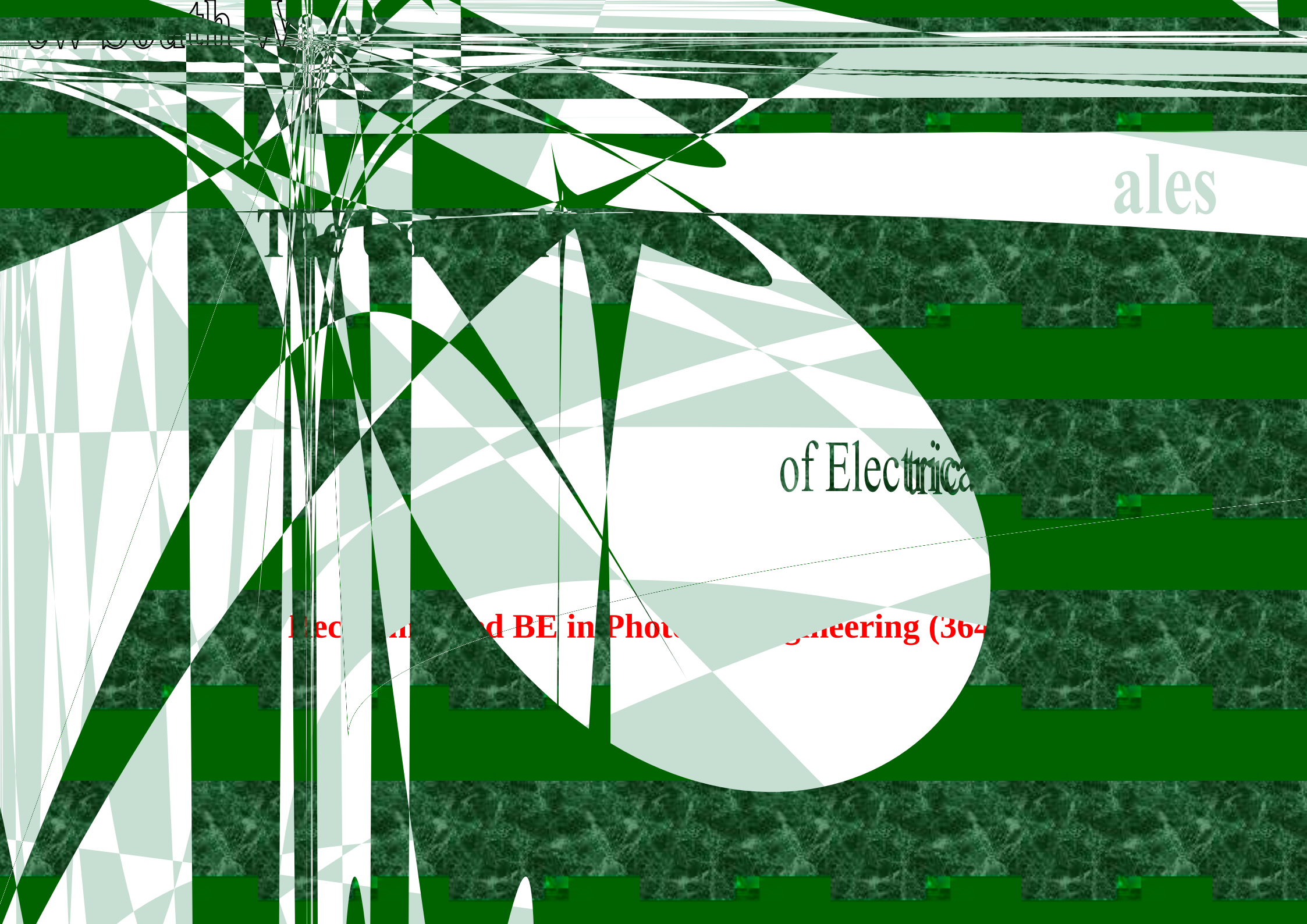
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BE in Photonic Engineering (3644) – Recommended new program structure from Year 2006

Year 1 – Session 1	
MATH1131	Mathematics 1A or
/Math1141	Higher Mathematics 1A

Updated on 20 May 2014

MATH2130	Mathematical Methods for Des	Pre-requisite: MATH1231	3 hrs/wk	3 uoc	
GENxxxxx	General Education courses			3 uoc	

