Applied Sciences in Engineering Curriculum (073)
Packaging Engineering Concentration

Name _____

FRESHMAN YEAR

01:160:159	Gen Chem for Engr	3	01:160:160	Gen Chem for Engr II	3
01:160:171	Intro to Experimentation	1	01:640:152	Calculus II	4
01:355:101	Expository Writing	3	01:750:124	Analytical Physics IB	2
01:640:151	Calculus I	4	14:440:127	Intro Computers Engr	3
01:750:123	Analytical Physics IA	2	14:440:221	Eng'g Mech: Statics	3
14:440:100	Intro to Engineering	1			

SOPHOMORE YEAR (see also Eng'g & tech electives)

01:640:251	Multivariable Calculus	4	01:640:244	Differential Equations	4
01:750:229	Analytical Physics IIA	3	~~*01:750:228**~~	~~*Analytical Physics IIB*~~	~~*3*~~
01:750:227	Analytical Physics lab	1	~~*01:750:230**~~	~~*Analytical Physics IIB lab*~~	~~*1*~~
			01:220:102	Micro Economics	3

ENGINEERING ELECTIVES- 14:xxx:xxx (10 course of 3cr+ each)

440:301	3M	440:419	3M	440:4xx (Pkg Mfg II)	3M	440:4xx Pkg Dev. Proc	3M
440:302	3M	440:420	3M	440:373	3M		
440:371	**3M**	440:471	**3M**	**Pkg elective	**3M**		

TECHNICAL ELECTIVES (36cr **math, sci, eng'g, or related courses) +** ***4cr for 750:228/230 = 40cr***

440:222	3M	440:473	2M	TE	3M
355:302	3M	440:470	2M	TE	3M
33:799:301 Intro to Supply Chain	3M	**Pkg elective	3M		
Mechanics elective 635:314 635:407180:243 650:291	3M	**Pkg elective	3M		
Statistics elective 960:379 960:384 960:401	3M	**Pkg elective	3M		
Engineering elective 14:155:208, 14:635:206, 14:650:351, 01:160:209, 01:160:307, 14:635:361, 14:635:312	3M	TE	3M		

HUMANITIES/SOCIALSCIENCE ELECTIVES (12cr)

	3		3 300+
	3		3 300+

Extra Courses:

TOTAL CREDITS REQUIRED: 126

Packaging Electives 14:440:378, 14:440:403, 14:440:406, 14:440:408, 14:440:468, 14:440:489/490, 16:731:5xx

Packaging Engineering Curriculum

Name_____

FRESHMAN YEAR

01:160:159	Gen Chem for Engr	3	01:160:160	Gen Chem for Engr	3
01:160:171	Intro to Experimentation	1	14:440:127	Intro Computers for Engr	3
01:355:101	Expository Writing	3	14:440:221	Eng'g Mech: Statics	3
14:440:100	Engineering Orientation	1	01:640:152	Calculus II	4
01:640:151	Calculus I	4	01:750:124	Analytical Physics IB	2
01:750:123	Analytical Physics IA	2	____:_____	Hum/SocSci Elective	3
____:_____	Hum/SocSci Elective	3			
	Total	**17**		**Total**	**18**

SOPHOMORE YEAR

01:640:251	Multivariable Calculus	4	01:640:244	Differential Equations	4
01:750:227	Analytical Physics IIA	3	14:440:222	Eng'g Mech: Dynamics	3
01:750:229	Anal. Physics IIA Lab	1	33:799:301	Intro to Supply Chain	3
14:440:301	Intro to Packaging	3	__:___:___	Hum/SSci Elective 300+	3
14:440:302	CAD in Packaging	3	14:440:___	Packaging Elective*	3
01:220:102	Micro Economics	3			
	Total	**17**		**Total**	**16**

JUNIOR YEAR

14:440:371	Packaging Evaluation	3	01:355:302	Sci & Tech Writing	3
14:440:470	Packaging Lab I	2	14:440:471	Distribution Packaging	3
14:440:___	Packaging Elective	3	14:440:473	Packaging Lab II	2
__:___:___	Mechanics*	3	14:440:___	Packaging Elective*	3
__:___:___	Statistics*	3	14:440:4xx	Pkg Development Proc*	3
	Total	**14**		**Total**	**14**

SENIOR YEAR

14:440:373	Packaging Manufacturing I	3	14:440:420	Senior Design Project	3
14:440:419	Innovation and Design	3	14:440:4xx	Spec. Topics Mfg II	3
__:___:___	Hum/SSci Elective 300+	3	14:440:___	Packaging Elective*	3
__:___:___	Packaging Elective	3	__:___:___	Engineering Elective*	3
__:___:___	Technical Elective	3	__:___:___	Technical Elective	3
	Total	**15**		**Total**	**15**

TOTAL CREDITS REQUIRED: 126

Notes*:
Packaging Electives 14:440:378, 14:440:403, 14:440:406, 14:440:408, 14:440:468, 14:440:489, 16:731:5xx
Mechanics Elective: 14:635:314, 14:635:407, 14:180:243, 14:650:291
Statistics Elective: 01:960:379, 01:960:384, 01:960:401
Engineering Elective: 14:155:208, 14:635:206, 14:650:351, 01:160:209, 01:160:307, 14:635:361, 14:635:312

Undergraduate students are only allowed to take two packaging graduate courses.

