



## Department of Chemical and Environmental Engineering

### Accelerated Masters Program in Chemical Engineering

#### Overview

The Accelerated Master's Program in Chemical Engineering (AMP ChE) is a program designed to enable advanced UA undergraduate students to complete both the Bachelor of Science degree and the Master of Science degree in ChE in a total of 5 years. This program is available only for undergraduate students in chemical engineering at the U of A.

#### How to apply

In early January of the junior year, students submit an online application to the Graduate College, specifying chemical engineering as major subject. The student will also have the opportunity to indicate explicitly that the application is for AMP ChE. After acceptance to the AMP program, students register during their senior (fourth) year to take a combination of undergraduate and graduate courses. These courses will serve both as electives for the B.Sc. degree and as core or elective courses for the MS. In the fifth and final year, students focus on graduate course work and their thesis or project.

#### Eligibility criteria

To be considered eligible to apply for the AMP ChE, students must:

- Be a continuing University of Arizona undergraduate.
- Have a minimum cumulative GPA of 3.3.
- At the time of application, have completed a minimum of 75 units of undergraduate course work; a minimum of 12 undergraduate units must have been completed in the student's major at University of Arizona's main campus.

Research experience as an undergraduate is not a requirement, but it is desirable.

#### UA Graduate College policies on AMPs

Students will be considered undergraduates until they complete their undergraduate requirements, which should be no later than the end of their fourth year. Students must take at least 12 of their graduate credits while in graduate status. In other words: During years 1-3 (or approximately 0-90 credits) students will be taking undergraduate coursework and charged at the undergraduate rate.

Once admitted to AMP, during the senior (or transition) year, students may take up to 12 units of graduate coursework, which may apply toward both the B.Sc. and the M.S. degrees. Students will be charged at the undergraduate rate and retain eligibility for undergraduate scholarships.

After completion of all B.Sc. requirements, students will be granted graduate status, be charged at the graduate rate, and be eligible for graduate assistantships.

Should a student have completed 12 graduate credits, but not yet completed the undergraduate degree, they will be considered graduate for financial aid and tuition purposes and coded as “graduate” in SIS. They will no longer be eligible for undergraduate scholarships. Nor will they be eligible for graduate assistantships.

At least 12 graduate units must be taken while in graduate status, after completing all degree requirements for the B.Sc. A total of 30 graduate credits (500 or higher) should be taken.

Students should complete their undergraduate requirements no later than one semester before receiving their MS.

### **Program requirements and guidelines**

After admission into the AMP ChE program, students must select an advisor who will guide the student’s research or development work towards the completion of a thesis or master’s report. Writing a thesis or a report project is required.

CHEE 400 level courses that are convened with 500 level courses can be taken as electives for both the BSc and the AMP programs – the 500 version of the course must be taken in this case. Exceptions are CHEE 420/520 and 477R/577R. These are required undergraduate courses and the 400 version must be taken.

The AMP ChE can be either thesis or non-thesis and will follow the same requirements of the regular MS program, which can be found in the ChEE graduate students handbook: [http://che.arizona.edu/graduates/files/graduate\\_handbook\\_2011-2012-0911.pdf](http://che.arizona.edu/graduates/files/graduate_handbook_2011-2012-0911.pdf)

Sample plans for both version of the AMP ChE (thesis or non-thesis) are shown below.

