

College of Engineering

MDS 040 BSCHE Chemical Engineering **4 Year 1 Co-op**

Yr 1 FL	C MTH U241 Calculus 1 for Sci/Engr	4.0 SH
Yr 1 FL	C CHM U151 General Chem for Engineers Coreq(s): C CHM U152 C CHM U153	4.0 SH
Yr 1 FL	A GE U110 Engineering Design	4.0 SH
Yr 1 FL	A GE U100 Intro to the Study of Engr	1.0 SH
Yr 1 FL	NU Core course or Elective	4.0 SH
	Semester Subtotal	17.0 SH
Yr 1 SP	C MTH U242 Calculus 2 for Sci/Engr	4.0 SH
Yr 1 SP	C PHY U151 Physics for Engineering 1 Coreq(s): C PHY U152 C PHY U153	4.0 SH
Yr 1 SP	C PHY U152 Lab for PHY U151 Coreq(s): C PHY U151 C PHY U153	1.0 SH
Yr 1 SP	C PHY U153 Interact Learn for PHY U151 Coreq(s): C PHY U151 C PHY U152	0.0 SH
Yr 1 SP	C ENG U111 College Writing	4.0 SH
Yr 1 SP	A GE U111 Engr Prob Solv and Comp	4.0 SH
	Semester Subtotal	17.0 SH
Yr 1 S1	VACATION	0.0 SH
	Semester Subtotal	0.0 SH
Yr 1 S2	VACATION	0.0 SH
	Semester Subtotal	0.0 SH
Yr 2 FL	C MTH U341 Calculus 3 for Sci/Engr Coreq(s): C MTH U342	4.0 SH
Yr 2 FL	C CHM U311 Organic Chemistry 1 Coreq(s): C CHM U312	4.0 SH
Yr 2 FL	C CHM U312 Lab for CHM U311 Coreq(s): C CHM U311	1.0 SH
Yr 2 FL	A CHE U308 Chemical Engr Calculations Coreq(s): A CHE U309	4.0 SH
Yr 2 FL	A CHE U300 Intro to Engr Coop Education	1.0 SH
Yr 2 FL	CHE MATH	4.0 SH
	Semester Subtotal	18.0 SH
Yr 2 SP	C MTH U343 Diff Eq and Lin Alg for Engr Coreq(s): C MTH U344	4.0 SH
Yr 2 SP	C CHM U313 Organic Chemistry 2 Coreq(s): C CHM U314	4.0 SH
Yr 2 SP	C CHM U314 Lab CHM U313 Coreq(s): C CHM U313	1.0 SH
Yr 2 SP	A CHE U320 Chemical Engr Thermodynamics 1	4.0 SH
Yr 2 SP	A CHE U310 Transport Processes and Ops 1	4.0 SH
Yr 2 SP	TRANSPORT 1 LAB	1.0 SH
	Semester Subtotal	18.0 SH
Yr 2 S1	C ENG U302 Advanced Writing in Tech Prof	4.0 SH
Yr 2 S1	NU Core Course or Elective	4.0 SH
	Semester Subtotal	8.0 SH
Yr 2 S2	VACATION	0.0 SH
	Semester Subtotal	0.0 SH

Yr 3 FL	A CHE U322 Chemical Engr Thermodynamics 2	4.0 SH
Yr 3 FL	C PHY U155 Physics for Engineering 2 Coreq(s): C PHY U156 C PHY U157	4.0 SH
Yr 3 FL	C PHY U156 Lab for PHY U155 Coreq(s): C PHY U155 C PHY U157	1.0 SH
Yr 3 FL	C PHY U157 Interact Learn for PHY U155 Coreq(s): C PHY U155 C PHY U156	0.0 SH
Yr 3 FL	A CHE U500 Professional Issues in Engr	1.0 SH
Yr 3 FL	A CHE U312 Transport Processes and Ops 2	4.0 SH
Yr 3 FL	NU Core Course or Elective	4.0 SH
Yr 3 FL	TRANSPORT 2 LAB	1.0 SH
	Semester Subtotal	19.0 SH

Yr 3 SP	CO-OP	0.0 SH
	Semester Subtotal	0.0 SH

Yr 3 S1	CO-OP	0.0 SH
	Semester Subtotal	0.0 SH

Yr 3 S2	C BIO U111 General Biology 1 Coreq(s): C BIO U112	4.0 SH
Yr 3 S2	C BIO U112 Lab for BIO U111 Coreq(s): C BIO U111	1.0 SH
Yr 3 S2	NU Core Course or Elective	4.0 SH
	Semester Subtotal	9.0 SH

