

COLLEGE OF ENGINEERING AND INFORMATICS

Marks and Standards 2011-2012

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ENGINEERING PROGRAMMES

Modules of Examinations

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(1EG) First University Examination in Engineering (Undenominated)								
Group I								
	MA140	Engineering Calculus	6	Full Year	2	3	All 1 st BE progs	
	MM120	Mathematical Methods For Engineers	6	Full Year	2	3	All 1 st BE progs	
	MP120	Engineering Mechanics	6	Full Year	2	3	All 1 st BE progs	
Group II								
exCH112 exCH110	CH110 CH112	Fundamentals of Chemistry or Ceimic Innealtóireacht	6	1	1	2	1BLE, 1BP, 1BEE, 1BSE, 1BEI	CH112 CH110
	PH104	Principles of Physics	6	2	2	2	All 1 st Eng	
Group III								
	EE130	Fundamentals of Electrical & Electronic Engineering I	3	1	1	2	1BLE, 1BP, 1BCT, 1BG, 1BM, 1BEE, 1BSE, 1BEI	
	IE121	Industrial Innovation	3	1	1	Project		
	ME112	Fundamentals of Mechanical Engineering	3	2	2	2	1BM, 1BG, 1BLE, 1BP, 1BEI	
	CE112	Engineering Graphics II	9	Full Year	2	3	1BE, 1BV, 1BCM, 1BSE	
Group IV								
Students must select Elective A or Elective B								
Elective A								
	CE107	Fundamentals of Civil Engineering	3	1	1	2	1BE, 1BSE	CE109
	ME152	Introduction to Engineering Computing	6	1	1	2 + c/a	1BG, 1BSE	
	EE112	Engineering Computing II (C Programming I)	3	2	2	c/a	1BM	
Elective B								
	ME152	Introduction to Engineering Computing	6	1	1	2 + c/a	1BG, 1BSE	
	BO106	Introduction to Biology & Cellular Process 1 & 2	6	Full Year	2	3	1BG	BO101
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(1BE) First University Examination in Engineering (Civil)								
Group I								
	MA140	Engineering Calculus	6	Full Year	2	3	All 1 st BE progs	
	MM120	Mathematical Methods For Engineers	6	Full Year	2	3	All 1 st BE progs	
	MP120	Engineering Mechanics	6	Full Year	2	3	All 1 st BE progs	
Group II								
	PH104	Principles of Physics	6	2	2	2	All 1 st Eng	
Ex: CH107 Ex: CH111	CH111 CH107	Engineering & Medical Chemistry or Ceimic	9	Full Year	2	3	1BM, 1BG, 1BV	
Group III								
	CE107	Fundamentals of Civil Engineering	3	1	1	2	1EG, 1BSE	CE109
	CE118	Introduction to Surveying	6	1	1	2 + year's work	1BV, 1BCM	CE102
Group IV								
	CE112	Engineering Graphics II	9	Full Year	2	3 (computer based)	1EG, 1BV, 1BCM, 1BSE	
	CE117	Introduction to Computing	9	Full Year	2	3 + year's work	1BV	
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(1BV) First University Examination in Engineering (Environmental)								
Group I								
	MA140	Engineering Calculus	6	Full Year	2	3	All 1 st BE progs	
	MM120	Mathematical Methods For Engineers	6	Full Year	2	3	All 1 st BE progs	
	MP120	Engineering Mechanics	6	Full Year	2	3	All 1 st BE progs	
Group II								
	PH104	Principles of Physics	6	2	2	2	All 1 st Eng	
Ex: CH107 Ex: CH111	CH111 CH107	Engineering & Medical Chemistry or Ceimic	9	Full Year	2	3	1BM, 1BG, 1BE	CH101 CH107
