

Pre-Chemical Engineering Planning Worksheet 2021-2023

Important Information: It is recommended that students who intend to apply for professional programs at the bachelor's degree level also complete the MORRIS General Education Requirements so that they have greater flexibility if their educational objectives change. Students often decide to complete their degree at Morris rather than transfer. Each student should consult with a pre-engineering advisor to plan their program. Students who transfer to another institution need to satisfy the general education requirements of that institution.

Students must also complete the Morris General Education Requirements, and a major, in addition to the following prerequisites for this professional program. Progress toward the UMN Morris degree should be monitored by the student and their adviser through APAS (degree audit).

Recommended Semester: X

If unable to choose (X) alternative semester: O

Course	Credits	Year 1 Fall	Year 1 Spring	Year 2 Fall	Year 2 Spring	Year 3 Fall	Year 3 Spring	Year 4 Fall	Year 4 Spring
Program Requirements									
Chem 1101: General Chemistry I	5	X							
Chem 1102: General Chemistry II	5		X						
Chem 2301 & 2311 (w/lab): Organic Chemistry I & Organic Chemistry lab	4 & 1			X					
Chem 2302: Organic Chemistry II	4				X				
Chem 3101 w/lab: Analytical Chemistry	4				X				
Chem 3501: Physical Chemistry: Thermodynamics	4			X					
Chem 3502: Physical Chemistry: Quantum Mechanics	4					X	X		
Chem 4111♣: Instrumental Analysis	5				O		O		
Math 1101: Calculus I	5	X							

Course	Credits	Year 1 Fall	Year 1 Spring	Year 2 Fall	Year 2 Spring	Year 3 Fall	Year 3 Spring	Year 4 Fall	Year 4 Spring
Program Requirements									
Math 1102: Calculus II	5		X						
Math 2401*: Differential Equations	4			X					
Math 2101: Calculus III	4			X					
Math 3111*: Linear Algebra	4				X				
Phys 1101: General Physics I	5		X						
Phys 1102: General Physics II	5			X					

Notes: *UMN Morris Math 2111 and 2401 together equals TC Math 2243. ♠ Offered alternate years – contact your adviser to plan this course.

CHEM 2001 Material & Energy Balances is now a FALL semester course (no longer summer) and it is a prerequisite for the junior sequence.

- If a student transfers to the U of M, TC after the freshman year, they will take the same classes as sophomores in Chemical Engineering and the student should graduate in three years.
- If the student is transferring after 2 years, take Physical Chemistry, CHEM 2001, and a few other courses and graduate in 3 years.
- A Student who completes 3 years at Morris will take CHEM 2001, MATS 3011, a few other courses and graduate in 3 years.

NOTE: Requirements during the first two years for students who plan to transfer to the College of Science and Engineering vary somewhat among the engineering and science majors offered. It is essential that students verify requirements by checking departmental webpages:

<http://cse.umn.edu/>