**Sample Plan 1: BS in ChE and AMP in ChE (non-thesis)**

<b>Semester 1</b>	<b>Units</b>	<b>Semester 2</b>	<b>Units</b>
ENGR 102	3	ECE 175	3
MATH 125 or 124 <sup>#</sup>	3/5	CHEM 152	4
CHEM 151	4	MATH 129	3
ENGL 101	3	ENGL 102	3
Tier 1 INDV*	3	Tier 1 INDV*	3
<b>Total</b>	<b>16/18</b>	<b>Total</b>	<b>16</b>
<b>Semester 3</b>	<b>Units</b>	<b>Semester 4</b>	<b>Units</b>
CHEE 201	3	CHEE 202	4
CHEE 201L	1	CHEE 203	3
MATH 223	4	PHYS 241	4
PHYS 141	4	MATH 254	3
CHEM 241a	3	CHEM 241b	3
CHEM 243a	1		
Tier 1 TRAD*	3		
<b>Total</b>	<b>19</b>	<b>Total</b>	<b>17</b>
<b>Semester 5</b>	<b>Units</b>	<b>Semester 6</b>	<b>Units</b>
CHEE 303	3	CHEE 305	3
CHEE 402	3	CHEE 326	3
CHEE 477R***	3	Science Elective†	3
CHEM 480a	3	Technical Requirement**	3
Tier 1 TRAD*	3	Tier 2 INDV*	3
CHEE 301a	1	CHEE 301b	1
<b>Total</b>	<b>16</b>	<b>Total</b>	<b>16</b>
<b>Semester 7</b>	<b>Units</b>	<b>Semester 8</b>	<b>Units</b>
CHEE 420***	3	CHEE 413	3
CHEE 442	3	CHEE 443	3
CHEE 401a	1	Grad/undergrad elective††	3
CHEE 502	3	Grad/undergrad elective††	3
Grad/undergrad elective††	3	Tier 2 Art/Hum*	3
<b>Total</b>	<b>13</b>	<b>Total</b>	<b>15</b>
<b>Semester 9</b>	<b>Units</b>	<b>Semester 10</b>	<b>Units</b>
CHEE 505	3	CHEE 530	3
CHEE 506	3	CHEE 574	3
Grad elective‡	3	CHEE 909	3
<b>Total</b>	<b>9</b>	<b>Total</b>	<b>9</b>
<b>Total BS/ChE</b>	<b>128</b>	<b>Total MS/ChE</b>	<b>30</b>

**Sample Plan 2: BS in ChE and AMP in ChE (thesis)**

Semester 1	Units	Semester 2	Units
ENGR 102	3	ECE 175	3
MATH 125 or 124 <sup>#</sup>	3/5	CHEM 152	4
CHEM 151	4	MATH 129	3
ENGL 101	3	ENGL 102	3
Tier 1 INDV*	3	Tier 1 INDV*	3
Total	16/18	Total	16
Semester 3	Units	Semester 4	Units
CHEE 201	3	CHEE 202	4
CHEE 201L	1	CHEE 203	3
MATH 223	4	PHYS 241	4
PHYS 141	4	MATH 254	3
CHEM 241a	3	CHEM 241b	3
CHEM 243a	1		
Tier 1 TRAD*	3		
Total	19	Total	17
Semester 5	Units	Semester 6	Units
CHEE 303	3	CHEE 305	3
CHEE 402	3	CHEE 326	3
CHEE 477R***	3	Science Elective†	3
CHEM 480a	3	Technical Requirement**	3
Tier 1 TRAD*	3	Tier 2 INDV*	3
CHEE 301a	1	CHEE 301b	1
Total	16	Total	16
Semester 7	Units	Semester 8	Units
CHEE 420***	3	CHEE 413	3
CHEE 442	3	CHEE 443	3
CHEE 401a	1	Grad/undergrad elective††	3
CHEE 502	3	Grad/undergrad elective††	3
Grad/undergrad elective††	3	Tier 2 Art/Hum*	3
Total	13	Total	15
Semester 9	Units	Semester 10	Units
CHEE 505	3	CHEE 530	3
CHEE 506	3	CHEE 574	3
CHEE 910	2	CHEE 910	3
CHEE 696A	1		
Total	9	Total	9
Total BS/ChE	128	Total MS/ChE	30

**Notes:**

# MATH 124 is a 5 unit version of MATH 125.

\* INDV/TRAD courses must meet University general education requirements.

\*\* Technical requirement: Complete 3 units from CE 214, ECE 207, MSE 331R, ENGR 211C, E, I, M and R.

\*\*\* The 500 version of these courses should not be taken since it will not count for graduate credit.

† Science elective: complete one course from CHEM 480b, 481, 462b; or BME 510, 511. If the choice is CHEM 462b, student must file a petition to replace CHEE 477R by CHEM 462a, which is a prerequisite for CHEM 462b. BME 510 and 511 require a GPA greater than 3. If used as the science elective, BME 510 or 511 cannot be used as graduate credit.

†† These are 500-level courses. Up to two of the electives can be from Math or Science graduate programs. At least one of the electives must be from an Engineering graduate program; 400/500 level courses are acceptable (in this case, students must take the 500 version).

‡ Any 500 or 600 level course in Math, Science or Engineering.