

Chemical Engineering Concentrations	Course Sequencing	Research Areas	Faculty
<p>Biological Engineering Concentration credit total: 19</p> <p>**BIO 1510, BIO 2600 AND CHM 5600 before research</p>	<p><u>Winter/Junior</u>: Research Prep</p> <p><u>Summer</u>: Work on Research</p> <p><u>Fall/Senior</u>: CHE 5811-Research Prep II- 1 credit—finalize research</p> <p><u>Winter/Senior</u>: CHE 6810-4 credits—write research paper and present</p> <p>Additional Concentration Requirements: BIO 2600, CHM 5600, CHE 5100, Tech Electives-4 credits total</p>	<p>Tissue engineering Biomaterials Immunotherapy Lipid bilayers and proteins Drug and gene delivery for cancer therapies Molecular motors</p>	<ul style="list-style-type: none"> <li>• Dr. Zhiqiang Cao</li> <li>• Dr. Haipeng Liu</li> <li>• Dr. Guangzhao Mao</li> <li>• Dr. Howard Matthew</li> <li>• Dr. Jeffrey Potoff</li> <li>• Dr. Korosh Torabi</li> <li>• Dr. Elaine Zhu</li> <li>• Dr. Carolyn Harris</li> </ul>
<p>Molecular Engineering &amp; Nanotechnology Concentration credit total: 19</p> <p>** CHM 5440 before research ** Nanoengineering Certificate available see academic advisor for requirements</p>	<p><u>Winter/Junior</u>: Research Prep</p> <p><u>Summer</u>: Work on Research</p> <p><u>Fall/Senior</u>: CHE 5811-Research Prep II- 1 credit—finalize research</p> <p><u>Winter/Senior</u>: CHE 6810-4 credits—write research paper and present</p> <p>Additional Concentration Requirements: CHM 5440, MSE 5650, Tech electives-7 credits total</p>	<p>Nanomedicine Nanomaterials for batteries Nanomaterials for electrocatalysis Nanosensors Colloids and supramolecular complexes</p>	<ul style="list-style-type: none"> <li>• Dr. Zhiqiang Cao</li> <li>• Dr. Da Deng</li> <li>• Dr. Guangzhao Mao</li> <li>• Dr. Eranda Nikolla</li> <li>• Dr. Elaine Zhu</li> <li>• Dr. Jeffrey Potoff</li> </ul>
<p>Product and Process Concentration credit total: 19</p>	<p>No Research requirement</p> <p>Concentration Requirements: CHM 5440 or CHM 5600 CHE 4800, CHE 6570, Tech electives-9 or 10 credits total</p>	<p>Process Controls Sustainability</p>	<ul style="list-style-type: none"> <li>• Dr. Yinlun Huang</li> <li>• Dr. Helen Durand</li> </ul>

For information about faculty research and undergraduate research opportunities go to: <http://engineering.wayne.edu/che/faculty/index.php>