## Degree Requirements

### Required Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 711</td>
<td>Chemical Engineering Process Modeling</td>
<td></td>
<td>12</td>
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<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.

### CHE Courses

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
</tr>
</thead>
<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>
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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-Nanotechnology</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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<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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<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
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<tbody>
<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>
<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>
<td>1-3</td>
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<tr>
<td>CHE 596</td>
<td>Special Topics in Chemical Engineering (Colloid Science &amp; Nanoscale Engineering)</td>
<td>1-3</td>
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<tr>
<td>CHE 596</td>
<td>Special Topics in Chemical Engineering (Molecular Cell Engineering)</td>
<td>1-3</td>
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</tr>
<tr>
<td>CHE 596</td>
<td>Special Topics in Chemical Engineering (Chemical Process Engineering)</td>
<td>1-3</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>
<td>1-3</td>
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<tr>
<td>CHE 597</td>
<td>Chemical Engineering Projects</td>
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<tr>
<td>CHE 761</td>
<td>Polymer Blends and Alloys</td>
<td>3</td>
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</tbody>
</table>
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
Behnam Pourdeyhimi
Balaji M. Rao
Richard J. Spontak
Orlin Dimitrov Velev
Phillip R. Westmoreland

**Associate Professors**
Chien Ching Lilian Hsiao
Albert Jun Qi Keung
Stefano Menegatti
Adriana San Miguel Delgadillo
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 Bol
Eric Muller Gomez
Raghbir P. Gupta
Patrick V. Gurgel
Michael R. Ladisch
Gregory B. McKenna
Orlando J. Rojas
Martin Schoen
Sindie Lou Simon
Malgorzata Sliwinska-Bartowiak
Simeon D. Stoyanov

**Assistant Professors**
Milad Abolhasani
Nathan Crook