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BE in Telecommunications (3643) – New program structure from Year 2006 – Recommended Telecommunications Program

Year 1 – Session 1					
MATH1131 / MATH1141	Mathematics 1A or Higher Mathematics 1A		6 hrs/wk	6 uoc	Offered in S1/S2
PHYS1131 COMP1911 or COMP1917	Higher Physics 1A		6 hrs/wk	6 uoc	Offered in S1/S2

					S2/Summer
GENxxxxx	General Education courses			6 uoc	

Year 3 – Session 1					
ELEC3115	Electromagnetic Engineering	Pre-requisite: PHYS1231 and MATH2069	5 hrs/wk	6 uoc	Offered in S1
ELEC3106	Electronics	Pre-requisite: ELEC2133 and ELEC2141	5 hrs/wk	6 uoc	Offered in S1
ELEC3104	Digital Signal Processing	Pre-requisite: ELEC2134	5 hrs/wk	6 uoc	Offered in

COMP3211	Computer Architecture	Pre-requisite:COMP2021 & COMP3222 ELEC2041	5 hrs/wk	6 uoc	Offered in S2
COMP3231	Operating Systems	Pre-requisite:COMP1921 or COMP1927 & COMP2121 or ELEC2142.	5 hrs/wk	6 uoc	Offered in S1
Year 4 – Session 1					
TELE4120	Thesis A	Pre-requisite: TELE3117 and 120 UOC	4 hrs/wk	6 uoc	Offered in S1/S2
TELE4123	Telecommunications Design Proficiency	Pre-requisite: all 3rd year's core courses	5 hrs/wk	6 uoc	Offered in S1/S2
Elective	L3 or L4 Elective course (see the L3 or L4 list)			6 uoc	
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Year 4 – Session 2					
TELE4121	Thesis B	Pre-requisite: ELEC4120	5 hrs/wk	6 uoc	Offered in S1/S2
ELEC4122	Strategic Leadership and Ethics	Pre-requisite: 120 uoc	5 hrs/wk	6 uoc	Offered in S2
Elective	L4 Elective course (see the L4 list below)			6 uoc	
Elective	L4 Elective course (see the L4 list below)			6 uoc	

L4 Elective Courses list					
Group 1	Microelectronics				
ELEC4601	Digital and Embedded Systems	Pre-requisite: ELEC3106	4 hrs/wk	6 uoc	Offered in S2
ELEC4602	Microelectronics Design and Technology	Pre-requisite: ELEC3106	4 hrs/wk	6 uoc	Offered in S2
ELEC4603	Solid-State Electronics	Pre-requisite: ELEC2133	4 hrs/wk	6 uoc	Offered in S1
ELEC4604	RF Electronics	Pre-requisite: ELEC3106	4 hrs/wk	6 uoc	Offered in S1
Group 2	Energy Systems				
ELEC4611	Power System Equipment	Pre-requisite: ELEC3105	4 hrs/wk	6 uoc	Offered in S1
ELEC4612	Power System Analysis	Pre-requisite: ELEC3105	4 hrs/wk	6 uoc	Offered in S2
ELEC4613	Electrical Drive Systems	Pre-requisite: ELEC3105	4 hrs/wk	6 uoc	Offered in S2
ELEC4614	Power Electronics	Pre-requisite: ELEC2133	4 hrs/wk	6 uoc	Offered in S1
Group 3	Signal Processing				

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ELEC4623	Biomedical Instrumentation, Measurement and Design	Pre-requisite: ELEC3104	4 hrs/wk	6 uoc	Offered in S2
Group 4	Systems and Control				
ELEC4631	Continuous-Time Control System Design	Pre-requisite: ELEC3114	4 hrs/wk	6 uoc	Offered in S1
ELEC4632	Computer Control Systems	Pre-requisite: ELEC3114	4 hrs/wk	6 uoc	Offered in S2
ELEC4633	Real Time Engineering	Pre-requisite: ELEC3114	4 hrs/wk	6 uoc	Offered in S1
Group 5	Data and Mobile Communications				
TELE4651	Wireless Communication Technologies	Pre-requisite: TELE3113	4 hrs/wk	6 uoc	Offered in S2
TELE4652	Mobile and Satellite Communication Systems	Pre-requisite: TELE3113	4 hrs/wk	6 uoc	Offered in S2
TELE4653	Digital Modulation and Coding	Pre-requisite: TELE3113	4 hrs/wk	6 uoc	Offered in S1
TELE4642	Network Performance	Pre-requisite: TELE3118	4 hrs/wk	6 uoc	Offered in S1
Group 6	Photonics				

- ƒ In the case of a combined degree program, accreditation of any course in more than one program is not permitted.
- ƒ Prior School consent is required for any accredited substitution. This includes any courses taken from other schools at the student's own initiative.
- ƒ Substitution is not normally permitted in the first two years of the program.
- ƒ Substitution of one postgraduate course within the School is permitted, provided a similar course is not offered at the undergraduate level.
- ƒ Student exchanges are permitted, and students are encouraged to organise their exchange in the second session of their third year in order to simplify the process of accrediting substitutions.

Rules Governing Elective Courses

L3 and L4 electives provide the breadth and the depth required for an Electrical, Telecommunications and Photonic Engineering Degree. These electives are provided from the six disciplines within the School. In addition, L3 electives include courses from other Schools. Students must have completed at least 36 units of credit of 4th year core and L4 elective courses in order to satisfy the requirements for graduation. Therefore students should choose their L3 and L4 electives accordingly.

Note: Students are not permitted to count more than 60 units of credit (excluding the 12 units of general education courses) of 1st year courses towards the degree, as the required breadth and depth of the Electrical/Telecom/Photonics engineering program would not be obtained otherwise.

Industrial Training

All students are required to undertake mandatory industrial training. Each student is personally responsible for arranging and completing the full 60 days compulsory industrial training prescribed as part of the requirements for the award of the degree. Industrial training should be concurrent with enrolment and is best accumulated in the summer recesses at the end of the second and third years of the program, but it must be completed before graduating .Industrial training should be in the area of engineering design and/or project work, but limited credit may be given for work of a non-engineering nature. It is preferable that all 60 days be completed with one or two organisations. Students should, in general, work with professional engineers and take an active part in their work in the design of equipment, solving of engineering problems, or any other work that is relevant to the profession of Engineering.

Students are required to submit a written report on their industry placements, typically 2000-3000 words, describing the organisation of the Company, summarising the work done and the training received. The report must be accompanied by certification of their industrial placement by a senior company representative.

Industrial Training will be assessedaptinecddepth8(owgic Lee)6.6.dTw(m)12398 -6.48 0 8.1(ning)irship11.58-.EthiT4(h( )T8(s3.74(u)-7bm)124.2(dustr2 0 16 Tw(6(h772Scho)-4.7(o)-4.7(l.2

The introduction of year 1 (L1), year 3 (L3) and year 4 (L4) electives accommodates students who are transferring from another program, are advanced standing or are in mid-year entry, as it allows them to complete required number of units of credit within the stipulated time of the normal program.