Yr 4 FL	C CHM U403 Physical Chemistry 2 Coreq(s): C CHM U404	4.0 SH
Yr 4 FL	C CHM U404 Lab for CHM U403 Coreq(s): C CHM U403	1.0 SH
Yr 4 FL	A CHE U510 Chemical Engineering Kinetics	4.0 SH
Yr 4 FL	A CHE U701 Chemical Process Design 1 Coreq(s): A CHE U702	4.0 SH
Yr 4 FL	A CHE U702 Lab for CHE U701 Coreq(s): A CHE U701	1.0 SH
Yr 4 FL	NU Core Course or Elective	4.0 SH
	Semester Subtotal	18.0 SH

Yr 4 SP	A CHE U703 Chemical Process Design 2 Coreq(s): A CHE U704	3.0 SH
Yr 4 SP	A CHE U704 Lab for CHE U703 Coreq(s): A CHE U703	2.0 SH
Yr 4 SP	A CHE U512 Chemical Engr Process Control	4.0 SH
Yr 4 SP	NU Core Course or Elective	4.0 SH
	Semester Subtotal	13.0 SH

MDS 040 BSCHE Chemical Engineering Div A

Yr 1 FL	C MTH U241 Calculus 1 for Sci/Engr	4.0 SH
Yr 1 FL	C CHM U151 General Chem for Engineers Coreq(s): C CHM U152 C CHM U153	4.0 SH
Yr 1 FL	C CHM U153 Recitation for CHM U151 Coreq(s): C CHM U151 C CHM U152	0.0 SH
Yr 1 FL	A GE U110 Engineering Design	4.0 SH
Yr 1 FL	A GE U100 Intro to the Study of Engr	1.0 SH
Yr 1 FL	NU Core course or Elective	4.0 SH
	Semester Subtotal	17.0 SH

Yr 1 S2	VACATION	0.0 SH	Yr 4 S1	CO-OP	0.0 SH
	Semester Subtotal	0.0 SH		Semester Subtotal	0.0 SH
Yr 2 FL	C MTH U341 Calculus 3 for Sci/Engr	4.0 SH	Yr 4 S2	VACATION	0.0 SH
	Coreq(s): C MTH U342			Semester Subtotal	0.0 SH
Yr 2 FL	C CHM U311 Organic Chemistry1	4.0 SH			
	Coreq(s): C CHM U312		Yr 5 FL	A CHE U510 Chemical Engineering Kinetics	4.0 SH
Yr 2 FL	C CHM U312 Lab for CHM U311	1.0 SH	Yr 5 FL	A CHE U701 Chemical Process Design 1	4.0 SH
	Coreq(s): C CHM U311			Coreq(s): A CHE U702	
Yr 2 FL	A CHE U308 Chemical Engr Calculations	4.0 SH	Yr 5 FL	A CHE U702 Lab for CHE U701	1.0 SH
	Coreq(s): A CHE U309			Coreq(s): A CHE U701	
Yr 2 FL	A CHE U300 Intro to Engr Coop Education	1.0 SH	Yr 5 FL	Engrg General Elective	4.0 SH
Yr 2 FL	C PHY U155 Physics for Engineering 2	4.0 SH	Yr 5 FL	Engrg General Elective	4.0 SH
	Coreq(s): C PHY U156 C PHY U157			Semester Subtotal	17.0 SH
Yr 2 FL	C PHY U156 Lab for PHY U155	1.0 SH			
	Coreq(s): C PHY U155 C PHY U157		Yr 5 SP	A CHE U703 Chemical Process Design 2	3.0 SH
Yr 2 FL	C PHY U157 Interact Learn for PHY U155	0.0 SH		Coreq(s): A CHE U704	
	Coreq(s): C PHY U155 C PHY U156		Yr 5 SP	A CHE U704 Lab for CHE U703	2.0 SH
	Semester Subtotal	19.0 SH		Coreq(s): A CHE U703	
Yr 2 SP	CO-OP	0.0 SH	Yr 5 SP	A CHE U512 Chemical Engr Process Control	4.0 SH
	Semester Subtotal	0.0 SH	Yr 5 SP	Engrg General Elective	4.0 SH
			Yr 5 SP	CHE Technical Elective	4.0 SH
Yr 2 S1	CO-OP	0.0 SH		Semester Subtotal	17.0 SH
	Semester Subtotal	0.0 SH			
Yr 2 S2	A CHE U320 Chemical Engr Thermodynamics 1	4.0 SH			
Yr 2 S2	C CHM U313 Organic Chemistry 2	4.0 SH			
	Coreq(s): C CHM U314				
Yr 2 S2	C CHM U314 Lab CHM U313	1.0 SH			
	Coreq(s): C CHM U313				
	Semester Subtotal	9.0 SH			
Yr 3 FL	A CHE U322 Chemical Engr Thermodynamics 2	4.0 SH			
Yr 3 FL	A CHE U310 Transport Processes and Ops 1	4.0 SH			
Yr 3 FL	C MTH U343 Diff Eq and Lin Alg for Engr	4.0 SH			
	Coreq(s): C MTH U344				
Yr 3 FL	C BIO U111 General Biology 1	4.0 SH			
	Coreq(s): C BIO U112				
Yr 3 FL	C BIO U112 Lab for BIO U111	1.0 SH			
	Coreq(s): C BIO U111				
Yr 3 FL	TRANSPORT 1 LAB	1.0 SH			
	Semester Subtotal	18.0 SH			
Yr 3 SP	CO-OP	0.0 SH			
	Semester Subtotal	0.0 SH			
Yr 3 S1	CO-OP	0.0 SH			
	Semester Subtotal	0.0 SH			
Yr 3 S2	C ENG U302 Advanced Writing in Tech Prof	4.0 SH			
Yr 3 S2	NU Core course or Elective	4.0 SH			
	Semester Subtotal	8.0 SH			
Yr 4 FL	C CHM U403 Physical Chemistry 2	4.0 SH			
	Coreq(s): C CHM U404				
Yr 4 FL	C CHM U404 Lab for CHM U403	1.0 SH			
	Coreq(s): C CHM U403				
Yr 4 FL	A CHE U500 Professional Issues in Engr	1.0 SH			
Yr 4 FL	A CHE U312 Transport Processes and Ops 2	4.0 SH			
Yr 4 FL	Engrg General Elective	4.0 SH			
Yr 4 FL	CHE MATH	4.0 SH			
Yr 4 FL	TRANSPORT 2 LAB	1.0 SH			
	Semester Subtotal	19.0 SH			
Yr 4 SP	CO-OP	0.0 SH			
	Semester Subtotal	0.0 SH			

