THIS SHEET APPLIES WINTER 2018
Additional information can be found at [www.chem.wayne.edu](http://www.chem.wayne.edu). (TRANSFER STUDENTS: You must earn a minimum of 15 chemistry credits at WSU. Check transferred chemistry courses with an advisor to prevent problems at graduation.)

### NON-CHEMISTRY REQUIREMENTS

**MATHEMATICS:**
- ☐ 2010(4)
- ☐ 2020(4)
- ☐ 2210(4)

[NOTE: A math placement exam is required prior to enrolling in MAT 2010. Contact the Testing Office (577-3400).]

**PHYSICS:**
- ☐ 2020 coreq
- ☐ 2170(4)
- ☐ 2171(1)
- ☐ 2180(4)
- ☐ 2181(1)

ALL students who transfer in less than 10 hrs of physics should check with Dr. Zibuck (101 Chemistry Bldg.)

### CHEMISTRY & BIOLOGY COURSES

#### GENERAL/ORGANIC CHEMISTRY:
- ☐ 1220(4) or 1225(3)/1230(1) or [1070(4) or 1050(6) or 1310(5) or 1410(6)]
- ☐ 1240(4)/1250(1) or [2240(4) or 2310(4) or 1410(6)]
- ☐ 2220(4)/2230(1) or [2260(4)/2270(2) or 2320(4)/2270(2) or 1420(6)]

#### GENERAL/ANALYTICAL CHEMISTRY:
- if you have taken 1080 but not 3120, please see an advisor
- ☐ 2280(3)/2290(2) or [1080(5) and 3120(4) or 3120(5)]
- ☐ 2310(4) or 1410(6)

#### INORGANIC CHEMISTRY:
- ☐ 3000(3)/F]

#### PHYSICAL CHEMISTRY:
- ☐ 5400(4)/W]

#### BIOCHEMISTRY:
- ☐ 6620(3)/F]
- ☐ 6610(3)/W, F/Prereq: 6620 & Coreq: 6635
- ☐ 6635(3)/W/Prereq: 6620 & Coreq: 6610

#### BIOLOGY:
- ☐ 1510(4)
- ☐ 2200(5) (BIO 2600 and BIO 3070 are required prerequisites for some biology advanced electives.)

#### ADVANCED ELECTIVES: Students must complete three elective courses from one of the following options:

<table>
<thead>
<tr>
<th>Bioorganic Option</th>
<th>Bioinorganic Option</th>
<th>Bioanalytical Option</th>
<th>Health Science Option**</th>
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<tbody>
<tr>
<td>CHM 5510 (3) /F]</td>
<td>CHM 6070 (3) /W]</td>
<td>CHM 5160 (3) [F]</td>
<td>BIO 5280 (3) BIO 6160 (3) IM 7010 (2)</td>
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<td>CHM 6270 (3) /F]</td>
<td>CHM 5020 (3) /F]</td>
<td>CHM 5570 (3) [W]</td>
<td>BIO 5330 (3) BIO 7011 (3) IM 7020 (2)</td>
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<td>CHM 6070 (3) /W]</td>
<td>CHM 6270 (3) [F]</td>
<td>CHM 6170 (3)</td>
<td>BIO 5640 (3) PHC 6500 (3) IM 7030 (2)</td>
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<td>BIO 6010 (3) PHC 7410 (3)</td>
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** Registration for non-chemistry electives require approval from the department that is offering the course. Students need to receive permission from a chemistry advisor prior to taking any 7000 level electives.

#### RESEARCH IN CHEMISTRY:
- ☐ 5999(5) (min. 2; max 4) or 5900 (2) [NOTE: Start Research Project no later (sooner the better) than the 1ST SEMESTER OF SENIOR YR.] To sign up for research e-mail Dr. Linz at tlinz@chem.wayne.edu to set up an advising appointment. You must file an Undergraduate Research Form and present a written report signed by the Chairman of the Department of Chemistry in order to obtain a final grade for your work. With prior approval, students may be allowed to substitute 2 credits of an internship experience (CHM 6991) in place of research.

#### B.S. WITH HONORS
Students wishing to earn a B.S. in Biochemistry & Chemical Biology degree with Honors must see Dr. Linz (367 Chemistry).

(see back for sample schedule and additional graduation requirements)
## Degree Requirements for BS in Biochemistry and Chemical Biology

### Freshman Year

#### Fall Semester
- CHM 1220/1230 – (PS) General Chemistry I (T) | 5
- English 1020 (BC) – (BC) Introductory College Writing | 3
- MAT 2010 – Calculus I (T) | 4
- Competency Requirement | 3

Total: 15

#### Winter Semester
- CHM 1240/1250 - Organic Chemistry I (T) | 5
- Intermediate Composition (IC) | 3
- MAT 2020 - Calculus II (T) | 4
- BIO 1510 - (LS) Basic Life Mechanisms (T) | 4

Total: 16

### Sophomore Year

#### Fall Semester
- CHM 2220/2230 - Organic Chemistry II (T) | 5
- Physics 2170/2171 - (PS) General Physics I (T) | 5
- BIO 2200 - Introductory Microbiology | 5
- Competency Requirement | 3

Total: 18

#### Winter Semester
- CHM 2280/2290 - General Chemistry II/ Analytical (T) | 5
- Physics 2180/2181 - General Physics II (T) | 5
- MAT 2210 - Probability and Statistics for Teachers (T) | 4
- Group Requirement | 3

Total: 17

### Junior Year

#### Fall Semester
- CHM 6620 - Metabolism: Pathways and Regulation (F) | 3
- CHM 3000 - Metals in Biology (F) | 3
- CHM 5999 - Undergraduate Research (T) | 3
- Group Requirement | 3
- Language I | 4

Total: 15

#### Winter Semester
- CHM 6610 - (WI) Biological Chemistry Laboratory | 3
- CHM 6635 - Tools of Molecular Biology (W) | 3
- CHM 6640 - Molecular Biology (W) | 3
- Group Requirement | 3
- Language II | 4

Total: 16

### Senior Year

#### Fall Semester
- Advanced Elective | 3
- Advanced Elective | 3
- Language III | 4
- Group Requirements | 6

Total: 16

#### Winter Semester
- CHM 5400 - Biological Physical Chemistry (W) | 4
- Advanced Elective | 2-4
- Group Requirements | 6

Total: 12-14

All College of Liberal Arts and Science students must maintain at least a 2.0 overall gpa. All Biochemistry Majors must earn a grade of "C" or above in all chemistry prerequisite courses in addition to the writing intensive course (CHM 6610). Biochemistry Majors must also maintain at least a 2.0 chemistry gpa. All Bachelor of Science majors must complete 2 to 4 credits of research, which is normally completed over at least two semesters. Some students start research in the Sophomore or Junior year and carry out a two-year or longer research project. Many students also carry out research in the summer.