IOWA | Chemical and Biochemical Engineering

ENTREPRENEURSHIP FOCUS AREA

Summary

The Entrepreneurship Certificate at the University of Iowa helps chemical engineers build skills in innovation, market analysis, and venture creation, strengthening their ability to translate technical ideas into real-world solutions. It emphasizes understanding sound business practices, developing leadership and teamwork abilities, and learning how to manage financial and technical resources in entrepreneurial settings. For chemical engineers, this foundation supports careers in technology commercialization, product development, and innovation-focused roles within both startups and established companies.

Focus Area Requirements

In addition to the core chemical engineering requirements, you must choose a focus area and complete 12 s.h. toward that focus area. Below are the lists of possible focus area electives that can fulfill this requirement. If you feel another course would fit within this requirement, you must get approval from the department undergraduate director.

Entrepreneurship Certificate Earned

This certificate requires 18 s.h. of courses. These courses can fall within the chemical engineering degree by fulfilling the 9 s.h. of focus area electives, 6 s.h. of the general education elective, and Chemical Engineering Design II. See certificate for details. Below are recommended courses to complete the certificate without additional credit hours needed. To discuss alternative possible routes for this certificate, please see your advisor.

Required Focus Area Elective 3 s.h. (pick one from list below)

Offered	Course	s.h.
S	ISE:2500 Engineering Economy	3

Focus Area Electives 9 s.h. (pick two from certificate list and one from chemical engineering class list)

Certificate (pick two from list)

Offered	Course	s.h.
ALL	ENTR:3350 Entrepreneurial Strategy	3
ALL	ENTR:3400 Strategic Management of Technology and Innovation	3
ALL	ENTR:3500 Social Entrepreneurship	3
ALL	ENTR:3550 Commercializing New Technology I	3
ALL	ENTR:3575 Commercializing New Technology II	3
ALL	ENTR:3595 Nonprofit Organizational Effectiveness I	3
ALL	ENTR:3600 Social Media Strategies for Entrepreneurial Ventures	3
ALL	ENTR:3700 Sustainable Innovation and Management	3
ALL	ENTR:4000 Topics in Entrepreneurship	3
ALL	ENTR:4100 International Entrepreneurship, Culture, and Social Impact	3
ALL	ENTR:4200 Entrepreneurship: Business Consulting (recommended)	3
ALL	ENTR:4300 Launching an Entrepreneurial Venture	3
ALL	ENTR:4400 Managing the Growth Business	3
ALL	ENTR:4460 Entrepreneurship and Global Trade	3

Chemical Engineering Class (pick one from list)		
Offered	**Course**	**s.h.**
S-ODD	CBE:3405 Green Chemical and Energy Technologies	3
S-EVEN	CBE:4125 Advanced Process Safety	3
F	CBE:4460 Process and Design for Satellites and Environmental Sensors	3
F	CBE:5120 Data Science in Chemical and Engineering Systems	3
S-ODD	CBE:5310 Polymer Science and Technology	3
F-EVEN	CBE:5315 Polymer Chemistry	3
S-EVEN	CBE:5410 Electrochemical Engineering	3
S-EVEN	CBE:5425/CEE:5115 Atmospheric Chemistry and Physics	3

Require General Education Elective 6 s.h. (required for certificate)		
Offered	**Course**	**s.h.**
ALL	ENTR:2000 Entrepreneurship and Innovation	3
ALL	ENTR:3100 Entrepreneurial Finance	3

Other Electives that Align with this Focus Area

In addition to the focus area electives listed above, you will be required to complete the following electives to complete your degree: the Advanced Chemistry Elective (3 s.h.), the Advanced Chemistry Lab Elective, the Advanced Science Elective (3 s.h.), the Engineering Be Creative General Education Elective (3 s.h.), and the Cultural Perspectives, Values, & Society General Education Elective (3 s.h.). ***These do not count toward your focus area electives.*** Below are lists of possible courses to fulfill these requirements that align with this focus area.

Statistics Requirement 3 s.h.		
Offered	**Course**	**s.h.**
S	CBE:3020 Applied Statistics for Chemical and Natural Resources Engineering	3
ALL	STAT:2020 Probability and Statistics for Engineers	3
ALL	STAT:3510 Biostatistics	3

Advanced Chemistry Elective 3 s.h. (possible courses that align with this focus area)		
Offered	**Course**	**s.h.**
ALL	CHEM 3000+ Level	3

Advanced Chemistry Lab Elective 3 s.h. (possible courses that align with this focus area)		
Offered	**Course**	**s.h.**
ALL	CHEM:2210 Fundamentals of Chemical Measurements Lab	3
ALL	CHEM:2220 Organic Chemistry Lab	3
ALL	CHEM:2240 Organic Chemistry for Majors Lab	3

Advanced Science Elective 3 s.h. (possible courses that align with this focus area)		
Offered	**Course**	**s.h.**
ALL	See Advanced Science list	3