DePauw University Department of Chemistry & Biochemistry
Checklist of Requirements for the Biochemistry Major

**Required Introductory Core Courses (4.25 cr)**
- Chem 120: Structure & Properties of Organic Molecules (1.0 cr)
- Chem 130: Structure & Properties of Inorganic Compounds (1.0 cr)
- Chem 170: Stoichiometric Calculations (0.25 cr)
- Chem 240: Structure & Function of Biomolecules (1.0 cr) (prerequisite: Chem 120 and 170)
- Chem 260: Thermodynamics, Kinetics and Equilibrium (1.0 cr) (prerequisite: Chem 120 or 130 and 170)

**Required Upper-Level Courses (3.0 cr) **
*Introductory core must be completed prior to these courses
- Chem 310: Enzyme Mechanisms (1.0 cr)
- Chem 343: Advanced Biochemistry (1.0 cr)
- Chem 440: Biophysical Chemistry (1.0 cr)

**Elective Courses: (2 credits chosen from the following; one course must be a full credit with a lab and not be research.)**

<table>
<thead>
<tr>
<th>0.5 credit courses</th>
<th>1.0 credit courses</th>
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<tbody>
<tr>
<td>Chem 342: Topics in Biochemistry</td>
<td>Bio 250: Microbiology</td>
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<td>Chem 331: Inorganic Reaction Mechanisms</td>
<td>Bio 320: Genetics</td>
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<td>Chem 332: Inorganic Synthesis</td>
<td>Bio 325: Bioinformatics</td>
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<td>Chem 351: Chemometrics</td>
<td>Bio 335: Animal Physiology</td>
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<td>Chem 352: Analytical Equilibria</td>
<td>Bio 361: Immunology</td>
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<td>Chem 353: Instrumental Methods of Analysis</td>
<td>Bio 381: Cell Signaling in Physiology</td>
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<td>Chem 361: Chemical Kinetics</td>
<td>Bio 385: Molecular Neurobiology</td>
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<td>Chem 362: Chemical Thermodynamics</td>
<td>Bio 415: Molecular Genetics and Genomics</td>
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<td>Chem 363: Quantum Mechanics in Chemistry</td>
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*The following may apply w/approval of advisor, provided they involve a biochemical topic. No more than 0.5 credit of research may apply.*
- Chem 335, 354, 364: Topics in different subdisciplines in chemistry (0.5 cr)
- Bio 390: Topics (variable)
- Chem 395: Independent Study (variable)
- Chem 405: Thesis (0.25)
- Bio 490: Research Problems (0.5 cr)

**Total for the Major: 9.25 credits**  
Note: At least 3.0 courses must be at 300 level or above

**Senior Comprehensive:**
- Attendance at 12 department seminars during Jr/Sr years*
- Successful completion of comprehensive exam (Sr year)

*The seminar requirement is reduced by 3 only if a student is off campus in an approved study program. In no case will the requirement be reduced below 9 seminars.

**Courses Required via Prerequisites**
- Bio 101: Molecules, Genes & Cells (1.0 cr) (prerequisite for Chem 343, 440)
- Bio 315: Molecular Biology (1.0 cr) (prerequisite for Chem 440)
- Phys 120: Principles of Physics I (1.0 cr) (prerequisite for Chem 440)
- Math 151: Calculus I (1.0 cr) (prerequisite for Chem 440)

March 2016