Group III								
	CE109	Fundamentals of Environmental Engineering	3	1	1	2	1BE, 1EG	CE107
	CE118	Introduction to Surveying	6	1	1	2 + c/a	1BE, 1BCM	CE102
Group IV								
	CE112	Engineering Graphics II	9	Full Year	2	3 (computer based)	1EG, 1BE, 1BCM	
	CE117	Introduction to Computing	9	Full Year	2	3 + c/a	1BE	
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(1BLE) First University Examination in Engineering (Electrical & Electronic)								
Group I								
	MA140	Engineering Calculus	6	Full Year	2	3	All 1 st BE progs	
	MM120	Mathematical Methods For Engineers	6	Full Year	2	3	All 1 st BE progs	
	MP120	Engineering Mechanics	6	Full Year	2	3	All 1 st BE progs	
Group II								
Ex: CH112 Ex: CH110	CH110 CH112	Fundamentals of Chemistry or Ceimic Innealtóireacht	6	1	1	2	1BP, 1EG, 1BEE, 1BSE, 1BEI	CH112 CH110
	PH104	Principles of Physics	6	2	2	2	All 1 st Eng	
Group III								
	CE111	Engineering Graphics I	6	1	1	2 (computer based) + c/a	1BP	
	CT103	Programming	9	Full Year	2	3	1BP, 1BEI, 1BEE, 1BN, 1BCT, 1IM	
Group IV								
	EE130	Fundamentals of Electrical & Electronic Engineering I	3	1	1	2 + c/a	1BP, 1BM, 1BG, 1EG, 1BCT, 1BEE, 1BSE, 1BEI	
	EE131	Fundamentals of Electrical & Electronic Engineering II	3	2	2	2	1BP, 1BEE, 1BEI	
	ME112	Fundamentals of Mechanical Engineering	3	2	2	2	1BP, 1BM, 1BG, 1EG, 1BEE, 1BSE, 1BEI	
	EE132	Electrical & Electronic Engineering Laboratory I	6	Full Year	2	Practical		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(1BP) First University Examination in Engineering (Electronic & Computer)								
Group I								
	MA140	Engineering Calculus	6	Full Year	2	3	All 1 st BE progs	
	MM120	Mathematical Methods For Engineers	6	Full Year	2	3	All 1 st BE progs	
	MP120	Engineering Mechanics	6	Full Year	2	3	All 1 st BE progs	
Group II								
Ex: CH112 Ex: CH110	CH110 CH112	Fundamentals of Chemistry or Ceimic Innealtóireacht	6	1	1	2	1BLE, 1EG, 1BEE, 1BSE, 1BEI	CH112 CH110
	PH104	Principles of Physics	6	2	2	2	All 1 st Eng	
Group III								
	CE111	Engineering Graphics I	6	1	1	2 (computer based) + c/a	1BLE	
	CT103	Programming	9	Full Year	2	3	1BLE, 1BEI, 1BEE, 1BCT, 1IM	
Group IV								
	EE130	Fundamentals of Electrical & Electronic Engineering I	3	1	1	2	1BLE, 1EG, 1BCT, 1BG, 1BM, 1BEE, 1BSE, 1BEI	
	EE131	Fundamentals of Electrical & Electronic Engineering II	3	2	2	2	1BLE, 1BEE, 1BEI	
	ME112	Fundamentals of Mechanical Engineering	3	2	2	2	1BLE, 1BM, 1BG, 1EG, 1BEE, 1BSE, 1BEI	
	EE133	Electronic & Computer Engineering Laboratory I	6	Full Year	2	Practical		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(1BM) First University Examination in Engineering (Mechanical)								
Group I								
	MA140	Engineering Calculus	6	Full Year	2	3	All 1 st BE progs	
	MM120	Mathematical Methods For Engineers	6	Full Year	2	3	All 1 st BE progs	
	MP120	Engineering Mechanics	6	Full Year	2	3	All 1 st BE progs	
