

BSIE Curriculum

Revision 2016

Year 1 - First Semester					
Offer 1	Course ID	Title	Co-Req	Pre-Req.	Cr.
	ESPA 3101	Basic Spanish I			3
	INGE 3011	Graphics			2
	INGL 3XXX ³	1st Year English <small>(*Please refer to the English courses sequence)</small>			3
	MATE 3005 ²	Pre-Calculus		EXAM	5
	QUIM 3131	General Chem. I	QUIM 3133 & (MATE 3005 OR MATE 3171)		3
	QUIM 3133	General Chem. Lab I	QUIM 3131 & (MATE 3005 OR MATE 3171)		1
Total Credits: 17					

Year 1 - Second Semester					
Offer 1	Course ID	Title	Co-Req	Pre-Req.	Cr.
		Socio/Hum. Elec.			3
	QUIM 3132	General Chem. II	QUIM 3134	QUIM 3131 & QUIM 3133	1
	QUIM 3134	General Chem. Lab II	QUIM 3132	QUIM 3131 & QUIM 3133	3
	MATE 3031 ²	Calculus I		MATE 3005 OR MATE 3172	4
	INGL 3XXX ³	1st Year English <small>(*Please refer to the English courses sequence)</small>			3
	ESPA 3102	Basic Spanish II		ESPA 3101	3
	EDFI	Physical Edu. Elec.			1
Total Credits: 18					

Year 2 - First Semester					
Offer 1	Course ID	Title	Co-Req	Pre-Req.	Cr.
	MATE 3032	Calculus II		MATE 3031	4
	INGL 3XXX ³	2nd Year English <small>(*Please refer to the English courses sequence)</small>			3
	INGE 3016	Alg. & Comp. Prog.		MATE 3005 OR MATE 3172	3
	INGE 3031	Eng. Mech. Statics		MATE 3031	3
	FISI 3171	Physics I		MATE 3031	4
	FISI 3173	Physics Lab. I	FISI 3171	MATE 3031	1
Total Credits: 18					

Year 2 - Second Semester					
Offer 1	Course ID	Title	Co-Req	Pre-Req.	Cr.
	MATE 3063	Calculus III		MATE 3032	3
A-J	ININ 4010	Prob. & Stat. for Eng		MATE 3032 & (INGE 3016 OR C/IC 3011* OR C/IC 3015*)	3
	INGE 4001	Eng. Materials		QUIM 3132 & QUIM 3134 & FISI 3171	3
	INGE 3032	Eng. Mechanics Dyn.		INGE 3031 & FISI 3171	3
	FISI 3172	Physics II		FISI 3171	4
	FISI 3174	Physics Lab. II	FISI 3172	FISI 3173	1
	EDFI	Physical Edu. Elective			1
Total Credits: 18					

Year 3 - First Semester					
Offer 1	Course ID	Title	Co-Req	Pre-Req.	Cr.
	MATE 4145	Linear Alg. & Diff. Eq.		MATE 3063 & (INGE 3016 OR COMP 3010* OR C/IC 3015*)	4
	INME 4055	Mfg. Proc.		INGE 4001	3
A-J	ININ 4077 ¹	Work Systems Dsgn.		ININ 4010	4
A-J	ININ 4020	Applied Ind. Stat.		ININ 4010 & MATE 3063	3
	INEL 4075	Fund. Electrical Eng.		MATE 3063 & FISI 3172	3
Total Credits: 17					

Year 3 - Second Semester					
Offer 1	Course ID	Title	Co-Req	Pre-Req.	Cr.
	INGL 3XXX ³	2nd Year English <small>(*Please refer to the English courses sequence)</small>			3
	INME 4056	Manuf. Proc. Lab.	INME 4055	INGE 3011	1
	INEL 4076	Fund. Of Electronics		INEL 4075	3
A-J	ININ 4015	Eng. Econ. Analysis		MATE 3032	3
A-J	ININ 4009 ^{1P}	Work Measurement		ININ 4077 & ININ 4020	4
A-J	ININ 4150	Models in OR		ININ 4010 & MATE 4145	4
Total Credits: 18					

Year 4 - First Semester					
Offer 1	Course ID	Title	Co-Req	Pre-Req.	Cr.
	INME 4045	Gen. Thermodyn.		QUIM 3132 & QUIM 3134 & FISI 3172	3
A-J	ININ 4155	Prod. Syst. & Inv.	ININ 4150 & ININ 4015	ININ 4020	4
A-J	ININ 4087	Cost Management		ININ 4010	4
	INGE 4011	Mech. Materials I		INGE 3031 & MATE 3032	3
	INEL 4077	Basic Electr. Lab.	INEL 4076		1
	ECON 3021	Princ. Econ. I			3
Total Credits: 18					