Packaging Engineering Curriculum (with Spring Co-op)

Name_____

FRESHMAN YEAR

01:160:159	Gen Chem for Engr	3	01:160:160	Gen Chem for Engr	3
01:160:171	Intro to Experimentation	1	14:440:127	Intro Computers for Engr	3
01:355:101	Expository Writing	3	14:440:221	Eng'g Mech: Statics	3
14:440:100	Engineering Orientation	1	01:640:152	Calculus II	4
01:640:151	Calculus I	4	01:750:124	Analytical Physics IB	2
01:750:123	Analytical Physics IA	2	____:_____	Hum/SocSci Elective	3
____:_____	Hum/SocSci Elective	3			
	Total	**17**		**Total**	**18**

SOPHOMORE YEAR

01:640:251	Multivariable Calculus	4	01:640:244	Differential Equations	4
01:750:227	Analytical Physics IIA	3	14:440:222	Eng'g Mech: Dynamics	3
01:750:229	Anal. Physics IIA Lab	1	33:799:301	Intro to Supply Chain	3
14:440:301	Intro to Packaging	3	14:440:302	CAD in Packaging	3
01:220:102	Micro Economics	3	14:440:___	Packaging Elective*	3
__:___:___	Hum/SSci Elective 300+	3			
	Total	**17**		**Total**	**16**

JUNIOR YEAR

14:440:371	Packaging Evaluation	3	14:440:497	Co-op	6
14:440:373	Packaging Manufacturing	3			
__:___:___	Statistics*	3			
__:___:___	Mechanics*	3			
14:440:470	Packaging Lab I	2			
01:355:302	Sci & Tech Writing	3			
	Total	**17**		**Total**	**6**

Summer

14:440:497 Co-op

SENIOR YEAR

14:440:419	Innovation and Design	3	14:440:420	Senior Design Project	3
__:___:___	Engineering Elective	3	14:440:471	Distribution Packaging	3
14:440:___	Packaging Elective	3	14:440:473	Packaging Lab II	2
14:440:___	Packaging Elective	3	14:440:490	Special Topic Manufacturing II	3
14:440:___	Packaging Elective	3	14:440:4xx	Pkg Development Proc	3
__:___:___	Hum/SSci Elective 300+	3	__:___:___	Technical Elective	3
	Total	**18**		**Total**	**17**

TOTAL CREDITS REQUIRED: 126

Notes*:

Packaging Electives 14:440:378, 14:440:403, 14:440:406, 14:440:408, 14:440:468, 14:440:489, 16:731:5xx
Mechanics Elective: 14:635:314, 14:635:407, 14:180:243, 14:650:291
Statistics Elective: 01:960:379, 01:960:384, 01:960:401
Engineering Elective: 14:155:208, 14:635:206, 14:650:351, 01:160:209, 01:160:307, 14:635:361, 14:635:312

Co-op students may register for up to two additional courses to maintain full-time enrollment. If students elect to register for only the 6-credit co-op the University will consider them to be part-time students. They will pay part-time tuition and fees (pay per credit). Part- time status will affect most scholarships, need-based financial aid, and on-campus housing. If students enroll for at least 6 credits they are still eligible for loans, but most other aid will be canceled or reduced. Discuss this issue with Financial Aid.

Packaging Engineering Curriculum (with Fall Co-op)

Name_____

FRESHMAN YEAR

01:160:159	Gen Chem for Engr	3	01:160:160	Gen Chem for Engr	3
01:160:171	Intro to Experimentation	1	14:440:127	Intro Computers for Engr	3
01:355:101	Expository Writing	3	14:440:221	Eng'g Mech: Statics	3
14:440:100	Engineering Orientation	1	01:640:152	Calculus II	4
01:640:151	Calculus I	4	01:750:124	Analytical Physics IB	2
01:750:123	Analytical Physics IA	2	____:_____	Hum/SocSci Elective	3
____:_____	Hum/SocSci Elective	3			
	Total	**17**		**Total**	**18**

SOPHOMORE YEAR

01:640:251	Multivariable Calculus	4	01:640:244	Differential Equations	4
01:750:227	Analytical Physics IIA	3	14:440:222	Eng'g Mech: Dynamics	3
01:750:229	Anal. Physics IIA Lab	1	33:799:301	Intro to Supply Chain	3
14:440:301	Intro to Packaging	3	14:440:302	CAD in Packaging	3
01:220:102	Micro Economics	3	14:440:___	Packaging Elective*	3
__:___:___	Hum/SSci Elective 300+	3			
	Total	**17**		**Total**	**16**

