

**Chemical Engineering Program 2007/2009 (131 Hours)**

Offered:  
F=Fall  
S=Spring  
M=Summer

| Semester, Transfer or AP   | Grade         | Course Number | Cr Hrs | Course Title                             | Prerequisites, Corequisites and/or with Concurrency   | Prerequisites                          | Offered:                             |                               |   |
|--|---------------|---------------|--------|--|---|--|--------------------------------------|-------------------------------|---|
| <b>English - 6 hours</b>   |               |               |        |  |   |  |                                      |                               |   |
|  |               | EH 101        | 3      | Freshman Composition I                   | Placement   |  | FSM                                  |                               |   |
|  |               | EH 102        | 3      | Freshman Composition II                  | EH 101  |  | FSM                                  |                               |   |
| <b>Mathematics - 15 hours</b>  |               |               |        |  |   |  |                                      |                               |   |
|  |               | MA 171        | 4      | Calculus A                               | MA 113 or MA 115 or Level III Placement   |  | FSM                                  |                               |   |
|  |               | MA 172        | 4      | Calculus B                               | MA 171  |  | FSM                                  |                               |   |
|  |               | MA 201        | 4      | Calculus C                               | MA 172  |  | FSM                                  |                               |   |
|  |               | MA 238        | 3      | Applied Differential Equations           | Prereq w/Con: MA 201  |  | FSM                                  |                               |   |
| <b>** Class has required recitation section Chemistry - 15 hours</b> |               |               |        |  |   |  |                                      |                               |   |
|  |               | CH 121        | 3      | General Chemistry I                      | CH 101 or Placement, MA 113, Co-req: CH 125   |  | FSM                                  |                               |   |
|  |               | CH 125        | 1      | General Chemistry Lab I                  | Prereq w/Con: CH 121  |  | FSM                                  |                               |   |
|  |               | CH 123        | 3      | General Chemistry II                     | CH 121, Co-req: CH 126  |  | FSM                                  |                               |   |
|  |               | CH 126        | 1      | General Chemistry Lab II                 | Prereq w/Con: CH 123  |  | FSM                                  |                               |   |
| <b>** Organic Chemistry I</b>  |               |               |        |  |   |  |                                      |                               |   |
|  |               | CH 331        | 3      | Organic Chemistry I                      | CH 123, CH 126, Coreq: CH 331R  |  | FSM                                  |                               |   |
| <b>** Organic Chemistry Lab I</b>                                    |               |               |        |  |   |  |                                      |                               |   |
|  |               | CH 335        | 1      | Organic Chemistry Lab I                  | Prereq w/Con: CH 331  |  | FSM                                  |                               |   |
| <b>** Organic Chemistry II</b>                                       |               |               |        |  |   |  |                                      |                               |   |
|  |               | CH 332        | 3      | Organic Chemistry II                     | CH 331, Coreq: CH 332R  |  | FSM                                  |                               |   |
| <b>Biology - 3 hours</b>   |               |               |        |  |   |  |                                      |                               |   |
|  |               | BYS 201       | 3      | Intro to Molecular Biological Systems    | CH 123  |  | S                                    |                               |   |
| <b>Physics - 8 hours</b>   |               |               |        |  |   |  |                                      |                               |   |
|  |               | PH 111        | 3      | General Physics w/Calculus I             | MA 171, Coreq: PH 114   |  | FSM                                  |                               |   |
|  |               | PH 114        | 1      | General Physics Lab I                    | Prereq w/Con: PH 111  |  | FSM                                  |                               |   |
|  |               | PH 112        | 3      | General Physics w/Calculus II            | MA 172, PH 111, Coreq: PH 115   |  | FSM                                  |                               |   |
|  |               | PH 115        | 1      | General Physics Lab II                   | Prereq w/Con: PH 112  |  | FSM                                  |                               |   |
| <b>History, Social &amp; Behavioral Sciences - 9 hours</b>           |               |               |        |  |   |  |                                      |                               |   |
|  |               | HY            | 3      | History                                  | See History, Social & Behavioral Sciences list at <a href="http://www.eng.uah.edu/StudentAffairs/forms.php">http://www.eng.uah.edu/StudentAffairs/forms.php</a> . Also available at the Engineering Student Affairs office, EB 157.                                 |  | FSM                                  |                               |   |
|  |               |               | 3      |  |   |  | FSM                                  |                               |   |
|  |               |               | 3      |  |   |  | FSM                                  |                               |   |
| <b>Humanities &amp; Fine Arts - 9 hours</b>                          |               |               |        |  |   |  |                                      |                               |   |
|  |               | EH            | 3      | Literature                               | Must take a six hour sequence in a discipline. See Humanities & Fine Arts List at <a href="http://www.eng.uah.edu/StudentAffairs/forms.php">http://www.eng.uah.edu/StudentAffairs/forms.php</a> . Also available at the Engineering Student Affairs office, EB 157. |  | FSM                                  |                               |   |
