

**CHEMICAL ENGINEERING DEPARTMENT**

**TECHNICAL Electives – Approved Courses**  
**(For students graduating 2010)**

The following courses are approved Technical Electives **FOR STUDENTS GRADUATING 2010**. Be sure to check the pre-requisites, co-requisites, and credit hours as listed in the University Catalog. If you do not have the pre-requisites and co-requisites, talk with the instructor for permission to take the class. The list may be updated during the year, be sure to get an up-to-date copy from the ChE Office at the time you choose the Technical Electives. The course(s) you choose must be on the approved list in effect at the time you take the course(s).

**Choose 3 hours from these approved courses.** If you take more than 3 hours, the excess hours count toward Free Electives. **Technical Electives must be taken A-F.**

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<u>Discipline</u>	<u>Course No.</u>	<u>Course Title</u>	<u># Credits</u>
<b>Biochemistry</b>	2024	Concepts of Biochemistry	3
	2144	Organic Biochemistry	1
	3114	Biochem. For Biotechnology & Life Sci.	3
	4115,4116	General Biochemistry	4,3
	4204	Biochemical Toxicology	3
<b>Chemical Engineering</b>			
Any ChE course not required in the ChE undergraduate curriculum may count as a technical elective ( <u>EXCEPT</u> 4144 (Bus. & Mktg. for Proc. Indus.)). Some examples:			
	4214	Intro to Polymer Materials	3
	4224	Intro to Polymer Processing	3
ChE/BSE	4544	Protein Separation Engineering	3
	4304	Applied Surface & Colloid Chemistry	3
(see the undergraduate and graduate catalog for other listings of courses)			
<b>Chemistry</b>	2114, 2124	Analytical Chem & Lab (duplicates Chem 3114, 3124)	3, 1
	2555, 2556	Organic Synthesis & Techniques & Lab	3, 1
	3114, 3124	Analyt Chem Life Sci & Lab (duplicates Chem 2114, 2124)	3, 1
	3616, 3626	Phys. Chem. (duplicates Chem 4616) & Lab	3, 1
	CHEM 4074/MSE 4544	Laboratory in Polymer Science	2
	4114	Instrumental Analysis	4
	4124	Advanced Instrumental Techniques	2
	4404	Physical Inorganic Chemistry	3
	4414	Inorganic Chemistry Lab	2
	4424	Descriptive Inorganic Chemistry	3
	4524	Identification of Organic Compounds	3
	4534	Organic Chemistry of Polymers	3

	4554	Drug Chemistry	3
	4616	Physical Chem. Life Sci. II (duplicates Chem 3616)	3
	4634	Polymer and Surface Chemistry	3
<b>Civil and Environ. Engr.</b>	5104	Environmental Chemistry	3
<b>Engineering</b>	3124	Introduction to Green Engineering	3
<b>Envir. Sci.</b>	4734/ CSES 4734	Environmental Soil Chemistry	3
<b>Materials Sci. &amp; Engr.</b>	2034	Elements of Materials Engr.	3
	3204	Introduction to Electronic Materials	3
	3424	Crystal Chem. & Phase Equilibria	3
<b>Food Sci. &amp; Technology</b>	4504	Food Chemistry	3
	4514	Food Analysis	3
<b>Physics</b>	3455	Quantum and Solid State Physics	4
<b>Wood Sci. &amp; Forest Prod.</b>	3114	Wood Structure, Properties, & Processing (10 week course) MUST ALSO TAKE 3234 (1 credit) THE SAME SEMESTER (course is last 5 weeks of the semester)	3
	3434	Wood Chemistry, Products & Processes	3

It is possible to take ChE 4994/Undergraduate Research (UR) or ChE 4974/Independent Study (IS) and count the credits toward Technical Electives. The student should talk with a faculty member about a research project. Get the paperwork (request for approval to take ChE 4994 or 4974) from the ChE main office. **You do not add the hours to your class schedule.** After the request is filled out, approved by the ChE Department and the Dean's Office, the hours will be added to your class schedule. **The paperwork must be completed and returned to Jane Price (ChE main office) by the first day of classes.** To be eligible to take 4974 or 4994, your overall and in-major GPA must be at least 2.0.

If there is a course you are interested in taking and it is not on the approved list, talk to Dr. Cox for approval to substitute a course.