### 1. ENTRANCE TO MAJOR

- **2.0 GPA is required**

- **CHEM 110 (H): Chemical Principles** 3
- **CHEM 111: Experimental Chemistry I** 1
- **CHEM 112 (H): Chemical Principles II** 3
- **MATH 140: Calculus I** 4

A student enrolled in this major must receive a grade "C" or better in the courses listed above specified by Senate Policy 82-44.

### 2. HIGH SCHOOL LANGUAGE ADMISSION REQUIREMENT: Y OR N

- **ENGL/CAS 137H (fall) and 138T (spring)**

### 3. FIRST-YEAR SEMINAR (1 Unit)

**PSU 016: First Year Seminar** 1

### 4. WRITING ACROSS THE CURRICULUM (3 Units)

**UNITED STATES AND INTERNATIONAL CULTURES (6 Units)**
- **US**
- **IL**

**BIOLOGY (3 Units)**
- **Biol 322: Genetic Analysis** 3

### 5. MINIMUM CUMULATIVE GPA REQUIREMENT FOR GRADUATION

- **Overall GPA must be 2.0**
- **Total units earned (less repeats and remedial; must have at least 125 units to graduate).**

### 6. RESIDENCY REQUIREMENTS: SENATE POLICY 83-80

- **At least 36 of last 60 units must be earned at PSU?**
- **60 units in last 5 years?**

### 7. GENERAL EDUCATION

**WRITING/SPEAKING (GWS) (9 Units)**
- **^ ENGL 015 or 030; Rhetoric & Comp** 3
- **^ CAS 100 A, B, or C: Effective Speech** 3
- **^ ENGL/CAS 137H (fall) and 138T (spring) - Honor students first-year experience in place of ENGL30/CAS100.**

- **ENGL 202C: Technical Writing** 3
- **(GA)** 3
- **(GA)** 3
- **(GA)** 3

**HUMANITIES (6 Units)**
- **(GH)** 3
- **(GH)** 3
- **(GH)** 3

**SOCIAL & BEHAVIORAL SCIENCES (6 Units)**
- **(GS)** 3
- **(GS)** 3
- **(GS)** 3

**All courses appearing in the University Bulletin are acceptable as elective courses: 6 units of ROTC may be applied toward graduation requirements. Students MAY NOT fulfill this requirement with lower level or general education courses in math and science (including but not limited to examples such as: any BI SC course, any B M B course below the 100 level, MATH 110 and 111, and the like). Students MAY NOT fulfill this requirement with courses that significantly repeat material from courses required for the major, (including but not limited to examples such as: CHEM 202 or 203 after taking CHEM 210 or 212, or vice-versa; PHYS 250 or 251 after taking PHYS 211, 212, 213, and 214, or vice-versa; and so forth). Students MAY NOT fulfill this requirement with remedial courses (including but not limited to examples such as: LL ED 005 and 010; ENGL 004, 005, and 006; CHEM courses below CHEM 110; MATH courses below MATH 110; STAT 100; PHYS courses below PHYS 211; and the like).**

**HEALTH AND PHYSICAL ACTIVITY (3 Units)**
- **(GHA)**
- **(GHA)**
- **(GHA)**

### 8. REQUIREMENTS FOR THE MAJOR

**CHEMISTRY (14 Units)**
- **CHEM 110 (H): Chemical Principles I - "C" required** 3
- **CHEM 111: Experimental Chemistry I - "C" required** 1
- **CHEM 112 (H): Chemical Principles II - "C" required** 3
- **CHEM 113: Experimental Chemistry II** 1
- **CHEM 202: Fundamentals of Organic Chemistry I** 3
- **CHEM 203: Fundamentals of Organic Chemistry II** 3

**BIOCHEMISTRY & MOLECULAR BIOLOGY (6 Units)**
- **BMB 211: Elementary Biochemistry** 3
- **BMB 212: Elementary Biochemistry Laboratory** 1
- **BMB 221: Applied Biochemistry** 2

**MICROBIOLOGY (52 Units)**
- **MICRB 201: Introductory Microbiology** 3
- **MICRB 202: Introductory Microbiology Lab** 2

- **MICRB 251: Molecular and Cell Biology I** 3
- **MICRB 252: Molecular and Cell Biology II** 3
- **MICRB 410: Principles of Immunology** 3
- **MICRB 412: Medical Microbiology** 3
- **MICRB 421W: Lab General & Applied Microbiology** 3
- **MICRB 422: Medical Microbiology Laboratory** 2
- **MICRB 405A: Seminar/Practicum in Medical Tech.** 8
- **MICRB 405B: Seminar/Practicum in Medical Tech.** 4
- **MICRB 405C: Seminar/Practicum in Medical Tech.** 6
- **MICRB 405D: Seminar/Practicum in Medical Tech.** 5
- **MICRB 405E: Seminar/Practicum in Medical Tech.** 7
- **MICRB 405F: Seminar/Practicum in Medical Tech.** 3

**MATH (8 Units)**
- **MATH 140: Calculus I - "C" required** 4
- **MATH 141: Calculus II** 4

**PHYSICS (8 Units)**
- **PHYS 250: Introductory Physics I** 4
- **PHYS 251: Introductory Physics II** 4

**A "C" grade or better is required in 2 of the following 3 courses. All 3 courses required**
- **MICRB 201: Introductory Microbiology** 3
- **MICRB 251: Molecular and Cell Biology I** 3
- **MICRB 252: Molecular and Cell Biology II** 3

**Total ≥ 9**

**LIST C FREE ELECTIVES**

- Select 1 - 3 units from department list

**LIST C FREE ELECTIVES - With the EXCEPTION of the courses listed below, ALL courses appearing in the University Bulletin are acceptable as elective courses: 6 units of ROTC may be applied toward graduation requirements. Students MAY NOT fulfill this requirement with lower level or general education courses in math and science (including but not limited to examples such as: any BI SC course, any B M B course below the 100 level, MATH 110 and 111, and the like). Students MAY NOT fulfill this requirement with courses that significantly repeat material from courses required for the major, (including but not limited to examples such as: CHEM 202 or 203 after taking CHEM 210 or 212, or vice-versa; PHYS 250 or 251 after taking PHYS 211, 212, 213, and 214, or vice-versa; and so forth). Students MAY NOT fulfill this requirement with remedial courses (including but not limited to examples such as: LL ED 005 and 010; ENGL 004, 005, and 006; CHEM courses below CHEM 110; MATH courses below MATH 110; STAT 100; PHYS courses below PHYS 211; and the like).**