|  |               |               | 3      | Fine Arts                                |   |  | FSM                                  |                               |   |
|  |               | PHL 202       | 3      | Intro to Ethics                          |   |  | FSM                                  |                               |   |
| <b>Engineering Core - 12 hours</b>                                   |               |               |        |  |   |  |                                      |                               |   |
|  |               | CHE 197       | 3      | Computer Methods for Chemical Engineers  | Level II Math Placement or Coreq: MA 112  |  | F                                    |                               |   |
|  |               | CHE 244       | 3      | Intro to Chemical Engineering Systems    | CH 123, CHE 197, PH 111   |  | S                                    |                               |   |
|  |               | CHE 294       | 3      | Nature & Properties of Materials         | CH 121, PH 111  |  | FM                                   |                               |   |
|  |               | CHE 344       | 3      | Chemical Engineering Thermodynamics      | CHE 244, CHE 341  |  | SM                                   |                               |   |
| <b>Chemical Engineering Option - 54 hours</b>                        |               |               |        |  |   |  |                                      |                               |   |
|  |               | MAE 271       | 3      | Statics                                  | PH 111, Prereq w/Con: MA 201  |  | FSM                                  |                               |   |
|  |               | EE 213        | 3      | Electrical Circuit Analysis I            | PH 112, Prereq w/Con: MA 238 & MA 244 or CHE 244 or MAE 285   |  | FSM                                  |                               |   |
|  |               | ISE 321       | 3      | Engineering Economy                      | MA 172, Sophomore Standing  |  | FSM                                  |                               |   |
|  |               | CHE 295       | 1      | Nature & Properties of Materials Lab     | Prereq w/Con: CHE 294   |  | FM                                   |                               |   |
|  |               | CH 341        | 3      | Physical Chemistry I                     | CH 123, MA 201, PH 112  |  | F                                    |                               |   |
|  |               | CHE 347       | 3      | Quantitative Modeling for Chemical Engrs | CHE 244, MA 238   |  | SM                                   |                               |   |
|  |               | MAE 310       | 3      | Fluid Mechanics I                        | MA 238, MAE/CE 271 & MAE 285 or CPE 112 or CHE 197  |  | FSM                                  |                               |   |
|  |               | CHE 439       | 2      | Unit Operations Lab I                    | BYS 201, Prereq w/Con: CHE 441, CHE 443, CHE 446  |  | F                                    |                               |   |
|  |               | CHE 440       | 2      | Unit Operations Lab II                   | CHE 439, CHE 441, CHE 443   |  | S                                    |                               |   |
|  |               | CHE 441       | 3      | Chemical Kinetics & Reactor Design       | CHE 344, CHE 347  |  | F                                    |                               |   |
|  |               | CHE 342       | 3      | Transport Phenomena                      | CHE 244, Prereq w/Con: MAE 310  |  | S                                    |                               |   |
|  |               | CHE 443       | 3      | Mass Transfer Operations                 | CHE 342, CHE 344, MAE 310   |  | F                                    |                               |   |
|  |               | CHE 445       | 3      | Chemical Process Control                 | CHE 347, CHE 441  |  | S                                    |                               |   |
|  |               | CHE 446       | 3      | Analysis & Design of Transport Equipment | MAE 310, Prereq w/Con: CHE 443  |  | F                                    |                               |   |
|  |               | CHE 448       | 3      | Chemical Engineering Design              | CHE 441, CHE 443, CHE 446, Prereq w/Con: CHE 445  |  | S                                    |                               |   |
| Select One Concentration   | Biotechnology |               |        | CH 361                                   | 3   | General Biochemistry I                 | BYS 201, CH 332, CH 335              | FSM                           |   |
|  |               |               |        | CH 362                                   | 1   | General Biochemistry Lab I             | Prereq w/Con: CH 361                 | FSM                           |   |
|  |               |               |        | CH 363                                   | 3   | General Biochemistry II                | CH 361                               | S                             |   |
|  |               |               |        | CHE 460                                  | 3   | Introduction to Bioprocess Engineering | CH 362, CH 363                       | F                             |   |
|  |               |               |        | CHE 461                                  | 3   | Bioseparations                         | CH 362, CH 363, CHE 460              | S                             |   |
|  | Materials Eng |               |        |  | CH 342  | 3                                      | Physical Chemistry II                | CH 341                        | S |
|  |               |               |        |  | CH 346  | 1                                      | Experimental Physical Chemistry II   | CHE 295, Prereq w/Con: CH 342 | S |
|  |               |               |        |  | CH 440  | 3                                      | Polymer Synthesis & Characterization | CH 331                        | F |
|  |               |               |        |  | CHE 494   | 3                                      | Applied Materials Engineering        | CHE 294, CH 342 or CH 348     | S |
|  |               |               |        |  | CHE 495   | 3                                      | Polymer Engineering                  | CH 341, CH 440                | F |

**ENGINEERING APPROVALS:**

All prerequisite classes must be completed with a "C" or higher grade.  
The Catalog is the final authority for all degree requirements.

Version 1  
June 6, 2007

|         |      |                  |      |                     |      |
|---------|------|------------------|------|---------------------|------|
| Advisor | Date | Department Chair | Date | Dean of Engineering | Date |
|---------|------|------------------|------|---------------------|------|