MDS 040 BSCHE Chemical Engineering Div N

Yr 1 FL	C MTH U241 Calculus 1 for Sci/Engr	4.0 SH
Yr 1 FL	C CHM U151 General Chem for Engineers	4.0 SH
	Coreq(s): C CHM U152 C CHM U153	
Yr 1 FL	C CHM U153 Recitation for CHM U151	0.0 SH
	Coreq(s): C CHM U151 C CHM U152	
Yr 1 FL	A GE U110 Engineering Design	4.0 SH
Yr 1 FL	A GE U100 Intro to the Study of Engr	1.0 SH
Yr 1 FL	NU Core course or Elective	4.0 SH
	Semester Subtotal	17.0 SH
Yr 1 SP	C MTH U242 Calculus 2 for Sci/Engr	4.0 SH
Yr 1 SP	C PHY U151 Physics for Engineering 1	4.0 SH
	Coreq(s): C PHY U152 C PHY U153	
Yr 1 SP	C PHY U152 Lab for PHY U151	1.0 SH
	Coreq(s): C PHY U151 C PHY U153	
Yr 1 SP	C PHY U153 Interact Learn for PHY U151	0.0 SH
	Coreq(s): C PHY U151 C PHY U152	
Yr 1 SP	C ENG U111 College Writing	4.0 SH
Yr 1 SP	A GE U111 Engr Prob Solv and Comp	4.0 SH
	Semester Subtotal	17.0 SH
Yr 1 S1	VACATION	0.0 SH
	Semester Subtotal	0.0 SH
Yr 1 S2	VACATION	0.0 SH
	Semester Subtotal	0.0 SH

