UNIVERSITY OF PUERTO RICO-MAYAGUEZ CAMPUS

ENGINEERING
University of Puerto Rico · Mayagüez Campus

ELECTRICAL ENGINEERING CURRICULUM

FIRST YEAR

1ST SEMESTER

CODE	COURSE	PRE- or CO-REQ	CR.
MATE 3005*	PRE-CALCULUS		5
QUIM 3131	GENERAL CHEMISTRY I	**CO: MATE 3171 o MATE 3005**	3
QUIM 3133	GENERAL CHEMISTRY LAB I	**CO: MATE 3171 o MATE 3005**	1
ESPA 3101 o 3131	BASIC COURSE IN SPANISH I		3
INGL 3___	COURSE IN ENGLISH		3
INGE 3011	ENGINEERING GRAPHICS I		2
EDFI ____	PHYSICAL EDU. ELECTIVE		1
		TOTAL	**18**

2ND SEMESTER

CODE	COURSE	PRE- or CO-REQ	CR.
MATE 3031	CALCULUS I	**MATE 3005 ó MATE 3143 ó 3172 ó 3174**	4
QUIM 3132	GENERAL CHEMISTRY II	**QUIM 3131, 3133 OR QUIM3001**	3
QUIM 3134	GENERAL CHEMISTRY LAB II	**QUIM 3131, 3133 OR QUIM3001 CO- QUIM 3132**	1
ESPA 3132 o ESPA 3102	BASIC COURSE IN SPANISH II	**ESPA 3131 o ESPA3101**	3
INGL ____	COURSE IN ENGLISH		3
EDFI ____	PHYSICAL EDUCATION ELECTIVE		1
		TOTAL	**15**

SECOND YEAR

1ST SEMESTER

CODE	COURSE	PRE- or CO-REQ	CR.
MATE 3032	CALCULUS II	**MATE 3031 o MATE3144**	4
FISI 3171	PHYSICS I	**MATE 3031 o MATE3144**	4
FISI 3173	PHYSICS LAB I	**CO: FISI 3171**	1
INGE 3016	ALGORITHMS & COMPUT PROG		3
INGL 3___	COURSE IN ENGLISH		3
INGE 3035	ENGINEERING MECHANICS	MATE 3031 o MATE 3144 **Co**: FISI3171	3
		TOTAL	**18**

2ND SEMESTER

CODE	COURSE	PRE- or CO-REQ	CR.
MATE 3063	CALCULUS III	**MATE 3032**	3
FISI3172	PHYSICS II	**FISI 3171**	4
FISI 3174	PHYSICS LAB II	**FISI 3173 CO- FISI 3172**	1
INGE 3045	MATER SCIENCE FOR ELEC ENG.	**QUIM 3132, QUIM 3134 CO: FISI3172**	3
INGL ____	COURSE IN ENGLISH		3
INEL 3105	ELECTRIC SYSTEMS ANAL I	**MATE 3032, INGE 3016 CO-FISI3172, MATE3063**	3
		TOTAL	**17**

THIRD YEAR

1ST SEMESTER

CODE	COURSE	PRE- or CO-REQ	CR.
MATE 4009	ORD DIFFEREN EQUATIONS	**MATE 3063**	3
INEL 4102	ELECTRICAL SYST ANAL II	**INEL 3105, FISI 3172, INGE 3016 CO- MATE 4009**	3
INEL 4205	LOGIC CIRCUITS	**INGE 3016**	3
INEL 4201	ELECTRONICS I	**INEL 3105, FISI 3172**	3
INEL 4151	ELECTROMAGNETICS I	**MATE3063, FISI 3172 CO-MATE 4009**	3
INEL 4115	ELECTRIC MEASUREMENT LAB	**CO-INEL 3105**	1
		TOTAL	**16**

2ND SEMESTER

CODE	COURSE	PRE- or CO-REQ	CR.
ININ 4010	PROB & STAT FOR ENG	**MATE3032, INGE 3016**	3
INEL 4103	ELECTRICAL SYST ANAL III	**MATE4009, INEL 4102, INEL 4151**	3
INEL 4095	SIGNALS AND SYSTEMS	**INEL 4102, MATE4009**	3
INEL 4211	ELECTRONICS LABORATORY I	**INEL 4115, CO-INEL4201**	1
INEL 4___	**ELECTIVE BREADTH**	**SEE TABLE BELOW**	3
INEL 4206	MICROPRO EMBEDDED SYST	**INEL 4205**	3
		TOTAL	**16**

