

Program Change Request

Date Submitted: 08/22/16 11:23 am

Viewing: **CHEGMS : Chemical Engineering, Master of Science in Chemical Engineering**

Last approved: 05/18/16 10:47 am

Last edit: 10/18/16 3:04 pm

Changes proposed by: chesteki

In Workflow

1. ENGR Dean Initial
2. GRAD Dean Initial
3. Director of Program Assessment and Review
4. Registrar Initial
5. CHEG Chair
6. ENGR Curriculum Committee
7. ENGR Faculty
8. ARSC Dean
9. ENGR Dean
10. Global Campus
11. Provost Review
12. University Course and Program Committee
13. Graduate Committee
14. Faculty Senate
15. Provost Final
16. Provost's Office-- Notification of Approval
17. Registrar Final
18. Catalog Editor Final

Approval Path

1. 09/06/16 2:12 pm
ndennis: Approved for ENGR Dean Initial
2. 09/06/16 3:47 pm
pkoski: Approved for GRAD Dean Initial
3. 09/08/16 8:56 am
agriffin: Approved for Director of Program Assessment and Review
4. 09/08/16 11:50 am
lkulcza: Approved for Registrar Initial
5. 09/08/16 1:08 pm
eclause: Approved for

- CHEG Chair
6. 10/18/16 3:04 pm
rossetti: Approved for ENGR Curriculum Committee
 7. 10/19/16 4:31 am
ndennis: Approved for ENGR Faculty
 8. 10/19/16 8:07 am
jdurdik: Approved for ARSC Dean
 9. 10/19/16 2:40 pm
ndennis: Approved for ENGR Dean
 10. 10/20/16 10:29 am
pritchey: Approved for Global Campus
 11. 11/09/16 9:30 am
tmartin: Approved for Provost Review

History

1. Mar 21, 2016 by chesteki
2. May 18, 2016 by lkulcza

Catalog Pages Using this Program [Chemical Engineering \(CHEG\)](#)

Submitter: User ID: chesteki
Phone: 575-3416

Academic Level Graduate

Select a reason for the proposed change: Making Minor Changes to an Existing Degree (e.g. changing 15 or fewer hours, changing admission/graduation requirements, adding Focused Study)

Program Status Active

Academic Unit Major/Field of Study

Are you adding, changing or deleting a concentration? No

Action	Proposed Code	Proposed Name

Are you adding, changing or deleting a track? No

Action	Proposed Code	Proposed Name

Are you adding, changing or deleting a focused study? No

Action	Proposed Code	Proposed Name

Effective Catalog Year	Fall 2016 2017
College, School, Division	College of Engineering (ENGR)
Department Code	Department of Chemical Engineering (CHEG)
Program Code	CHEGMS
Degree	Master of Science in Chemical Engineering
CIP Code	14.0701 - Chemical Engineering.
Program Title	Chemical Engineering, Master of Science in Chemical Engineering
Method of Delivery	On Campus
Is this program interdisciplinary or use courses from another College?	Yes Select all that apply: ARSC
Does this change the total hours needed to complete the program?	No

Program Requirements, Description and 8-Semester Plan

Admission to the Degree Program:The specific requirements for admission to the program and completion of an advanced degree in chemical engineering are determined by the Graduate School of the University of Arkansas and the Graduate Studies Committee of the Ralph E. Martin Department of Chemical Engineering. A general summary of departmental requirements is given below and detailed information may be obtained from the [Chemical Engineering website](#).

An undergraduate or M.S. degree in chemical engineering is recommended for admission to the graduate program, but students with a B.S. in another field of engineering or in a natural science may also enter the program by first taking certain undergraduate chemical engineering courses to prepare them for graduate study. The requirements for admission to the department's graduate program are:

- A grade point average of 3.0 out of 4.0 in a B.S. or M.S. in chemical engineering or, if the student does not have a degree in chemical engineering, satisfactory completion of the department's undergraduate deficiency program.
- A minimum GRE score of 155 on the quantitative section of the exam and a minimum of 307 combined score on the quantitative and verbal sections, taken within five years prior to application.

- Students without a B.S. degree from a U.S. university will need a minimum score on one of the following English proficiency exams: TOEFL paper exam – 550; iBT computer exam – 80; or IELTS – 6.5. The test must have been taken within two years prior to application.
- To enter the Ph.D. program, a majority vote by the Graduate Studies Committee of the Ralph E. Martin Department of Chemical Engineering is required.