Yr 2 FL	C MTH U341 Calculus 3 for Sci/Engr Coreq(s): C MTH U342	4.0 SH	Yr 4 S2	C BIO U111 General Biology 1 Coreq(s): C BIO U112	4.0 SH
Yr 2 FL	C CHM U311 Organic Chemistry1 Coreq(s): C CHM U312	4.0 SH	Yr 4 S2	C BIO U112 Lab for BIO U111 Coreq(s): C BIO U111	1.0 SH
Yr 2 FL	C CHM U312 Lab for CHM U311 Coreq(s): C CHM U311	1.0 SH	Yr 4 S2	C ENG U302 Advanced Writing in Tech Prof	4.0 SH
Yr 2 FL	A CHE U308 Chemical Engr Calculations Coreq(s): A CHE U309	4.0 SH		Semester Subtotal	9.0 SH
Yr 2 FL	A CHE U309 Lab for CHE U308 Coreq(s): A CHE U308	1.0 SH	Yr 5 FL	A CHE U510 Chemical Engineering Kinetics	4.0 SH
Yr 2 FL	A CHE U300 Intro to Engr Coop Education	1.0 SH	Yr 5 FL	A CHE U701 Chemical Process Design 1 Coreq(s): A CHE U702	4.0 SH
Yr 2 FL	Engr General Elective	4.0 SH	Yr 5 FL	A CHE U702 Lab for CHE U701 Coreq(s): A CHE U701	1.0 SH
	Semester Subtotal	19.0 SH	Yr 5 FL	A CHE U512 Chemical Engr Process Control	4.0 SH
Yr 2 SP	CO-OP	0.0 SH	Yr 5 FL	CHE MATH	4.0 SH
	Semester Subtotal	0.0 SH		Semester Subtotal	17.0 SH
Yr 2 S1	CO-OP	0.0 SH	Yr 5 SP	A CHE U703 Chemical Process Design 2 Coreq(s): A CHE U704	3.0 SH
	Semester Subtotal	0.0 SH	Yr 5 SP	A CHE U704 Lab for CHE U703 Coreq(s): A CHE U703	2.0 SH
Yr 2 S2	VACATION	0.0 SH	Yr 5 SP	CHM Intermed/Adv UG Elective	5.0 SH
	Semester Subtotal	0.0 SH	Yr 5 SP	Engr General Elective	4.0 SH
Yr 3 FL	C CHM U313 Organic Chemistry 2 Coreq(s): C CHM U314	4.0 SH	Yr 5 SP	CHE Technical Elective	4.0 SH
Yr 3 FL	C CHM U314 Lab CHM U313 Coreq(s): C CHM U313	1.0 SH		Semester Subtotal	18.0 SH
Yr 3 FL	C CHM U403 Physical Chemistry 2 Coreq(s): C CHM U404	4.0 SH			
Yr 3 FL	C CHM U404 Lab for CHM U403 Coreq(s): C CHM U403	1.0 SH			
Yr 3 FL	A CHE U320 Chemical Engr Thermodynamics 1	4.0 SH			
Yr 3 FL	A CHE U310 Transport Processes and Ops 1	4.0 SH			
Yr 3 FL	TRANSPORT 1 LAB	1.0 SH			
	Semester Subtotal	19.0 SH			
Yr 3 SP	CO-OP	0.0 SH			
	Semester Subtotal	0.0 SH			
Yr 3 S1	CO-OP	0.0 SH			
	Semester Subtotal	0.0 SH			
Yr 3 S2	Engr General Elective	4.0 SH			
Yr 3 S2	NU Core course or Elective	4.0 SH			
	Semester Subtotal	8.0 SH			
Yr 4 FL	C MTH U343 Diff Eq and Lin Alg for Engr Coreq(s): C MTH U344	4.0 SH			
Yr 4 FL	A CHE U312 Transport Processes and Ops 2	4.0 SH			
Yr 4 FL	C PHY U155 Physics for Engineering 2 Coreq(s): C PHY U156 C PHY U157	4.0 SH			
Yr 4 FL	C PHY U156 Lab for PHY U155 Coreq(s): C PHY U155 C PHY U157	1.0 SH			
Yr 4 FL	C PHY U157 Interact Learn for PHY U155 Coreq(s): C PHY U155 C PHY U156	0.0 SH			
Yr 4 FL	A CHE U500 Professional Issues in Engr	1.0 SH			
Yr 4 FL	A CHE U322 Chemical Engr Thermodynamics 2	4.0 SH			
Yr 4 FL	TRANSPORT 2 LAB	1.0 SH			
	Semester Subtotal	19.0 SH			
Yr 4 SP	CO-OP	0.0 SH			
	Semester Subtotal	0.0 SH			
Yr 4 S1	CO-OP	0.0 SH			
	Semester Subtotal	0.0 SH			