

Selection of Third Year Prescribed Electives (AY2014-2015)

Third Year Courses

The third year curriculum for BRC students are as follows:

ADMITTED TO YEAR 1 FROM AY2011-2012 ONWARDS	DIRECT-ENTRY TO YEAR 2 IN AY2012-2013 ONWARDS
OPTION A: INDUSTRIAL ORIENTATION	
AY2014 SEMESTER 1	
EE3001 ENGINEERING ELECTROMAGNETICS EE3002 MICROPROCESSORS EE3080 DESIGN & INNOVATION PROJECT EE3xxx PRESCRIBED ELECTIVE 1 UNRESTRICTED ELECTIVE	EE2003 SEMICONDUCTOR FUNDAMENTALS EE2007 ENGINEERING MATHEMATICS II EE2008 DATA STRUCTURES & ALGORITHMS EE3001 ENGINEERING ELECTROMAGNETICS EE3080 DESIGN & INNOVATION PROJECT
AY2014 SEMESTER 2	
EE3xxx PRESCRIBED ELECTIVE 2 EE0001 IMPACT OF ELECTROMAGNETIC RADIATION ON HUMANS GER ELECTIVE [STS] GER ELECTIVE UNRESTRICTED ELECTIVE UNRESTRICTED ELECTIVE	EE3002 MICROPROCESSORS EE3xxx PRESCRIBED ELECTIVE 1 EE3xxx PRESCRIBED ELECTIVE 2 EE0001 IMPACT OF ELECTROMAGNETIC RADIATION ON HUMANS UNRESTRICTED ELECTIVE
SPECIAL TERM (MAY – JUL 2015)	
EE3176 INDUSTRIAL ORIENTATION	
OPTION B: INDUSTRIAL ATTACHMENT	
AY2014 SEMESTER 1	
EE3001 ENGINEERING ELECTROMAGNETICS EE3002 MICROPROCESSORS EE3080 DESIGN & INNOVATION PROJECT EE0001 IMPACT OF ELECTROMAGNETIC RADIATION ON HUMANS EE3xxx PRESCRIBED ELECTIVE 1 EE3xxx PRESCRIBED ELECTIVE 2	EE2003 SEMICONDUCTOR FUNDAMENTALS EE2007 ENGINEERING MATHEMATICS II EE2008 DATA STRUCTURES & ALGORITHMS EE3001 ENGINEERING ELECTROMAGNETICS EE3002 MICROPROCESSORS EE3080 DESIGN & INNOVATION PROJECT
AY2014 SEMESTER 2	
EE3179 INDUSTRIAL ATTACHMENT	

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In the third year, students will be required to read the respective core courses and select two Major Prescribed Electives from the following list.

GER-CORE COURSES		PRE-REQUISITE	LABORATORY
EE0001	IMPACT OF ELECTROMAGNETIC RADIATION ON HUMANS	-	-

CORE COURSES		CO-REQUISITE	LABORATORY
EE3001	ENGINEERING ELECTROMAGNETICS	EE2007	E3001L
EE3002	MICROPROCESSOR	-	E3002L

MAJOR PRESCRIBED ELECTIVES		PRE-REQUISITE	LABORATORY
EE3010	ELECTRICAL DEVICES AND MACHINES	EE2001	E3010L
EE3011	MODELLING & CONTROL	EE2006	E3011L
EE3012	COMMUNICATION PRINCIPLES	EE2010	E3012L
EE3013	SEMICONDUCTOR DEVICES AND PROCESSING	EE2003	E3013L
EE3014	DIGITAL SIGNAL PROCESSING	EE2010	E3014L
EE3015	POWER SYSTEMS AND PROTECTION	EE2001	E3015L
EE3017	COMPUTER COMMUNICATIONS	-	E3017L
EE3018	INTRODUCTION TO PHOTONICS	-	E3018L
EE3019	INTEGRATED ELECTRONICS	EE2002	E3019L

Students should note that the third year major prescribed elective courses are pre-requisites to some final year prescribed elective courses. Their choice should be guided by their intended option group or specialization in their final year as indicated below:

