

## BACHELOR OF SCIENCE IN INDUSTRIAL ENGINEERING

### PROGRAM OF STUDY

Offer <sup>1</sup>	Codif.	Course Title	Crs	Co-req	Req	Offer <sup>1</sup>	Codif.	Course Title	Crs	Co-req	Req																																																																								
<b>FIRST YEAR</b>						<b>FOURTH YEAR</b>																																																																													
<b>First Semester</b>						<b>First Semester</b>																																																																													
A-J-S	MATE 3005 <sup>2</sup>	Pre-Calculus	5			A-J-S	ININ 4057 <sup>L-P</sup>	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 <sup>P</sup>	Deterministic Mod in Oper. Research	3		ININ 4010 and MATE 4145																																																																								
A-J	INGL _____ <sup>3</sup>	1st year English	3			A-J	ININ 4078 <sup>L</sup>	Statistical Quality Control	3		ININ 4010																																																																								
A-J-S	ESPA 3101	Basic Course in Spanish	3			A-S	ININ 4077 <sup>L</sup>	Work Dystems Design	4		ININ 4010																																																																								
A-J-S	ELECTIVE	Sociohumanistic Elective	3						16																																																																										
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A-J-S	MATE 3031 <sup>2</sup>	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 <sup>P</sup>	Probabilistic Mod. in Oper. Research	3		ININ 4020																																																																								
J-S	QUIM 3134	Gen. Chemistry Lab. II	1	QUIM 3132		A-J	ININ 4039 <sup>P</sup>	Production Planning and Control I	3	ININ 4015	ININ 4021 and ININ 4020																																																																								
A-J-S	INGL _____ <sup>3</sup>	1st year English	3		INGL 1st year	J-S	ININ 4009 <sup>L-P</sup>	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																																																																																
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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 <sup>L-P</sup>	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 <sup>P</sup>	Production Planning and Control II	3		ININ 4039																																																																								
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A-J-S	INGE 3031	Engineering Mechanics-Statics	3		MATE 3031 or MATE 3144	ELECTIVE		Free Electives	6																																																																										
A-J-S	INGE 3016	Algorithms & Computer Progr.	3		MATE 3172, MATE 3005				18																																																																										
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A-J-S	MATE 3063	Calculus III	3		MATE 3032	A-J	ININ 4079 <sup>P</sup>	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-S	INGL _____ <sup>3</sup>	2nd year English	3		INGL 2nd year	A-J	ININ 4035 or ININ 4029	Human Resources Planning	3		ININ 4077																																																																								
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A-J-S	ININ 4010	Probability and Statistics for Eng.	3		MATE 3032 and INGE 3016																																																																														
A-J-S	MATE 4145	Linear Algebra and Differential Equ.	4		MATE 3063 and INGE 3016																																																																														
A-J-S	INGE 4001	Engineering Materials	3		FISI 3171 and (QUIM 3132 or QUIM 3002)																																																																														
A-J-S	INME 4045	Gen. Thermodynamics for Eng.	3		FISI 3172 and (QUIM 3132 or QUIM 3002)																																																																														
A-J-S	INEL 4075	Fundamentals of Electrical Eng.	3		FISI 3172 and MATE 3063																																																																														
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A-J-S	INME 4055	Manufacturing Process	3		INGE 4001																																																																														
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J-S	ININ 4020	Applied Statistics in Industry	3		ININ 4010 and MATE 3063																																																																														
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**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 or INGL3191)  
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	0-9	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.