

General Education	30
Technical Courses	10
General Electives	22
Wellness	<u>2</u>
Total	64

Pre-Engineering Associate in Science Degree

Two years (4 semesters)

(Because of course and program demands, students should plan to reduce the semester load and extend the time spent at Anoka-Ramsey. BS degree programs in engineering typically take more than four years to complete.)

2008-2009

Program Information: Students may take the first half of a bachelor's degree in engineering at Anoka-Ramsey Community College (ARCC.) Because of differing requirements at transfer institutions, students should plan a program beyond the minimums listed based on the requirements of the transfer institution chosen. Students should also obtain copies of current bulletins for those colleges to which they intend to transfer. Students are encouraged to follow the course recommendations below. Not doing so could result in loss of credits or inappropriate preparation. Transfer guides are available in Counseling and Advising Services that outline the course requirements and the possible majors at Minnesota colleges. For additional information about pre-engineering, visit our Web site at <http://www.AnokaRamsey.edu>.

Program Goals: By completing this program, students will achieve the following learning goals: 1) comprehend and apply fundamental engineering concepts; 2) solve technical problems; 3) present clear and accurate solutions with respect to mathematics and units of measure.

Developmental Courses: Preparatory courses may be needed by some students in the areas of English, mathematics, computer science, keyboarding, and chemistry. These courses may (or may not) transfer. Courses numbered less than 1000 will not apply toward the AS degree. Other courses may apply as elective credit at ARCC.

Preparatory courses include: English 0950; Math 0200, 0210, 1200, 1201, or 1210 (prerequisite for Math 1400); Computer Science 1101; Business 1153 Keyboarding is recommended before Computer Science 1106, 1107, 1133 and 2251 if the student types fewer than 30 words/minute; Chemistry 1020 or high school chemistry (prerequisite for Chemistry 1061.)

Technical Courses	10 credits	General Education Requirements/MnTC	30 credits
Credits will vary depending on the area of engineering chosen. Consult the program guide sheets for recommendations.		Students must complete 30 credits from the Minnesota Transfer Curriculum (MnTC) and complete courses in at least 6 of the 10 emphasis areas. See reverse side of this sheet. Completion of all 10 areas of the MnTC with 40 credits waives the general education requirements for public universities in Minnesota.	
Computer Science 1106 [♦] , 1107 [♦] , 2253 [♦]	4-12 cr	1. Communications	4-7 cr.
Engineering 1100, 1111 [♦] , 2218 [♦] , 2219 [♦] , 2220 [♦] , 2241 [♦] , 2242 [♦] , 2243 [♦]	6-29 cr	ENGL 1121 [♦] College Writing and Critical Reading	4
		Note: St. Cloud requires Speech 1110	3
Elective Courses	22 credits	2. Humanities and/or Literature	4 cr. min.
Choose courses based on the transfer institution's requirements. Usually these are additional credits in math, science, general education or technical courses.		Choose any course from Emphasis Area #6. Consult the transfer guide for the school to which you plan to transfer.	
Wellness Requirement	2 credits	3. Social Science	4 cr. min.
Select any HPER course(s) totaling at least 2 credits.		Choose courses from Emphasis Area #5 of the Minnesota Transfer Curriculum.	
Summary		4. Science/Mathematics	
Minimum credits in categories 1-4 from next column	30 credits	Credits will vary depending on the area of engineering chosen. Consult the program guide sheets for recommendations.	
Minimum technical credits from above	10 credits	Math 1400 [♦] , 1401 [♦] , 2200 [♦] and/or 2210 [♦]	14-18 cr
HPER course(s)	2 credits	Physics 1327 [♦] , 1328 [♦]	12 cr
Elective credits	<u>22</u> credits	Math 2220 [♦] , 2230 [♦]	0-8 cr
TOTAL	64 credits	(required of some colleges and/or engineering majors)	
		Chemistry 1061 [♦] , 1062 [♦]	0-8 cr
		(required of most colleges and/or majors)	
[♦] Courses have prerequisites			
Note: There may be additional credits beyond the minimum recommended for some colleges and/or majors – up to 89 credits.			

General Degree Requirements:

1. A minimum cumulative grade point average (GPA) of 2.0 in courses numbered 1000 or above at ARCC.
2. Minimum of 64 semester credits numbered 1000 or above with a minimum of 20 semester credits taken at ARCC is required for graduation.
3. See the Minnesota Transfer Curriculum on the back for general education course selections.

You are encouraged to contact a counselor or advisor, Cambridge Campus 763.433.1840 or Coon Rapids Campus 763.433.1230, for course planning assistance and information about transfer credit evaluation.

NOTE: The requirements of this program are subject to change without notice.

06/25/08