6 |
| | MICR 199 | | Optional 1-6 |
| | PHYS 199 | | 1-6 |
| | POLS 299 | | 3 |
| | PSYC 299 | | 3 |
| | SOC 299 | | 3 |

Supportive Courses & Certificates

Please note that additional courses or certifications outside of the AA/AS General Studies curriculum will not be eligible for financial aid

| |
|--|
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |

Graduation Requirements

To graduate from CEI with your Associates Degree you must have:

- Cumulative GPA of 2.0
- Minimum grade of C- (70%) in all required courses
- At least 25% (15 credits) of your courses must come from CEI

| | |
|---|------------|
| Total General Education Credits (from front) | |
| Total Degree GEM Credits (from front) | |
| Total Elective Credits | |
| Total Associates Degree Credits | /60 |

- **Programs offered at:**
 Boise State University, Brigham Young University – Idaho, Dixie State University, Grand Canyon University, Eastern Oregon University, Idaho State University, Montana Tech University, University of Idaho, University of Montana, University of Utah, University of Wyoming, Utah State University, Washington State University, Weber State University
- **Comparable majors include, but are not limited to:**
 Biochemistry, Bioinformatics, Biology, Biomedical, Biotechnology, Cellular Biology, Forensic Science, Genetics, Medical Laboratory Science, Medical Sciences, Microbial Ecology, Molecular Biology & Technology, Molecular Biology, Organismal Biology, Public Health, Zoology
- Students planning to attend graduate school should meet with an advisor about additional Math requirements such as MATH 175, MATH 240, and MATH 275.

This list of courses is subject to change. Not all courses are provided every semester. Please see a current CEI catalog or your Self-Service for most up to date list of courses.

Sample Schedule



Momentum Year

| Semester 1 | | Credits | Notes |
|-----------------------|----------------------|-----------|--------------------------------------|
| * ENGL 101 | Writing & Rhetoric I | 3 | |
| MATH 170 | Calculus I | 4 | MATH 143&144 or equivalent placement |
| * BIOL 201/L | Biology I & Lab | 4 | |
| * GEM 5 | | 3 | Any H&A WoK |
| Semester total | | 14 | |

| Semester 2 | | Credits | Notes |
|-----------------------|------------------------------------|-----------|-----------------------------|
| * ENGL 102 | Writing & Rhetoric II | 3 | Prereq: ENGL 101 |
| * COMM 101 | Fundamentals of Oral Communication | 3 | |
| BIOL 202/L | Biology II & Lab | 4 | Prereq: BIOL 201/L |
| * GEM 5 | | 3 | H&A WoK of different prefix |
| * GEM 6 | | 3 | Any S&B WoK |
| Semester total | | 16 | |

| Summer Semester (Optional) | | Credits | Notes |
|----------------------------|--|---------|-------|
| | | | |
| Semester total | | | |

Transition Year

| Semester 3 | | Credits | Notes |
|-----------------------|------------------------------|-----------|-----------------------------|
| CHEM 111 | General Chemistry I with Lab | 5 | Prereq: MATH 143 or higher |
| PHYS 111/L | General Physics I & Lab | 4 | Prereq: MATH 143 or higher |
| * BIOL 209/L | General Ecology & Lab | 4 | Recommended Elective |
| * GEM 6 | | 3 | S&B WoK of different prefix |
| Semester total | | 16 | |

| Semester 4 | | Credits | Notes |
|-----------------------|-------------------------------|-----------|---------------------------------|
| MICR 250/L | General Microbiology & Lab | 4 | Prereq: BIOL 201/L and CHEM 111 |
| CHEM 112 | General Chemistry II with Lab | 5 | Prereq: CHEM 111 |
| PHYS 112/L | General Physics II & Lab | 4 | Prereq: PHYS 111/L |
| * Elective | | 1 | Depends on overall credit total |
| Semester total | | 14 | |

| Summer Semester (Optional) | | Credits | Notes |
|----------------------------|--|---------|-------|
| | | | |
| Semester total | | | |

* Indicates courses that may be offered as a Summer 8 week option
 For specific selection and sequencing of courses, students are strongly encouraged to meet with an advisor.