### University College Dublin (UCD) Approved Chemistry/Biochemistry Requirements

<table>
<thead>
<tr>
<th>Notre Dame Course Number/Name</th>
<th>UCD Course Number/Name</th>
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<tbody>
<tr>
<td>CHEM 30321 - Physical Chemistry I (Approved for biochemistry majors only)</td>
<td>CHEM 30060 - Quantum Mechanics and Molecular Spectroscopy</td>
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| CHEM 30322 - Physical Chemistry II | CHEM 30290 - Chemical Thermodynamics and Physical Chemistry  
OR  
CHEM 30080 - Thermodynamics and Reaction Kinetics |
| CHEM 30333 - Analytical Chemistry | CHEM 30110 - Instrumental Analysis |
| CHEM 30342 - Intermediary Metabolism | BMOL 20050 - Metabolic Biochemistry  
OR  
BIOC 20020 - Machinery of Life |
| CHEM 40434 - Physical Methods in Chemistry | CHEM 30230 - Symmetry and Spectroscopy |
| CHEM 48498 - Undergraduate Research | SCI 30010 - Introduction to Scientific Research |
| CHEM 50531 - Molecular Biology I | BMOL 30030 - Regulation of Gene Expression  
OR  
BMOL 20090 - Molecular Genetics and Biotechnology |
| BIOS 20303 - Fundamentals of Genetics | GENE 30010 - Genetics and Recombinant DNA  
OR  
GENE 20010 - Plant and Animal Genetics |
| BIOS 30341 - Cell Biology | CELB 30090 - Advanced Cell Biology  
OR  
CELB 20040 - Cell and Molecular Biology – Principles  
OR  
CELB 20010 - Cell Biology  
OR  
CELB 30070 - Cell Biology |

**Note:** Some of the courses do contain a lab component but are only 3 credits. You will simply need to make up the science credit with research or other science course at ND.