JUNIOR YEAR

14:440:371	Packaging Evaluation	3	14:440:___	Packaging Elective	3
14:440:419	Innovation and Design	3	__:___:___	Statistics*	3
14:440:470	Packaging Lab I	2	__:___:___	Mechanics*	3
14:440:373	Packaging Manufacturing I	3	__:___:___	Engineering Elective*	3
14:440:___	Packaging Elective	3	01:355:302	Sci & Tech Writing	3
__:___:___	Technical Elective	3	14:440:4xx	Pkg Development Proc	3
	Total	**17**		**Total**	**18**

Summer

14:440:498	Co-op	

SENIOR YEAR

14:440:498	Co-op	6	14:440:420	Senior Design Project	3
			14:440:471	Distribution Packaging	3
			14:440:473	Packaging Lab II	2
			14:440:4xx	Spe. Topic Manufacturing II	3
			14:440:___	Packaging Elective	3
			__:___:___	Hum/SSci Elective 300+	3
	Total	**6**		**Total**	**17**

TOTAL CREDITS REQUIRED: 126

Notes*:

Packaging Electives 14:440:378, 14:440:403, 14:440:406, 14:440:408, 14:440:468, 14:440:489, 16:731:5xx
Mechanics Elective: 14:635:314, 14:635:407, 14:180:243, 14:650:291
Statistics Elective: 01:960:379, 01:960:384, 01:960:401
Engineering Elective: 14:155:208, 14:635:206, 14:650:351, 01:160:209, 01:160:307, 14:635:361, 14:635:312

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Required Packaging Engineering Courses

14:440:301	Intro to Packaging	3 (F)	Prerequisites: 640:151
14:440:302	CAD in Packaging	3 (S)	Prerequisites: 440:301, 640:152
14:440:371	Packaging Evaluation	3 (F)	Prerequisites: 440:301, 440:222, 640:251, 750:227, 160:160
14:440:373	Packaging Manufacturing I	3 (F)	Prerequisites: 440:301, 440:222
14:440:419	Innovative Design	3 (F)	Prerequisites: 440:301, 440:302, 640:244, 440:371
14:440:420	Senior Design Project	3 (S)	Prerequisites: 440:301. 440:419
14:440:471	Distribution Packaging	3 (S)	Prerequisites: 440:301
14:440:470	Packaging Lab I	2 (F)	Prerequisites: 440:301
14:440:473	Packaging Lab II	2 (S)	Prerequisites: 440:301
14:440:490	Special Topics Manufacturing II	3 (S)	Prerequisites: 440:301
14:440:497/8	Summer Internship	3 (F/S)	
14:440:____	Design Process	3 (S)	

Packaging Engineering Electives

14:440:378	Sustainable Packaging	3 (F)	Prerequisites: 440:301
14:440:403	Safety Eng Packaging	3 (S)	
14:440:406	Packaging Printing/Decoration	3 (S)	Prerequisites: 440:301
14:440:468	Packaging Machinery	3 (S)	Prerequisites: 440:301
14:440:489	Special Problems (Packaging)	3 (F)	Special permission only

Certificate in Packaging Engineering Program

Students in any major who complete 14:440:301 and three additional packaging courses from the following list will earn a “Certificate in Packaging Engineering”.

14:440:302	CAD in Packaging	3 (S)	Prerequisites: 440:301, 640:152
14:440:371	Packaging Evaluation	3 (F)	Prerequisites: 440:301, 440:222, 640:251, 750:227, 160:160
14:440:373	Packaging Manufacturing	3 (F)	Prerequisites: 440:301, 440:222
14:440:378	Sustainable Packaging	3 (F)	Prerequisites: 440:301
14:440:403	Safety Eng Packaging	3 (S)	
14:440:406	Packaging Printing/Decoration	3 (S)	Prerequisites: 440:301
14:440:468	Packaging Machinery	3 (S)	Prerequisites: 440:301
14:440:471	Distribution Packaging	3 (S)	Prerequisites: 440:301
14:440:489	Special Problems (Packaging)	3 (F)	Special permission only
14:440:490	Special Topics Manufacturing II	3 (S)	Prerequisites: 440:301

Mechanics Electives

14:635:314	Strength of Materials
14:635:407	Mechanical Properties of Materials
14:180:243	Mechanics of Solids
14:650:291	Intro to Mechanics of Materials

Statistics

01:960:379	Basic Problems and Statistics
01:960:384	Intermediate Stat Analysis
01:960:401	Basic Statistics for Research

Junior Electives

14:155:208	Chemical Engineering Thermodynamics I
14:635:206	Thermodynamics of Materials
14:650:351	Thermodynamics
01:160:209	Element Organic Chemistry
01:160:307	Organic Chemistry
14:635:361	MSE of Polymers
14:635:312	Glass Engineering