Group II								
	PH104	Principles of Physics	6	2	2	2	All 1 st Eng	
Ex: CH112 Ex: CH110	CH111 CH107	Engineering and Medical Chemistry or Ceimic	9	Full Year	2	3	1BE, 1BV, 1BG	CH101 CH107
Group III								
	EE130	Fundamentals of Electrical & Electronic Engineering I	3	1	1	2	1BLE, 1EG, 1BCT, 1BG, 1BP, 1BEE, 1BSE, 1BEI	
	ME112	Fundamentals of Mechanical Engineering	3	2	2	2	1BG, 1EG, 1BLE, 1BP, 1BEE, 1BSE, 1BEI	
	ME107	Year's Work (Workshop Practice)	3	1	1	3 + c/a	1BG	
Group IV								
	ME152	Introduction to Engineering Computing	6	1	1	2 + c/a	1BG, 1EG, 1BSE	
	EE112	Engineering Computing II (C Programming I)	3	2	2	c/a	1EG	
	ME117	CADD I (A)	9	Full Year	2	c/a		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(1BG) First University Examination in Engineering (Biomedical)								
Group I								
	MA140	Engineering Calculus	6	Full Year	2	3	All 1 st BE progs	
	MM120	Mathematical Methods For Engineers	6	Full Year	2	3	All 1 st BE progs	
	MP120	Engineering Mechanics	6	Full Year	2	3	All 1 st BE progs	
Group II								
	PH104	Principles of Physics	6	2	2	2	All 1 st Eng	
Ex: CH107 Ex: CH111	CH111 CH107	Engineering & Medical Chemistry or Ceimic	9	Full Year	2	3	1BE, 1BV, 1BM	CH101 CH107
Group III								
	EE130	Fundamentals of Electrical & Electronic Engineering I	3	1	1	2	1BLE, 1EG, 1BCT, 1BP, 1BM, 1BEE, 1BSE, 1BEI	
	ME112	Fundamentals of Mechanical Engineering	3	2	2	2	1EG, 1BLE, 1BP, 1BM, 1BEE, 1BSE, 1BEI	
	ME107	Year's Work (Workshop Practice)	3	1	1	3 + c/a	1BM	
Group IV								
	ME152	Introduction to Engineering Computing	6	1	1	2 + c/a	1EG, 1BSE	
	BO106	Introduction to Biological & Cellular Processes	6	Full Year	2	3	1EG	BO101
	ME116	CADD I (B)	6	Full Year	2	c/a	1BEE	
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(1BCM) First University Examination in the B.Sc. in Project and Construction Management								
Group I								
	PH104	Principles of Physics	6	2	2	2	All 1 st Eng	
	MA160	Mathematics	9	Full Year	2	3	1BS, 1BCT	
Group II								
	CE118	Introduction to Surveying	6	Full Year	2	2	1BE, 1BV	
	CE112	Engineering Graphics II	9	Full Year	2	3	1BV, 1BE, 1EG, 1BSE	
Group III								
	CE119	Fundamentals of Project & Construction Management	6	2	2	3		
	CT109	Computer Systems and PC Applications	9	Full Year	2	2 + c/a		
	IE119	Introduction to Health & Safety for Engineers	3	Full Year	2	2		IE122
Group IV								
	MG110	Introduction to Management	3	1	1	2	1BC	
	AY102	Accounting	9	Full Year	2	3	1BC	
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

Requisite Type:	Course Code	Module Name	ECTS Credits	Taught in Semester(s)	Examined/ Submitted in Semester(s)	Duration of exam (hours)	Exam common to another group:	Bonded with:
(1BEE) First University Examination in Engineering (Sports and Exercise)								
Group I								
	MA140	Engineering Calculus	6	Full Year	2	3	All 1 st BE progs	
	MM120	Mathematical Methods For Engineers	6	Full Year	2	3	All 1 st BE progs	
	MP120	Engineering Mechanics	6	Full Year	2	3	All 1 st BE progs	
	CT103	Programming	9	Full year	2	3	1BP, 1BEI, 1BLE, 1BLE, 1BCT, 1IM	
Group II								
Ex: CH112 Ex: CH110	CH110 CH112	Fundamentals of Chemistry Or Ceimic Innealtóireacht	6	1	1	2	1BP, 1EG, 1BLE	CH112 CH110
	PH104	Principles of Physics	6	2	2	2	All 1 st Eng	
	ME116	CADD I(B)	6	Full year	2	c/a	1BG	
Group III								
	EE130	Fundamentals of Electrical & Electronic Engineering I	3	1	1	2	1BLE, 1EG, 1BCT, 1BG, 1BM, 1BP, 1BSE, 1BEI	
	EE131	Fundamentals of Electrical & Electronic Engineering II	3	2	2	2	1BLE, 1BP, 1BEI	
	ME112	Fundamentals of Mechanical Engineering	3	2	2	2	1EG, 1BLE, 1BP, 1BM, 1BEI, 1BSE	
	EE120	Sports & Exercise Engineering Laboratory 1	6	Full year	2	Practical		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								

Requisite Type:	Course Code	Module Name	ECTS Credits	Taught in Semester(s)	Examined/ Submitted in Semester(s)	Duration of exam (hours)	Exam common to another group:	Bonded with:
(1BEI) First University Examination in Engineering (Engineering Innovation - Electronic)								
Group I								
	MA140	Engineering Calculus	6	Full Year	2	3	All 1 st BE progs	
	MM120	Mathematical Methods For Engineers	6	Full Year	2	3	All 1 st BE progs	
	MP120	Engineering Mechanics	6	Full Year	2	3	All 1 st BE progs	
	CT103	Programming	9	Full year	2	3	1BP, 1BCT, 1BLE, 1BEE1,1BSE	
Group II								
Ex: CH112 Ex: CH110	CH110 CH112	Fundamentals of Chemistry <i>or</i> Ceimic Innealtóireacht	6	1	1	2	1BP, 1EG, 1BLE, 1BEE1,1BSE1	CH112 CH110
	PH104	Principles of Physics	6	2	2	2	All 1 st Eng	
	IE214	Graphical Communications	3	Full Year	2	Project		
Group III								
	EE130	Fundamentals of Electrical & Electronic Engineering I	3	1	1	2	1BLE, 1EG, 1BCT, 1BG, 1BM, 1BEE, 1BSE, 1BP	
	EE131	Fundamentals of Electrical & Electronic Engineering II	3	2	2	2	1BLE, 1BEE, 1BP	
	ME112	Fundamentals of Mechanical Engineering	3	2	2	2	1BP, 1BLE, 1BM, 1BG, 1EG, 1BEE1, 1BSE	
	IE121	Industrial Innovation	3	1	1	Project	1EG, 1BSE	
	EE114	Electronic Engineering Innovation Laboratory I	6	Full year	2	Practical		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								

Requisite Type:	Course Code	Module Name	ECTS Credits	Taught in Semester(s)	Examined/ Submitted in Semester(s)	Duration of exam (hours)	Exam common to another group:	Bonded with:
(1BSE) First University Examination in Engineering (Energy Systems)								
Group I								
	MA140	Engineering Calculus	6	Full Year	2	3	All 1 st BE progs	
	MM120	Mathematical Methods For Engineers	6	Full Year	2	3	All 1 st BE progs	
	MP120	Engineering Mechanics	6	Full Year	2	3	All 1 st BE progs	
Group II								
Ex: CH110 Ex: CH112	CH110 CH112	Fundamentals of Chemistry <i>or</i> Engineering Ceimic	6	1	1	2	1BLE, 1BP, 1EG, 1BEE, 1BEI	CH112 CH110
	PH104	Principles of Physics	6	2	2	2	All 1 st Eng	
Group III								
	EE130	Fundamentals of Electrical & Electronic Engineering I	3	1	1	2	1BLE, 1EG, 1BCT, 1BG, 1BM, 1BEE, 1BP, 1BEI	
	IE121	Industrial Innovation	3	1	1	Project	1EG, 1BEI	
	CE112	Engineering Graphics II	9	Full year	2	3 computer based	1BE, 1BV, 1EG, 1BCM	
	ME112	Fundamentals of Mechanical Engineering	3	2	2	2	1BM, 1BG, 1BLE, 1BP, 1EG, 1BEE, 1BEI	
Group IV								
	CE107	Fundamentals of Civil Engineering	3	1	1	2	1BE, 1EG	CE109
	EG100	Introduction to Energy Systems	3	2	2	c/a		
	ME152	Introduction to Engineering Computing	6	1	1	2 + c/a	1BG, 1BSE	
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								

<i>Requisite Type: Prerequisite e Co- Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(2BE) Second University Examination in Engineering (Civil)								
Group I								
	CE219	Year's Work in Civil Engineering	18	Full Year	2	c/a		
Group II								
	CE207	Engineering Materials	3	1	1	2	2BV, 2BCM	
	EOS216	Geology for Engineers 1	3	2	2	3	2BV, 2BCM	
	CE202	Principles of Building	6	2	2	3	2BV, 2BCM	
Group III								
	MA256	Engineering Calculus	3	1	1	2	2 nd Eng	
	MA254	Engineering Algebra	3	2	2	2	2 nd Eng	
	MA278	Engineering Statistics	3	2	2	2	2 nd Eng	
	MP254	Engineering Applied Mathematics I	3	1	1	2	2 nd Eng	
	MP252	Engineering Applied Mathematics II	3	2	2	2	2 nd Eng	
Group IV								
	CE217	Elementary Hydraulics	6	1	1	3	2BV	
	CE213	Strength of Materials	6	Full Year	2	3	2BM, 2BG, 2BV, 2BCM	CE215
Candidates who completed 1BE1 must present <u>one</u> from FR252, GR352, and MM255.								
For candidates who completed 1EG1, CE102 is obligatory.								
	CE102	Surveying	3	1	1	2		CE118
	FR252	French	3	Full Year	2	3		
	GR352	German	3	Full Year	2	3		
	MA260	Engineering Numerical Analysis	3	1	1	2	2 nd Eng	
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(2BV) Second University Examination in Engineering (Environmental)								
Group I								
	CE218	Year's Work in Environmental Engineering	18	Full Year	2	c/a		
Group II								
	CE207	Engineering Materials	3	1	1	2	2BE, 2BCM	
	EOS216	Geology for Engineers 1	3	2	2	3	2BE, 2BCM	
	CE202	Principles of Building	6	2	2	3	2BE, 2BCM	
Group III								
	MA256	Engineering Calculus	3	1	1	2	2 nd Eng	
	MA254	Engineering Algebra	3	2	2	2	2 nd Eng	
	MA278	Engineering Statistics	3	2	2	2	2 nd Eng	
	MP254	Engineering Applied Mathematics I	3	1	1	2	2 nd Eng	
	MP252	Engineering Applied Mathematics II	3	2	2	2	2 nd Eng	
Group IV								
	CE217	Elementary Hydraulics	6	1	1	3	2BE	
	MI430	Environmental Microbiology	3	2	2	2		
	CE213	Strength of Materials	6	Full Year	2	3	2BM, 2BG, 2BE, 2BCM	
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(2BLE) Second University Examination in Engineering (Electrical & Electronic)								
Group I								
	MA256	Engineering Calculus	3	1	1	2	2 nd Eng	
	MA254	Engineering Algebra	3	2	2	2	2 nd Eng	
	MA278	Engineering Statistics	3	2	2	2	2 nd Eng	
	MP254	Engineering Applied Mathematics I	3	1	1	2	2 nd Eng	
