



## 2023-2024 Catalog

### Industrial & Process Chemistry

Bachelor of Science & Master of Science in Industrial Chemistry

#### Program

Chemistry

**Total Credits 94**

Chemistry			
Item #	Course Title		Credits
<input type="checkbox"/> CHEM 1341	General Chemistry I	CHEM 1341 Corequisite: CHEM 1141	3
<input type="checkbox"/> CHEM 1141	General Chemistry I Laboratory	CHEM 1141 Corequisite: CHEM 1341	1
<input type="checkbox"/> CHEM 1342	General Chemistry II	CHEM 1342 Prerequisite (C or better): CHEM 1341/1141. Corequisite: CHEM 1142	3
<input type="checkbox"/> CHEM 1142	General Chemistry II Laboratory	CHEM 1142 Corequisite: CHEM 1342	1
<input type="checkbox"/> CHEM 2343	Organic Chemistry I	CHEM 2343 Prerequisite: CHEM 1342/1142; Corequisite: CHEM 2143.	3
<input type="checkbox"/> CHEM 2143	Organic Chemistry I Laboratory	CHEM 2143 Corequisite: CHEM 2343	1
<input type="checkbox"/> CHEM 3333	Organic Chemistry II	CHEM 3333 Prerequisite: CHEM 2343/2143; Corequisite: CHEM 3133.	3
<input type="checkbox"/> CHEM 3133	Organic Chemistry II Laboratory	CHEM 3133 Corequisite: CHEM 3333	1
<input type="checkbox"/> CHEM 3334	Biochemistry	CHEM 3334 Prerequisites: CHEM 2343, 2143	3
<input type="checkbox"/> CHEM 3134	Biochemistry Laboratory	CHEM 3134 Corequisite: CHEM 3334	1
<input type="checkbox"/> CHEM 3343	Analytical Chemistry	CHEM 3343 Prerequisite: CHEM 1342/1142; Corequisite: CHEM 3143.	3
<input type="checkbox"/> CHEM 3143	Analytical Chemistry Laboratory	CHEM 3143 Corequisite: CHEM 3343	1
<input type="checkbox"/> CHEM 4331	Advanced Organic Chemistry	CHEM 4331 Prerequisites: CHEM 3333/3133; Corequisite: CHEM 4131.	3
<input type="checkbox"/> CHEM 4131	Advanced Organic Chemistry Laboratory	CHEM 4131 Corequisite: CHEM 4331.	1
<input type="checkbox"/> CHEM 4332	Inorganic Chemistry	CHEM 4332 Prerequisites: CHEM 3333/3133; Corequisite: CHEM 4132.	3
<input type="checkbox"/> CHEM 4132	Inorganic Chemistry Laboratory	CHEM 4132 Corequisite: CHEM 4332	1
<input type="checkbox"/> CHEM 4362	Thermodynamics	CHEM 4362 Prerequisite: CHEM 3333/3133; MATH 1432; PHYS 1331/1332 OR PHYS 2333/2334.	3

<input type="checkbox"/>	CHEM 4162	Reaction Kinetics		1
<input type="checkbox"/>	CHEM 4112	Scientific Communication	CHEM 4112 Prerequisite: Junior/ Senior Standing.	1
<input type="checkbox"/>	CHEM 4150	Laboratory Research Methods	CHEM 4150 Prerequisites: Junior/ Senior Standing	1

### Additional Chemistry

Choose **two** from the following:

Item #	Course Title		Credits	
<input type="checkbox"/>	CHEM 4334	Advanced Biochemistry	CHEM 4334 Prerequisites (With Grade of 'C' or Better): CHEM/BIOL 3334	3
<input type="checkbox"/>	CHEM 4344	Advanced Analytical Techniques	CHEM 4344 Prerequisites: CHEM 3343/3143	3
<input type="checkbox"/>	CHEM 4354	Environmental Chemistry	CHEM 4354 Prerequisites: CHEM 3333, 3133	3
<input type="checkbox"/>	CHEM 4364	Materials Science	CHEM 4364 Prerequisites: CHEM 2343/2143 OR PHYS 3337/3137.	3

### Mathematics

Must take in order.

Item #	Course Title		Credits	
<input type="checkbox"/>	MATH 1431	Calculus I	MATH 1431 Prerequisite: MATH 1430 or department consent.	4
<input type="checkbox"/>	MATH 1432	Calculus II	MATH 1432 Prerequisite: Grade of 'C' or Better in MATH 1431	4
<input type="checkbox"/>	MATH 2343	Differential Equations I	MATH 2343 Prerequisite: MATH 1432 with a grade of "C" or better	3

### Physics

Choose one pair of courses

Item #	Course Title	Credits
<input type="checkbox"/>	General Physics I & II w/ lab	
<input type="checkbox"/>	University Physics I & II w/ Labs	

### Electives

Electives to reach a minimum of 117 undergraduate hours (8 credit hours)

## MSIPC Chemistry Courses

Item #	Course Title	Credits
<input type="checkbox"/> CHEM 5301	Engineering Flow and Heat Exchange	3
<input type="checkbox"/> CHEM 5302	Chemical Reactors and Separation Processes	3
<input type="checkbox"/> CHEM 5303	Analysis and Design of Chemical Processes	3
<input type="checkbox"/> CHEM 6301	Industrial Organic Chemicals	3
<input type="checkbox"/> CHEM 6302	Industrial Inorganic Chemicals	3
<input type="checkbox"/> CHEM 6303	Waste Management	3
<input type="checkbox"/> CHEM 6304	Capstone Project/Internship	3

CHEM 6304 Prerequisite: CHEM 5301, 5302, 5303, 6301, 6302, 6303.

## MBA Courses

Item #	Course Title	Credits
<input type="checkbox"/> MBA 6311	Managerial Economics	3
<input type="checkbox"/> MBA 6315	Operations Management and Supply Chain	3
<input type="checkbox"/> MBA 6322	Organizational Behavior	3
<input type="checkbox"/> MBA 6325	Ethical and Moral Business Management	3

MBA 6311 Prerequisite: MBA 5905X, MBA 5906X  
MBA 6315 Prerequisite: MBA 5903X  
MBA 6322 Prerequisite: MBA 5907X  
MBA 6325 Prerequisite: MBA 5907X, MBA 5908X, MBA 5909X