Year 4 - Second Semester					
Offer 1	Course ID	Title	Co-Req	Pre-Req.	Cr.
		Socio/Hum. Elec.			3
J	ININ 4078 ¹	Stat. Quality Ctrl.		ININ 4020	3
A-J	ININ 4040 ^{1P}	Layout Degn.	ININ 4015	ININ 4009 & ININ 4150 & ININ 4155	3
J	ININ 4027 ^P	Des. Anal. Eng. Exp.		ININ 4020	3
J	ININ 4018 ^P	Syst. Simulation		ININ 4020 & ININ 4150	3
Total Credits: 15					

Year 5 - First Semester					
Offer 1	Course ID	Title	Co-Req	Pre-Req.	Cr.
		Free Elective			3
		Socio/Hum. Elec.			3
	ININ XXXX	Ind. Eng. Elective			3
A-J	ININ 4079 ^P	Design Project		ININ 4015 & ININ 4040 & ININ 4150 & Auth. Dir.	3
A-J	ININ 4057 ^{1P}	R.T. Proc. Ctrl.	INME 4055 & INEL 4077	INGE 3016 & INEL 4076	3
A	ININ 4017	Info. Sys.		INGE 3016	3
Total Credits: 18					

Year 5 - Second Semester					
Offer 1	Course ID	Title	Co-Req	Pre-Req.	Cr.
		Free Electives			3
		Socio/Hum. Elec.			3
	ININ XXXX	Ind. Eng. Elective			3
		Free Electives			3
		Free Electives			3
		Socio/Hum. Elec.			3
Total Credits: 18					

Industrial Engineering Electives			
Course No.	Description	Cr.	Requisites
ININ 4016	Industrial Safety	3	ININ 4077
ININ 4996	Special Problems	1-3	Auth. Dir.
ININ 4998	Undergrad. Research	1-6	Auth. Dir.
ININ 5005	Modern Opt. Methods	3	ININ 4150
ININ 5006	Systems Eng. & Analysis	3	ININ 4007
ININ 5008	Know. Disc. Eng. Mult. Data	3	ININ 4020
ININ 5009	Lean Six Sigma Meth.	3	ININ 4155
ININ 5105	Intr. Medical Dev. Design	3	ININ 4020
ININ 5405	Stat. Methods Bio. Inf.	3	ININ 4010
ININ 5565	Mgmt. & Prdct. Prd. Reliab	3	ININ 4020
ININ 5575	Seq. & Sched. of Resources	3	ININ 4155
ININ 5595	Des. & Mgmt of Serv. Proc.	3	ININ 4009
ININ Courses that Can only Be Taken as Free Electives			
Course No.	Description	Cr.	Requisites
ININ 4995	COOP	3-9	ININ 4020
ININ 4029	Human Beh. Work. Org.	3	ININ 4077
ININ 4050	Print. Circ. Brd. Assy.	3	QUIM 3132 & FISI 3174

Footnotes:
 1. A=August (1st Semester), J=January (2nd Semester)
 2. The following are alternative sequences for MATE 3005-MATE 3031:
 MATE 3171 – MATE 3172 – MATE 3031
 MATE 3143 – MATE 3144
 3. The following are approved sequences for English (INGL) courses:
 INGL 3101 – INGL 3102 – INGL 3201 – INGL 3202 or INGL 3151
 INGL 3103 – INGL 3104 – (two add. courses from list provided by English Dept.)
 INGL 3211 – INGL 3212 – (a score of 4 or 5 in English AP Exam)
 L. Laboratory sessions integrated with class lectures.
 P. A project is required for this course.
Additional notes:
 1. A grade of C or better is required for all ININ courses.
 2. To get credit for ININ 4995 a minimum of one summer and one semester are required.
 3. ININ 4996 & ININ 4998 can be selected for credit as long as max. credits are not exceeded.
 4. 15 credits in Socio-humanistic Electives must be chosen from approved list.
 5. A total of 12 credits must be taken as free electives. Free electives must be a higher level than similar courses on the ININ program or any elective course already taken by the student.
 6. Course offerings on summers will be published on 2nd semesters.

- Critical Path Courses
- Elective Courses
- Industrial Engineering Courses
- Professional Elective Courses

*Italic Font** - Courses taken by students of other engineering departments that can be used in the ININ Curriculum in case of internal transfer.