Year 3 – Session 1					
ELEC3115	Electromagnetic Engineering	Pre-requisite: PHYS1231 and MATH2069	5 hrs/wk		Offered in S1
PHYS3770 or PHYS3780	Laser & Spectroscopy Laboratory Photonics Laboratory	Pre-requisite: 96 UOC	4 hrs/wk	3 uoc	Offered in S1 /S2
GENxxxxx	General Education Course			3 uoc	
ELEC3104	Digital Signal Processing	Pre-requisite: ELEC2134	5 hrs/wk	6 uoc	Offered in S1
Elective	L3 Elective course (see the L3 list below)		5 hrs/wk	6 uoc	

Year 3 – Session 2					
TELE3113	Analogue & Digital Communications	Pre-requisite: ELEC2134	5 hrs/wk	6 uoc	Offered in S2
PHYS3060	Advanced Optics	Pre-requisite: PHYS1231	2 hrs/wk	3 uoc	
PHYS3310	State Devices		2 hrs/wk	3 uoc	
PHTN3117	Photonic Engineering Design	Pre-requisite: ELEC2133	5 hrs/wk	6 uoc	Offered in S2
Elective	L3 Elective course (see the L3 list below)		5 hrs/wk	6 uoc	

L3 Elective courses list					
ELEC3145	Real Time Instrumentation	Pre-requisite: COMP1911 & ELEC2134	5 hrs/wk	6 uoc	Offered in S2
ELEC2146	Engineering Modelling and Simulation (subject to approval)	Pre-requisite: COMP1911 & ELEC2134	5 hrs/wk	6 uoc	Offered in S2
COMP2041	Software Construction (subject to approval)	Pre-requisite:COMP1921	5 hrs/wk	6 uoc	Offered in S1&2
TELE3118	Network Technologies	Pre-requisite: ELEC2142	5 hrs/wk	6 uoc	Offered in S1
ELEC3105	Electrical Energy	Pre-requisite: ELEC3115 and ELEC2134	5 hrs/wk	6 uoc	Offered in S2
TELE3119	Trusted Networks	Pre-requisite: TELE3118	5 hrs/wk	6 uoc	Offered in S2
MATH3411	Information, Codes and Ciphers			6 uoc	
MATH3101	Computational Mathematics	Pre-requisite:MATH2069 & MATH2099	5 hrs/wk	6 uoc	Offered in S1
MATH3121	Mathematical Methods and Partial Differential Equations	Pre-requisite:MATH2069 & MATH2099	5 hrs/wk	6 uoc	Offered in S2
MATH3161	Optimization	Pre-requisite: MATH2069 & MATH2099	5 hrs/wk	6 uoc	Offered in S1
MATH3201	Dynamical Systems and Chaos	Pre-requisite:MATH2069 & MATH2099	5 hrs/wk	6 uoc	Offered in S1

MATH3261	Fluids, Oceans and Climate	Pre-requisite:MATH2069 & MATH2099	5 hrs/wk	6 uoc	Offered in S2
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					
PHTN4120	Thesis A	Pre-requisite: PHTN3117 and 120 UOC	4 hrs/wk	6 uoc	Offered in S1/S2

ELEC4622	Multimedia Signal Processing	Pre-requisite: ELEC3104	4 hrs/wk	6 uoc	Offered in S2
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				
PHTN4661	Optical Circuits and Fibres	Pre-requisite: ELEC3115	4 hrs/wk	6 uoc	Offered in S1
PHTN4662	Photonic Networks	Pre-requisite: TELE3113	4 hrs/wk	6 uoc	Offered in S2
Group 7	Business Administration				
ELEC4445	Entrepreneurial Engineering	Pre-requisite: 132 uoc	4 hrs/wk	6 uoc	Offered in S2

Notes:

- This model allows students to take two L3 electives in the thir

- Substitution is not normally permitted if it unduly restricts the range of courses studied to only one area of specialisation.
- Progression to ‘next level’ courses is not permitted without satisfying the nominated pre-requisites.
- In the case of a combined degree program, accreditation of any course in more than one program is not permitted.
- Prior School consent is required for any acc

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.