

**BACHELOR OF SCIENCE IN INDUSTRIAL ENGINEERING
PROGRAM OF STUDY**

Offer ¹	Codif.	Course Title	Crs	Co-req	Req	Offer ¹	Codif.	Course Title	Crs	Co-req	Req
FIRST YEAR						SECOND YEAR					
First Semester						First Semester					
A-J-S	MATE 3005 ²	Pre-Calculus	5			A-J-S	ININ 4057 ^{L-P}	Real Time Process Control	3	INME 4055 and INEL 4077	INGE 3016 and INEL 4076
A-S	QUIM 3131	General Chemistry I	3	QUIM 3133 and (MATE 3005 or MATE 3171 or MATE 3143)		A-J-S	ININ 4015	Engineering Economic Analysis	3		MATE 3032
A-S	QUIM 3133	Gen. Chemistry Lab. I	1	QUIM 3131		A-S	ININ 4021 ^P	Deterministic Mod in Oper. Research	3		ININ 4010 and MATE 4145
A-J	INGL ³	1 st year English	3			A-J	ININ 4078 ^L	Statistical Quality Control	3		ININ 4010
A-J-S	ESPA 3101	Basic Course in Spanish	3			A-S	ININ 4077 ^L	Work Dystems Design	4	INME 4055	ININ 4010
A-J-S	ELECTIVE	Sociohumanistic Elective	3						16		
			18								
Second Semester						Second Semester					
A-J-S	MATE 3031 ²	Calculus I	4		MATE 3143 or MATE 3172	A-J	ININ 4085	Accounting for Engineers	3		ECON 3021
J-S	QUIM 3132	General Chemistry II	3	QUIM 3134	QUIM 3131 and QUIM 3133	J-S	ININ 4022 ^P	Probabilistic Mod. in Oper. Research	3		ININ 4020
J-S	QUIM 3134	Gen. Chemistry Lab. II	1	QUIM 3132		A-J	ININ 4039 ^P	Production Planning and Control I	3	ININ 4015	ININ 4021 and ININ 4020
A-J-S	INGL ³	1st year English	3		INGL 1st year	J-S	ININ 4009 ^{L-P}	Work Measurement	4		ININ 4077 and ININ 4020
A-J-S	ESPA 3102	Basic Course in Spanish	3		ESPA 3101		ELECTIVE	Sociohumanistic elective	3		
A-J-S	EDFI	Physical Education Elective	1						16		
A-J-S	INGE 3011	Engineering Graphics I	2								
			17								
SECOND YEAR						FIFTH YEAR					
First Semester						First Semester					
A-J-S	MATE 3032	Calculus II	4		MATE 3031 or MATE 3144	A-J	ININ 4086	Cost Analysis and Control	3		ININ 4085
A-J-S	FISI 3171	Physics I	4		MATE 3031 or MATE 3144	A-J-S	ININ 4040 ^{L-P}	Facility Layout and Design	3	ININ 4015	ININ 4039 and ININ 4009
A-J-S	FISI 3173	Physics Laboratory I	1	FISI 3171		A-J	ININ 4075 ^P	Production Planning and Control II	3		ININ 4039
A-J-S	INGL ³	2nd year English	3		INGL 1st year	ELECTIVE	ELECTIVE	Industrial Engineering Elective	3		
A-J-S	INGE 3031	Engineering Mechanics-Statics	3		MATE 3031 or MATE 3144	ELECTIVE	ELECTIVE	Free Electives	6		
A-J-S	INGE 3016	Algorithms & Computer Progr.	3		MATE 3031 or MATE 3144				18		
			18								
Second Semester						Second Semester					
A-J-S	MATE 3063	Calculus III	3		MATE 3032	A-J	ININ 4079 ^P	Design Project	3		ININ4015 and ININ 4022 and ININ4040 and Project Proposal
A-J-S	FISI 3172	Physics II	4		FISI 3171						
A-J-S	FISI 3174	Physics Laboratory II	1	FISI3172	FISI 3173	A-J	ININ 4035 or ININ 4029	Human Resources Planning	3		ININ 4077
A-J-S	INGL ³	2nd year English	3		INGL 2nd year	A-J	ELECTIVE	Human Behavior in Work Org.	3		ININ 4077
A-J-S	INGE 3032	Engineering Mechanics - Dynamics	3		INGE 3031 and FISI 3171	ELECTIVE	ELECTIVE	Industrial Engineering Elective	3		
A-J-S	INGE 4011	Mechanics of Materials	3		INGE 3031 and MATE 3032	ELECTIVE	ELECTIVE	Sociohumanistic Elective	3		
	EDFI	Physical Education Elective	1			ELECTIVE	ELECTIVE	Free Electives	6		
			18						18		
THIRD YEAR						INDUSTRIAL ENGINEERING ELECTIVES					
First Semester						Course no.					
A-J-S	ININ 4010	Probability and Statistics for Eng.	3		MATE 3032 and INGE 3016	ININ 4016	Industrial Safety	3		ININ 4077	
A-J-S	MATE 4145	Linear Algebra and Differential Equ.	4		MATE 3063 and INGE 3016	ININ 4017	Computer Based Info. Systems	3		INGE 3016 and ININ 4077	
A-J-S	INGE 4001	Engineering Materials	3		FISI 3171 and (QUIM 3132 or QUIM 3002)	ININ 4018	Syst. Simulation w/ Digital Compt.	3		ININ 4022	
A-J-S	INME 4045	Gen. Thermodynamics for Eng.	3		FISI 3172 and (QUIM 3132 or QUIM 3002)	ININ 4027	Des. and Anal. of Eng. Experiments	3		ININ 4020	
A-J-S	INEL 4075	FundamentalS of Electrical Eng.	3		FISI 3172 and MATE 3063	ININ 4810	Concurrent Engineering	3		ININ 4077	
A-J-S	ELECTIVE	Sociohumanistic Elective	3			ININ 4996	Special Problems	1-3		Authorization of the Director	
			19			ININ 4998	Undergraduate Research	1-6		Authorization of the Director	
Second Semester						ININ 5005					
A-J-S	INME 4055	Manufacturing Process	3		INME 4055	ININ 5005	Modern Optimization Methods	3		ININ 4021 or authorization of the Director	
A-J-S	INME 4056	Manufacturing Process Lab.	1	INME 4055		ININ 5505	Total Quality Management	3		ININ 4078 or authorization of the Director	
A-J-S	INEL 4076	Fundamentals of Electronics	3		INEL 4075	ININ 5565	Measmt.& Predict. of Prod. Reliab.	3		ININ 4020 or authorization of the Director	
A-J-S	INEL 4077	Basic Electronic Laboratory	1	INEL 4076		ININ 5575	Sequencing & Scheduling of Res.	3		ININ 4039 or authorization of the Director	
J-S	ININ 4020	Applied Statistics in Industry	3		ININ 4010 and MATE 3063	ININ 5595	Des. and Mgmt of Service Proc.	3		ININ 4039 and ININ 4009, or authorization of the Director	
A-J-S	ECON 3021	Princ. of Economics Microecon.	3								
	ELECTIVE	Sociohumanistic Elective	3								
			17								