Financial aid may be available for the student's stipend and/or tuition on a case-by-case basis. This is decided in the department.

Details about these requirements are in the Chemical Engineering Department Graduate Student Handbook, available as a [downloadable PDF](#).

Research Program: The thesis M.S. degree and the Ph.D. degree involve an interactive, hands-on program that exposes the graduate student to the techniques, procedures, and philosophy necessary for successful and ethical research. The students will work closely with their supervising professor and committee to perform original research on a topic of importance to the profession. The student will participate in the planning, managerial, budgetary, experimental, and reporting aspects of his/her research projects. The result will be a thesis (for the thesis master's degree) or a dissertation (for the Ph.D.), both of which should result in at least one journal or conference publication for the student. Active research interests of the faculty are listed on the department's [research page](#).

Requirements for the non-thesis M.S. Degree: At least 30 hours of course work as follows:

MATH 4423	Introduction to Partial Differential Equations (Sp, Su, Fa) ¹	3
CHEG 5113	Transport Processes I (Fa)	3
CHEG 5133	Advanced Reactor Design (Sp)	3
CHEG 5333	Advanced Thermodynamics (Fa)	3
CHEG 6123	Transport Processes II (Sp)	3
	Nine hours of a 4000 or 5000 level CHEG course ²	9
	Six hours of any 4000, 5000 or 6000 level technical electives ³	6
CHEG 5801	Graduate Seminar (Sp, Fa) (this should be taken every semester)	1
	Assisting in departmental teaching is required.	
	Total Hours	31

¹ Because this is an undergraduate course, additional work will be required by the instructor for graduate credit. In addition to this course, the non-thesis student will be able to present only three more hours of 3000-level credit for the degree, with the permission of the advisory committee.

² Not to exceed 3 hours of 4000 level credit. These electives must be lecture courses, not a special project, seminar or independent research topic.

³ Not to exceed 3 hours of 4000 level credit. These electives must be lecture courses, not a special project, seminar or independent research topic.

Students should also be aware of Graduate School requirements with regard to [master's degrees](#).

Requirements for the thesis M.S. Degree: At least 24 hours of course work and six hours of thesis as follows:

MATH 4423	Introduction to Partial Differential Equations (Sp, Su, Fa) ¹	3
CHEG 5113	Transport Processes I (Fa)	3
	Select two of the following:	6
CHEG 5133	Advanced Reactor Design (Sp)	3
CHEG 5333	Advanced Thermodynamics (Fa)	3

CHEG 6123	Transport Processes II (Sp)	3
Six hours of a 4000 or 5000 level CHEG course²		6
Three hours of a 4000 or 5000 level CHEG course²		3
Six hours of any 4000, 5000 or 6000 level technical electives ³		6
CHEG 600V	Master's Thesis (Sp, Su, Fa)	6
CHEG 5801	Graduate Seminar (Sp, Fa) (this should be taken every semester)	1
Research resulting in a successfully defended thesis and assisting in departmental teaching are required.		
Total Hours		31

¹ Because this is an undergraduate course, additional work will be required by the instructor for graduate credit. The thesis student will not be able to present any additional hours of 3000 level credit for the degree.

² Not to exceed 3 hours of 4000 level credit. These electives must be lecture courses, not a special project, seminar or independent research topic.

³ These electives must be lecture courses, not a special project, seminar or independent research topic.

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Are Similar Programs available in the area?	No
Estimated Student Demand for Program:	10
Scheduled Program Review Date:	2022-2023 2015-2016
Program Goals and Objectives:	The educational objective of the Chemical Engineering graduate program is to prepare students for advanced roles in the profession through a combination of planned coursework and research activities so that graduates are equipped to address present and future challenges in such areas as research, teaching, management, and entrepreneurship.
Learning Outcomes:	The educational outcomes of our graduate program are to assure that each student has had an opportunity to: <ul style="list-style-type: none"> a. Critically analyze meaningful and technologically relevant data, and for thesis students, plan and safely conduct research; b. Demonstrate proficiency in fundamental mathematics and chemical engineering problem solving; c. Understand professional and ethical responsibility; and d. Develop and use effective written and oral communication skills.
Description and justification of the request:	CHEGMS thesis degree was changed to require 4 CHEG core courses, which is consistent with the MS non-thesis and PhD degree. One CHEG elective was eliminated to keep the total number of hours unchanged.
Program reviewer comments	agriffin (09/08/16 8:55 am): Updated program review date. rossetti (10/18/16 3:04 pm): corrected small typo

Uploaded attachments: