### 2. REQUIREMENTS FOR THE MAJOR

#### CHEMISTRY (16 cr)
- 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 210 (H): Organic Chemistry I 3
- CHEM 212 (H): Organic Chemistry II 3
- CHEM 213: Organic Chemistry Lab 2

#### MICROBIOLOGY (14 cr)
- MICRB 201: Intro. Microbiology 3
- MICRB 202: Intro. Microbiology Lab 2
- MICRB 251: Molecular & Cell Biology I 3
- MICRB 252: Molecular & Cell Biology II 3
- MICRB 421W: Lab Gen/Applied Micro 3

#### BIOCHEMISTRY & MOLECULAR BIOLOGY (14 cr)
- BMB 400: Molec. Biol. of the Gene 2
- BMB 401: General Biochemistry 3
- BMB 402: General Biochemistry 3
- BMB 428: Physical Chem w/Biological Apps 3
- B M B 442: Lab Prot., Nuc. Acid Molec Clon 3

#### MATHEMATICS (8 cr)
- MATH 140: Calculus I - "C" required 4
- MATH 141: Calculus II 4

#### BIOLOGY (3 cr)
- BIOL 322: Genetic Analysis 3

#### PHYSICS (8 cr)
- PHYS 250: Intro Physics I 4
- PHYS 251: Intro Physics II 4

#### FIRST YEAR SEMINAR (1 cr)
- PSU 016: First Year Seminar 1

### 3. ELECTIVES IN THE MAJOR

#### a. Select any 4 of the following courses:
- MICRB 401: Micro Physiology
- MICRB 410: Principals of Immunology
- MICRB 412: Medical Microbiology
- MICRB 415: General Virology
- MICRB 450: Micb/Molec Genetics

#### b. Select 3 credits in 400-level laboratory courses.
- MICRB 422: Medical Microbiology Lab
- MICRB 447: Molec. Immunology Lab
- BMB 443W: Lab Molecular Genetics I
- BMB 448: Model Sys & Approach in Cell Biol

#### c. Select 6-7 credits from: FD SC 408 (2), B M B 488, B M B 496 or any MICRB 400-level course, with a total maximum of 4-credits in BMB 488 and/or 496.

### 4. LIST C FREE ELECTIVES

Select 9 – 11 credits from department list

### 5. TO GRADUATE

A "C" grade or better is required in 2 of the following 3 courses. All 3 courses required.

- MICRB 201: Intro. Microbiology
- MICRB 251: Molecular & Cell Biology
- MICRB 252: Molecular & Cell Biology

Total ≥ 9

### 6. ENTRANCE TO MAJOR

2.0 GPA is required

- CHEM 110 [H]: Chemical Principals 3
- CHEM 111: Experimental Chemistry I 1
- CHEM 112 [H]: Chemical Principals II 3
- MATH 140: Calculus I 4

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

### 7. REMEDIAL & REPEATS

Courses that do not meet degree requirements

### 8. SENATE POLICY 83-80

Source/Time Credit acquisition:

- 36 of last 60 credits at PSU?
- 60 credits in last 5 years?

### 9. GPA/CREDITS

Overall GPA must be ≥ 2.0

Total credits earned (less repeats and remedial; must have at least 125 credits to graduate)