OPTION GROUP	SPECIALISATION	THIRD YEAR PRESCRIBED ELECTIVES
ELECTRICAL AND SYSTEMS ENGINEERING	<ul style="list-style-type: none"> • INTELLIGENT SYSTEMS AND CONTROL ENGINEERING • BIOMEDICAL ELECTRONICS 	EE3011 + Any EE301x
	<ul style="list-style-type: none"> • ELECTRICAL POWER AND ENERGY 	EE3010 + EE3015
ELECTRONIC ENGINEERING	<ul style="list-style-type: none"> • IC DESIGN 	EE3013 + EE3019
	<ul style="list-style-type: none"> • MICROELECTRONICS 	EE3013 + EE3018
INFOCOMMUNICATIONS ENGINEERING	<ul style="list-style-type: none"> • COMMUNICATIONS ENGINEERING 	EE3012 + EE3017
	<ul style="list-style-type: none"> • DIGITAL MEDIA PROCESSING 	EE3012 + EE3014
	<ul style="list-style-type: none"> • COMPUTER ENGINEERING 	EE3014 + EE3017

Students, who wish to select more than two elective courses, may register them as unrestricted electives but only after registering the two required prescribed elective courses. They will NOT be allowed to change their prescribed electives into unrestricted electives and vice-versa. Any additional electives undertaken by the students will be counted towards their Unrestricted Elective Requirement.

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THIRD YEAR ATTACHMENTS

The various options for attachment offered to students are as follows:

- a) **Industrial Orientation (IO)** : This option is for students who want to speed up or catch up with their studies. The 10-week IO will be conducted during the 12-week vacation after Semester 2 of Year 3.
- b) **Industrial Attachment (IA)** : This option is mainly opted by students with the duration of 20 weeks.
- c) **Enhanced Industrial Attachment (EIA)** : This option is for students who prefer to have a long stint with the industry. EIA is only offered in Semester 2.
- d) **International Research Attachment (IRA)** : This option is for students who are interested in applied research project in overseas research centres/institutions. IRA is only offered in Semester 2.

	IO	IA	EIA / IRA
PERIOD	10 WEEKS [MAY - JUL]	20 WEEKS [SEM 1 OR SEM 2]	30 WEEKS [SEM 2]
ACADEMIC UNIT (CORE)	4	8	12
GRADING	PASS/FAIL	PASS/FAIL	PASS/FAIL
ASSESSMENTS	ONCE	TWICE	THRICE
SUBMISSION OF FINAL REPORT	YES	YES	YES
EST. APPLICATION PERIOD	FEB	SEP & APR	SEP

Additional Information:

1. All attachment types for BRC students are non-graded.
2. The first 4 AUs for both IA and EIA are used to meet the course requirement on IO. The extra 4 AUs earned for IA and 8 AUs for EIA can only be used to offset the requirement for Unrestricted Electives.
3. Students who choose to do IO in the final special sessions will not be able to attend the convocation in that year following the completion of their IO. These students will still graduate and be conferred their degree after successful completion of their IO. They can join the following year's convocation by informing OAS. The IO result will only be released from mid September onwards.
4. Students interested to do overseas IA must seek approval from the School and the Career Attachment Office (Student Services Centre, Level 4).
5. Students on scholarships or sponsorships (IA with the sponsor), may also apply for overseas IA, subjected to their sponsor's approval. An approval letter from the sponsor must be provided to the School and CAO.
6. For more information about overseas IA, please read the section on IA for Students on Academic Exchange via StudentLink > Academic > Engineering Attachment > Information on IA > Industrial Attachment for Students on Academic Exchange

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EXEMPTION OF ATTACHMENT

Please note that exemption will only be given to Industrial Orientation (IO), as this is the default attachment for BRC students.

CRITERIA

- Polytechnic graduate
- At least 2 years of relevant working experience after graduating from polytechnic

To apply, you must submit the [Application Form for Exemption of Attachment](#) together with the followings:

- a letter from employer or ex-employer's HR stating the period of employment and job responsibility
- a report of at least 2000 words on the last 6 months of each employment
- testimonial from employer/ex-employer (optional)

Please refer to **Section O Exemption from Attachment** under **[Information on Attachment]** in the Industrial Attachment module via StudentLink for the softcopy application form as well as the guidelines.

Please submit your application form and the supporting documents to Career & Attachment Office located at Student Service Centre, Level 4. Students are advised to apply as early as possible and **not later than the start of Semester 2 of Year 2.**