**CHEMICAL ENGINEERING (CHEN)\***

**2011-2012**

# FRESHMAN YEAR

CHEM 1110 General Chemistry I (P) 3

CHEM 1111 General Chemistry I Lab(P) 1

MATH 1610 Calculus I (P) 4

ENGR 1110 Intro to Engineering (CHEN) (P) 2

ENGL 1100 English Composition I 3

Core History 3

CHEM 1120 General Chemistry II(P) 3

CHEM 1121 General Chemistry II Lab(P) 1

MATH 1620 Calculus II (P) 4

ENGR 1100 Engineering Orientation (P) 0

ENGL 1120 English Composition II 3

PHYS 1600 Engineering Physics I 4

COMP 1200 Intro Engr Comp / MATLAB Prog (P) 2

*SOPHOMORE YEAR*

CHEN 2100 Principles of Chemical Eng (M) 4

MATH 2630 Multivariate Calculus 4

PHYS 1610 Engineering Physics II 4

BIOL 1020 Principles of Biology 3

BIOL 1021 Principles of Biology Lab 1

CHEN 2AA0 Progress Assessment I (M) 0

CHEN 2610 Transport I (M) 3

CHEM 2070 Organic Chemistry I 3

CHEM 2071 Organic Chemistry I Lab 1

MATH 2650 Linear Diff Equations 3

ENGR 2010 Thermodynamics 3

Core History or Core Literature 3

*JUNIOR YEAR*

CHEN 3370 Phase & Reaction Equilibrium (M) 3

CHEN 3600 Computer-Aided Chemical Eng (M) 3

CHEN 3620 Transport II (M) 3

CHEM 2080 Organic Chemistry II 3

Core Literature 3

CHEN 3AA0 Progress Assessment II (M) 0

CHEN 3650 Applied CHEN Analysis (M) 3

CHEN 3660 Chemical Engineering Separations (M) 3

CHEN 3700 Chem Reaction Eng (M) 3

CHEN 3820 Chemical Engineering Lab I (M) 2

Core Social Science 3

*Summer*

CHEN 4860 Chemical Eng Lab II (M) 2

CHEN Technical Elective I (M) 3

PHIL 1040 Business Ethics 3

Core Social Science 3

*SENIOR YEAR*

CHEN 4170 Digital Process Control (M) 3

CHEN 4450 Process Economics & Safety (M) 3

CHEN 4460 Process Simulation & Optimization (M) 2

CHEN Technical Elective II (M) 3

Adv Chemistry Elective 3

CHEN 4470 Process Design Practice (M) 3

CHEN Technical Elective III or ROTC (M) 3

CHEN Technical Elective IV or ROTC (M) 3

Core Social Science or Core Humanities 3

Core Fine Arts 3

UNIV4AA0 EN1 Undergrad Graduation 0

TOTAL - 134 SEMESTER HOURS

\* This curriculum model is offered for illustrative purposes only. Courses in the chemical engineering major are designated by (M). Courses required for pre-engineering are designated by (P). Students are free to arrange their own schedules as long as all prerequisite requirements are met. There is no requirement to attend summer term. The AU Bulletin lists acceptable core courses. Students must have a two-course sequence in literature and a course in history or a two-course sequence in history and a course in literature. Students must complete a core course that addresses Auburn University General Education Student Learning Outcome 9. See departmental advisor for approved course listing for technical electives and adv chemistry elective. At least three hours of technical electives must be coursework offered by an engineering department.

CHEM 1110, 1111, 1120 and 1121 are preferred, but CHEM 1030, 1031, 1040 and 1041 are acceptable substitutes.

MATH 1610, 1620, and 2630 are preferred, but MATH 1710, 1720, and 2730 are acceptable substitutes. Honors sections of all courses will be accepted for this curriculum.