

## French - Engineering Double Major (Chemical Concentration)

<b>Year 1</b>	Fall (16)	4 Chemistry 103 2 Engineering 101 2 Engineering 181 4 Mathematics 171 3 French 301 1 Interdisciplinary 149	General Chemistry (F) Intro to Engineering Design (F) Graphical Communication Lab (F) Calculus I (F,S) Advanced Conversation First Year Prelude
	INT	3 <i>IDIS 150-08</i>	<i>DCM: Women's Embodiment Experience</i>
	Spring (16)	4 Engineering 106 4 Mathematics 172 4 Physics 133 3 French 302 1 <i>Health and Fitness</i>	Engineering Chemistry and Materials Science (S) Calculus II (F,S) Introductory Physics, Mechanics and Gravity (F,S) Advanced Grammar <i>(PER 101-112)</i>
<b>Year 2</b>	Fall (15)	3 STFR 315 3 STFR 316 3 STFR 381 3 <i>The Arts</i> 3 <i>Cross-Cultural Engagement</i>	Advanced Language Study in France I Advanced Language Study in France II Special Topics
	INT	3 <i>IDIS 102 or 103</i>	<i>Oral Rhetoric for Engineers (F,S,I)</i>
<b>X</b>	Spring (16)	4 French 351 (Literature core) 4 Engineering 209 4 Mathematics 271 4 Chemistry 230	Survey of French Literature (S) Intro to the Laws of Conservation & Thermodynamics (F,S) - lab Multivariable Calculus (F,S) Adv. Inorganic Chemistry
		0 Engineering 294	Seminar (for students entering Calvin fall 2009 or later.)
<b>Year 3</b>	Fall (17)	4 Mathematics 231 4 Physics 235 5 Chemistry 261 3 <i>English 101</i> 1 <i>Health and Fitness</i> 0 Engineering 295	Differential Equations with Linear Algebra (F,S) Introductory Physics: Electricity and Magnetism (F) -lab Organic Chemistry 1 (F)-lab <i>Written Rhetoric (F,S)</i> <i>(PER 120-159)</i> Internship Workshop
	INT	0	
	Spring (15)	5 Chemistry 262 4 Engineering 204 2 <i>Mathematics 241</i> 3 <i>Economics 151 or 221</i> 1 <i>Health and Fitness</i>	Organic Chemistry 11 (S) Intro to Circuit Analysis and Electronics with Lab (F,S) <i>Engineering Statistics (S)</i> <i>Principles of Economics/Principles of Microeconomics</i> <i>(PER 160-189) (or during interim)</i>
<b>Year 4</b>	Fall (16)	3 Engineering 303 2 Computer Science 104, 106, or 108 3 <i>Religion 121 or 131</i> 4 Engineering 202 4 Chemistry 317	Chem. Engr. Principles & Thermodynamics (F) Applied C++ (F) (CS 106 or 108 may be substituted but both are 4 credit hours) <i>Biblical Literature/Christian Theology</i> Statics and Dynamics (F,S) [MUST be taken in Year 3] Physical Chemistry 1 (F)
	INT	0	
	Spring (15)	4 Engineering 312 4 Engineering 330 4 Chemistry 303 3 French 3xx	Chemical Engineering Thermodynamics (S) Fluid Flow & Heat Transfer (S) <b>Bio-</b> Chemistry (S) French elective in Literature
<b>SummeI</b>		0 Engineering 387	International Engineering Internship (in French speaking region)
<b>Year 5</b>	Fall (16)	2 Engineering 339 4 Engineering 331 4 Engineering 335 4 Chem 201 2 Business 357	Senior Design Project (F) Kinetics/Reactor Design (F) Mass Transfer & Staging Operations (F) Analytical Chem Business Aspects for Engineers (F)
	INT	3 Engineering Special Topics Elective	
	Spring (14)	1 <i>Health and Fitness</i> 3 <i>Philosophy 153</i> 2 Engineering 337 4 Engineering 342 4 Engineering 340 0 Engineering 394	<i>(PER 160-189) (or during interim)</i> <i>Fundamental Questions in Philosophy</i> Chemical Engineering Laboratory (S) Process Control (S) Senior Design Project (S) Engineering Seminar

*Pink listings (core courses) may be swapped as long as ALL are completed.*

See Elective Options sheet for elective courses highlighted in green, red, orange and purple.

**CALVIN**  
**Engineering**