Chemical Engineering (MR)

Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
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<tbody>
<tr>
<td>CHE 711</td>
<td>Chemical Engineering Process Modeling</td>
<td></td>
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</tr>
<tr>
<td>CHE 713</td>
<td>Thermodynamics I</td>
<td></td>
<td></td>
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<tr>
<td>CHE 715</td>
<td>Transport Phenomena</td>
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<tr>
<td>CHE 717</td>
<td>Chemical Reaction Engineering</td>
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Elective Courses

Select a minimum of six elective courses approved in conjunction with the academic committee.

CHE Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
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<tbody>
<tr>
<td>CHE 543</td>
<td>Polymer Science and Technology</td>
<td>3</td>
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<tr>
<td>CHE 551</td>
<td>Biochemical Engineering</td>
<td>3</td>
<td></td>
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<tr>
<td>CHE 560</td>
<td>Chemical Processing Of Electronic Materials</td>
<td>3</td>
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<tr>
<td>CHE 562</td>
<td>Fundamentals of Bio-</td>
<td>3</td>
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<tr>
<td>CHE 563</td>
<td>Fermentation of Recombinant Microorganisms</td>
<td>2</td>
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<tr>
<td>CHE 568</td>
<td>Conventional and Emerging</td>
<td>3</td>
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<tr>
<td>CHE 577</td>
<td>Advanced Biomanufacturing and Biocatalysis</td>
<td>3</td>
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</table>

CHE 596 Special Topics in Chemical Engineering (Core Chemical Engineering Concepts I (required of all non ChE majors; not available for others)) 1-3

CHE 596 Special Topics in Chemical Engineering (Core Chemical Engineering Concepts II (required of all non ChE majors; not available for others)) 1-3

CHE 596 Special Topics in Chemical Engineering (Colloid Science & Nanoscale Engineering) 1-3

CHE 596 Special Topics in Chemical Engineering (Molecular Cell Engineering) 1-3

CHE 596 Special Topics in Chemical Engineering (Polymer Rheology and Processing) 1-3

CHE 596 Special Topics in Chemical Engineering (Drug Delivery Concepts) 1-3

CHE 597 Chemical Engineering Projects 1-3

CHE 761 Polymer Blends and Alloys 3
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CHE 775</td>
<td>Multi-Scale Modeling of Matter</td>
<td>3</td>
</tr>
<tr>
<td>MA 501</td>
<td>Advanced Mathematics for Engineers and Scientists I</td>
<td>3</td>
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</table>

**Faculty**

**Full Professors**

Ruben G. Carbonell  
Joseph M. DeSimone  
Michael David Dickey  
Peter S. Fedkiw  
Jan Genzer  
Christine S. Grant  
Keith E. Gubbins  
Carol K. Hall  
Jason M. Haugh  
Hasan Jameel  
Robert M. Kelly  
Saad A. Khan  
Harold Henry Lamb  
Fanxing Li  
Phooi K. Lim  
Gregory N Parsons  
Walter James Pfaendtner  
Behnam Pourdeyhimi  
Balaji M. Rao  
Richard J. Spontak  
Orlin Dimitrov Velev  
Phillip R. Westmoreland

**Assistant Professors**

Milad Abolhasani  
Nathan Crook  
Chien Ching Lilian Hsiao  
Albert Jun Qi Keung  
Stefano Menegatti  
Adriana San Miguel Delgadillo  
Artem Rumyantsev  
Wentao Tang  
Qingshan Wei

**Practice/Research/Teaching Professors**

Lisa G. Bullard  
Matthew Ellis Cooper  
Kirill Efimenko  
Gary Louis Gilleskie  
Luke Neal  
John H. van Zanten

**Emeritus Faculty**

Richard M. Felder  
Michael Carl Flickinger  
Harold B. Hopfenberg  
David Frederick Ollis  
Hubert Winston

**Adjunct Faculty**

Anthony L. Andrady  
Christina Boi  
Eric Muller Gomez  
Raghubir P. Gupta  
Patrick V. Gurgel  
Michael R. Ladisch  
Gregory B. McKenna  
Orlando J. Rojas
Martin Schoen
Sindee Lou Simon
Małgorzata Sliwinska-Bartowiak
Simeon D. Stoyanov