

CHEMICAL ENGINEERING

<http://www.cems.umn.edu/>

Department version - Unofficial

For students admitted to the University of Minnesota prior to Fall 2010.

Official version at: http://cse.umn.edu/services/advising/CSE_CONTENT_188609.php

Freshman Year (many students take a lib ed elective in the May or Summer term)

Fall Semester	crs	Spring Semester	crs
Chem 1021 Chem Prin I	4	Chem 1022 Chem Prin II [Chem 1021]	4
Math 1371 (or 1271) Calc I (1371 Fall only)	4	Math 1372 Calc II [C or better in 1271 or 1371]	4
Phys 1301W Intro Phys I [&Math 1271 or &Math 1371]	4	UD Phys 1302W Intro Phys II [&Math 1272 or &1372, Phys 1301]	4
UD Freshman Writing - Lib Ed	3 or 4	Lib Ed* (e.g. Biol 1009)	3 or 4
ChEn 1001 2:30 (Optional, highly recommended)	1		

* Biol 1009 is recommended in the first year.

Junior Year

Fall Semester	crs	Spring Semester	crs
Chem 2311 Organic Lab [Chem 2302 or &2302]	4	ChEn 3401W JrChEnLab 9:05 [UD ChEn, (3005, 3006 or &, 3101, 3102 or &, 3201 or &, Chem 2121, 2311, Writ 1301 or eq.)]	2
ChEn 3701 Biomolec Eng 9:05 [Chem 2302, Math 2373 or &, 2001, h.s. biology rec'd]	3	ChEn 3006 Mass Tran & Sepns 8 [UD ChEn, 2001, 3005, 3101]	4
ChEn 3005 Fluid and Heat Transprt 10:10 [UD ChEn, 2001]	4	ChEn 3102 React Kin & Eng. 11:15 [UD ChEn, 2001, 3101]	4
ChEn 3101 Chem Eng Thermo 1:25 [UD ChEn, 2001, Chem 4501]	4	ChEn 3201 Comp Mthds in ChEn 10:10 [UD ChEn, 2001, 3005, 3006 or &]	3
Chem/ChEn dbl majors should take Chem 4701 12:20 this semester with Chem dept. approval; ChEn 3701 may be postponed to Sr. Fall		Lib Ed*** (e.g. Soc Sci II)	3

Sophomore Year

Fall Semester	crs	Spring Semester	crs
Chem 2301 Org Chem I [Chem 1022]	3	UD Chem 2302 Org Chem II [Chem 2301]	3
UD ChEn 2001 Matl and En Bal 3:35 [Chem 2301 or &, Math 2374 or &, Phys 1302 or &]	4	UD Chem 4501 Chemical Thermo 11:15 [Chem 1022, Math 2263 or 2374, Phys 1302] Chem 4501 can be taken earlier	3
\$ MatS 3011 Intro MatSci 2:30 [Chem 1021, Math 1272, Phys 1302]	3	UD Math 2373 Lin alg/diff eqs [Math 1272 or 1372]	4
UD Math 2374 Multivar. Calc and Vec An [Math 1272 or 1372]	4	Chem 2121 Analyt Chem 12:20 [2302 or &, 4501 or &, ChEn only]	3
Lib Ed*** (e.g. Hist)	3	Lib Ed*** (e.g., Soc Sci I)	3

& Registrar symbol for concurrent registration

Bold-bordered courses are offered only once a year.

Senior Year

Fall Semester (change Fall 10)	crs	Spring Semester (change Spring 11)	crs
ChEn 4401W Senior Chem Eng. Lab 12:20 [UD ChEn, 3005, 3006, 3101, 3102 3201, 3401, Chem 2121, 2311, Writ 1301 or eq.]	3	ChEn 4502W Chem Eng Proc Des II 8 [UD ChEn, 4501]	2
ChEn 4501W Chem Eng Proc Des I 11:15 [UD ChEn, 3005, 3006, 3101, 3102, 3201 3401, Chem 2311, 2121, Writ 1301 or eq.]	3	Chem 4502 Quantum Chem 10:10 [Chem1022, &Math 2263 or 2374, Phys 1302] Chem 4502 can be taken earlier	3
ChEn 4601 Process Control 8 [UD ChEn, ChEn 3102]	3	@ ChEn 4214 Polymers 11:15 * [UD, MatS 3011, [MatS 4001 or ChEn 3101]] ChEn 4214 can be taken earlier after Mats 3011	3
@ Tech elective I	3	@ Tech elective II	3
Lib Ed*** (e.g. Lit)	3	@ Tech elective III	3
		Lib Ed*** (e.g. Art/Hum)	3

For some courses, prereqs and MWF lecture times are shown in italics.

\$ Recommended at this position in the plan, but can be delayed with advisor approval.

@ Preapproved or with DUS/ChEn-advisor approval. Several restrictions apply.

Max 2 cr. nontechnical, max 6 cr. transfer, even if approved.

* Tech electives must be 9 cr., in addition to ChEn 4214 (or DUGS-approved substitute to ChEn 4214).

*** For eng degrees, the two Soc Sci, the Hist, the Lit, and the Other Hum lib eds must fill both a core and a theme to guarantee a 4-year degree program. These may be taken S/N.

UD You must have at least a 2.60 technical GPA for admission to upper division Chemical Engineering.

This GPA includes all calculus, physics, chemistry, computer science, and engineering courses.

In addition, courses with UD need to be completed before you apply, unless you have at least a 2.90 tech GPA and the courses in progress. Applies to students admitted prior to Fall 2010.

Students admitted after Fall 2010 and after are guaranteed admission if their technical GPA is 3.2, others admitted on a space available basis.