Footnotes:

- A= August (1st Semester), E= January (2nd Semester), S= Summer
- The following are alternative sequences for MATE 3005-MATE 3031:
MATE 3171 - MATE 3172 - MATE 3031
MATE 3143 - MATE 3144
- The following are approved sequences for English (INGL) courses:
INGL 3101 - INGL 3102 - INGL 3201 - INGL 3202
INGL 3103 - INGL 3104 - (two additional courses from list provided by English Dept.)
INGL 3211 - INGL 3212 - (A score of 4 or 5 in English Advanced Placement exam)
- Laboratory sessions integrated with class lectures.
- A project is required for this course.

Additional notes:

- A grade of C or Better is required for any ININ course to be considered approved.
- The following ININ courses can only be taken as free electives:

Course no.	Description	Crs	Requisites
ININ 4046	Industrial Engineering Practice	3	Authorization of the Director
ININ 4995	Eng. Practice for COOP students	0-6	ININ 4020
ININ 4050	Printed Circuit Board Assembly	3	(QUIM 3002 or QUIM 3132) and FISI 3172 and FISI 3174

- If both ININ 4035 & ININ 4029 are taken, one will count as requisite and the other as free elective.
- To get credit for ININ 4995 a minimum of one summer and one semester are required.
- ININ 4996 & ININ 4998 can be repeated for credit as long as max. credits not exceeded.
- A total of 15 credits in Sociohumanistic Electives must be chosen from approved list.
- A total of 12 credits must be taken as free electives. This can be any course in the catalog as long as the student has approved the pre-requisites and is not of a lower level than a course in the ININ program or than any elective course already taken by the student.