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FOURTH YEAR

1ST SEMESTER				2ND SEMESTER			
CODE	**COURSE**	**PRE- or CO-REQ**	**CR.**	**CODE**	**COURSE**	**PRE- or CO-REQ**	**CR.**
ININ 4015	ENGINEERING ECON ANAL	**MATE 3032**	3	INME 4045	GEN THERMODYN FOR ENGINEERING	**QUIM 3134,3132 o QUIM3002, FISI3172**	3
INEL ____	**ELECTIVE BREADTH**	**SEE TABLE BELOW**	**3**	MATH/INGE	RECOMMENDED MATH	**SEE TABLE BELOW**	3
INEL ____	**ELECTIVE BREADTH**	**SEE TABLE BELOW**	3	INEL 4406	ELECTRIC MACHINES LAB	**INEL 4115, INEL 4103**	1
INEL 4505	INTR TO CONTROL SYSTEMS	**INEL4102, MATE 4009**	3	INEL ____	**TECHNICAL ELECTIVE**	**SEE BROCHURE FOR AREAS**	3
INEL _____	**ELECTIVE BREADTH**	**SEE TABLE BELOW**	1	INEL ____	**TECHNICAL ELECTIVE**	**SEE BROCHURE FOR AREAS**	3
FREE ELECTIVE			3	SOCIO-HUMANISTIC ELECTIVE			3
		TOTAL	**16**			**TOTAL**	**16**

FIFTH YEAR

1ST SEMESTER				2ND SEMESTER			
CODE	**COURSE**	**PRE- or CO-REQ**	**CR.**	**CODE**	**COURSE**	**PRE- or CO-REQ**	**CR.**
INEL ___	**TECHNICAL ELECTIVE**	**SEE BROCHURE FOR AREAS**	3	INEL 5195	DESIGN PROJECT ELECTR ENG	DIR	3
INEL ___	**TECHNICAL ELECTIVE**	**SEE BROCHURE FOR AREAS**	3	INEL ___	**TECHNICAL ELECTIVE**	**SEE BROCHURE FOR AREAS**	3
SOCIO-HUMANISTIC ELECTIVE			3	SOCIO-HUMANISTIC ELECTIVE			3
SOCIO HUMANISTIC ELECTIVE			3	SOCIO-HUMANISTIC ELECTIVE			3
FREE ELECTIVE			3	FREE ELECTIVE			3
FREE ELECTIVE			3				
		TOTAL	**18**			**TOTAL**	**15**

RECOMMENDED MATH COURSES (3 CREDITS)

(choose one course)

CODE	COURSE	PRE- or CO-REQ	CR.
MATE 4061	NUMERICAL ANALYSIS I	MATE 3063, INGE 3016	3
INGE 4035	NUM METHD APPL ENGINEERING	MATE 3063, INGE 3016	3
MATE 4031	INTRO LINEAR ALGEBRA	MATE 3032	3
MATE 4010	INTRO COMPLEX VARIABLES	MATE 3063	3

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BREADTH COURSES (NOTE: choose 3 courses and 1 laboratory)			**(10 CREDITS)**
CODE	**COURSE**	**PRE- or CO-REQ**	**CR.**
INEL 4155	APPLIED ENG ELECTROMAGNETIC	INEL 4151, MATE 4009	3
INEL 4156	EMAG LAB	**CO-** INEL4152 o INEL 4155	1
INEL 4202	ELECTRONICS II	INEL 4201, INEL 4102	3
INEL 4212	ELECTRONICS LABORATORY II	INEL 4211, **CO-** INEL 4202	1
INEL 4405	ELECTRIC MACHINES	INEL 4103	3
INEL 4418	POWER ELECTRONICS LAB	**CO-**INEL4416	1
INEL 4301	COMMUNICATIONS THEORY I	INEL 4102, ININ4010	3

TECHNICAL COURSES	**(15 CREDITS)**
AREAS	**CHOOSE ONE AREA**
ELECTRONICS	• Complete 9 credits • The other 6 credits can be outside the area See brochure for more information
COMMUNICATIONS	
CONTROL	
POWER	
RF SYSTEMS	