	MP252	Engineering Applied Mathematics II	3	2	2	2	2 nd Eng	
	MA260	Engineering Numerical Analysis	3	1	1	2	2 nd Eng	
Group II								
	EE221	Electrical Circuits and Systems I	3	1	1	2	3BEE, 2BEI, 2BP, 2BM, 2BSE	
	EE222	Electrical Circuits and Systems II	3	2	2	2	2BEI, 2BP, 2BM, 2BSE	
	EE211	Analogue Systems Design I	6	Full Year	2	3	2BP, 2BSE, 2BEE, 2BEI	
Group III								
	EE207	Digital Systems I	3	1	1	2	2BP, 3BSE, 2BEI, 3BEI	
	EE206.i	Microprocessor Systems Engineering I	3	1	1	2	2BP, 3BSE, 2BEI, 2BEE	
	EE206.ii	Microprocessor Systems Engineering II	3	2	2	2	2BP, 2BEI, 2BEE	
	CT229	Programming II	9	Full Year	2	3	2BP, 2BEE	
Group IV								
	ME208	Theory of Machines	3	1	1	2	2BM, 2BG, 2BSE, 3BEE	
	EE214	Fundamentals of Electromagnetic Theory	3	1	1	2	2BP, 2BEI, 3BEE	
	EE218	Electrical & Electronic Engineering Laboratory II	6	Full Year	2	Practical		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

Requisite Type: Prerequisite Co-Requisite Exclusion	Course Code	Module Name	ECTS Credits	Taught in Semester(s)	Examined/ Submitted in Semester(s)	Duration of exam (hours)	Exam common to another group:	Bonded with:
(2BP) Second University Examination in Engineering (Electronic & Computer)								
Group I								
	MA256	Engineering Calculus	3	1	1	2	2 nd Eng	
	MA254	Engineering Algebra	3	2	2	2	2 nd Eng	
	MA278	Engineering Statistics	3	2	2	2	2 nd Eng	
	MP254	Engineering Applied Mathematics I	3	1	1	2	2 nd Eng	
	MP252	Engineering Applied Mathematics II	3	2	2	2	2 nd Eng	
	MA260	Engineering Numerical Analysis	3	1	1	2	2 nd Eng	
Group II								
	EE221	Electrical Circuits and Systems I	3	1	1	2	3BEE, 2BEI, 2BLE, 2BM, 2BSE	
	EE222	Electrical Circuits and Systems II	3	2	2	2	2BEI, 2BLE, 2BM, 2BSE	
	EE211	Analogue Systems Design I	6	Full Year	2	3	2BLE, 2BEE, 2BEI, 2BSE	
Group III								
	EE206.i	Microprocessor Systems Engineering I	3	1	1	2	2BLE, 2BEE, 2BEI, 3BSE	
	EE207	Digital Systems I	3	1	1	2	2BLE, 3BSE, 2BEE, 2BEI, 3BEI, 3BSE	
	EE206.ii	Microprocessor Systems Engineering II	3	2	2	2	2BLE, 2BEE, 2BEI	
	CT229	Programming II	9	Full Year	2	3	2BEE, 2BLE	
Group IV								
	EE214	Fundamentals of Electromagnetic Theory	3	1	1	2	2BLE, 2BEI, 3BEE	
	CT223	Operating Systems	3	2	2	2		
	EE210	Electronic and Computer Engineering Laboratory	6	Full Year	2	Practical		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

Requisite Type: Prerequisite Co-Requisite Exclusion	Course Code	Module Name	ECTS Credits	Taught in Semester(s)	Examined/ Submitted in Semester(s)	Duration of exam (hours)	Exam common to another group:	Bonded with:
(2BM) Second University Examination in Engineering (Mechanical)								
Group I								
	MA256	Engineering Calculus	3	1	1	2	2 nd Eng	
	MA254	Engineering Algebra	3	2	2	2	2 nd Eng	
	MA278	Engineering Statistics	3	2	2	2	2 nd Eng	
	MP254	Engineering Applied Mathematics I	3	1	1	2	2 nd Eng	
