# List of ChBE Electives (2021-22)

Updated 3/24/2021

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Undergraduate Students</th>
<th>Graduate Students</th>
</tr>
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<tbody>
<tr>
<td><strong>Summer 2021</strong></td>
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</tbody>
</table>
| Polymer Science & Engineering I                            | CHBE 4775
| Advanced Biomaterials                                       | CHBE 6777
| **Fall 2021**                                              |                        |                   |
| Chemical Engineering of Energy Systems                     | CHBE 4030
| Bioprocess Engineering                                     | CHBE 4310
| Chemical Product Design                                    | CHBE 4535
| Pulp & Paper Manufacturing                                 | CHBE 4720
| Data Analytics for Chemical Engineers                      | CHBE 4745
| Biofluid Mechanics                                         | CHBE 4757
| Electrochemical Storage                                   | CHBE 4759
| Biocatalysis                                              | CHBE 4760
| Protein Engineering                                       | CHBE 4762
| Polymer Science & Engineering I                            | CHBE 4775
| Mech Behavior-Composites                                  | CHBE 4791
| Nanoporous Materials                                       | CHBE 4803
| Intro to Micro-Electro-Mechanical Systems                  | CHBE 6229
| **Spring 2022 (tentative schedule)**                      |                        |                   |
| Microelectronics Fabrication                               | CHBE 4050
| Microfluidics and Bio-applications                         | CHBE 4710
| Emerging Technology in Forest Bioproducts                  | CHBE 4730
| Fund of Sustainable Chemical Industry                     | CHBE 4743
| Data-Driven Process Systems Engineering                    | CHBE 4746
| Biofluid Mechanics                                         | CHBE 4757
| Electrochemical Storage                                   | CHBE 4759
| Drug Design, Dev., & Delivery                              | CHBE 4765
| Polymer Science & Engineering I                            | CHBE 4775
| Polymer Science & Engineering II                           | CHBE 4776
| Biosystems Analysis                                       | CHBE 4782
| Composite Materials & Proc.                                | CHBE 4793
| Biomolecular Systems Engineering                           | CHBE 4803
| Prep. & Reactions-Polymers                                 | CHBE 6750

**Notes**

1. Taught by non-ChBE faculty
2. Undergrad ChBE students can take this course with consent of the instructor
3. Priority enrollment given to Biotechnology option students.
4. Elective for Standard option; required course for Biotechnology option.