# 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>12</td>
<td>Required Courses</td>
</tr>
<tr>
<td>CHE 713</td>
<td>Thermodynamics I</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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</table>

### Elective Courses
Select a minimum of six elective courses approved in conjunction with the academic committee

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
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</thead>
<tbody>
<tr>
<td>CHE 543</td>
<td>Polymer Science and Technology</td>
<td>3</td>
<td>CHE Courses</td>
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<tr>
<td>CHE 551</td>
<td>Biochemical Engineering</td>
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<tr>
<td>CHE 560</td>
<td>Chemical Processing Of Electronic Materials</td>
<td>3</td>
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<td>CHE 562</td>
<td>Fundamentals of Bio-Nanotechnology</td>
<td>3</td>
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<tr>
<td>CHE 563</td>
<td>Fermentation of Recombinant Microorganisms</td>
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<td>CHE 568</td>
<td>Conventional and Emerging Nanomanufacturing Techniques and Their Applications in Nanosystems</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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<tr>
<td>CHE 596</td>
<td>Special Topics in Chemical Engineering (Core Chemical Engineering Concepts I (required of all non ChE majors; not available for others))</td>
<td>1-3</td>
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<tr>
<td>CHE 596</td>
<td>Special Topics in Chemical Engineering (Core Chemical Engineering Concepts II (required of all non ChE majors; not available for others))</td>
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<tr>
<td>CHE 596</td>
<td>Special Topics in Chemical Engineering (Polymer Rheology and Processing)</td>
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<tr>
<td>CHE 596</td>
<td>Special Topics in Chemical Engineering (Drug Delivery Concepts)</td>
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<td>CHE 597</td>
<td>Chemical Engineering Projects</td>
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<tr>
<td>CHE 761</td>
<td>Polymer Blends and Alloys</td>
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### CHE 775
Multi-Scale Modeling of Matter
3

### MA 501
Advanced Mathematics for Engineers and Scientists I
3

## 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. Andredy
- 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