	MP252	Engineering Applied Mathematics II	3	2	2	2	2 nd Eng	
Group II								
	ME208	Theory of Machines	3	1	1	2	2BLE, 2BG, 2BSE, 3BEE	
	ME207	Introduction to Fluid Mechanics	3	2	2	2	2BG, 2BSE	
	CE213	Strength of Materials	6	Full Year	2	3	2BG, 2BV, 2BE, 2BCM	CE215
Group III								
	EE221	Electrical Circuits and Systems I	3	1	1	2	3BEE, 2BEI, 2BP, 2BLE, 2BSE	
	EE222	Electrical Circuits and Systems II	3	2	2	2	2BEI, 2BP, 2BLE, 2BSE	
	ME215	Instrumentation	6	Full Year	2	3		
	IE209	Fundamentals of Operations Engineering	6	Full Year	2	3		
Group IV								
	ME211	Year's Work (Engineering Computing)	3	1	1	c/a	2BG	
	ME213	Year's Work (CADD II)	6	Full year	2	c/a	2BG	
	ME214	Year's Work (Workshop Practice)	3	1	1	3 + c/a	2BG	
	EE205	Year's Work (Electronic Engineering)	3	Full Year	2	c/a	2BG	
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(2BG) Second University Examination in Engineering (Biomedical)								
Group I								
	MA256	Engineering Calculus	3	1	1	2	2 nd Eng	
	MA254	Engineering Algebra	3	2	2	2	2 nd Eng	
	MA278	Engineering Statistics	3	2	2	2	2 nd Eng	
	MP254	Engineering Applied Mathematics I	3	1	1	2	2 nd Eng	
	MP252	Engineering Applied Mathematics II	3	2	2	2	2 nd Eng	
Group II								
	ME208	Theory of Machines	3	1	1	2	2BLE, 2BM, 2BSE, 3BEE	
	ME207	Introduction to Fluid Mechanics	3	2	2	2	2BM, 2BSE	
	CE213	Strength of Materials	6	Full Year	2	3	2BM, 2BV, 2BE, 2BCM	
Group III								
	AN230	Human Body Structure	6	1	1	2	2BEE	
	EE212	Biomedical Electronics and Instrumentation	6	Full Year	2	3		
	ME218	Introduction to Biomedical Engineering	6	Full Year	2	2 + c/a		
Group IV								
	ME211	Year's Work (Engineering Computing)	3	1	1	c/a	2BM	
	ME213	Year's Work (CADD II)	6	Full year	2	c/a	2BM	
	ME214	Year's Work (Workshop Practice)	3	1	1	3 + c/a	2BM	
	EE213	Biomedical Electronic Lab	3	Full Year	2	c/a	2BM	
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(2BCM) Second University Examination in Project and Construction Management								
Group I								
	CE216	Database Applications & Computer Programming	3	2	2	2		
	MA278	Engineering Statistics	3	2	2	2	2 nd Eng	
Group II								
	CE213	Strength of Materials	6	Full year	2	3	2BM, 2BG, 2BV, 2BE	
	CE202	Principles of Building	6	2	2	2	2BE, 2BV	
	CE207	Engineering Materials	3	1	1	2	2BE, 2BV	
Group III								
	LW160	Business Law	6	Full year	2	3		
	AY207	Management Accountancy 1	3	1	1	2.5	3IF, 4BI	
Group IV								
	IE221	Health and Safety Practice	9	Full year	2	3	BSc	
	IE209	Fundamentals of Operations Engineering	6	Full year	2	3	2BCT, 4IF, 2BM	
	IE225	Project Planning and Organisation	3	1	1	2		
Group V								
	CE209	Years Work in Project and Construction Management	12	Full year	2	c/a		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

Requisite Type:	Course Code	Module Name	ECTS Credits	Taught in Semester(s)	Examined/ Submitted in Semester(s)	Duration of exam (hours)	Exam common to another group:	Bonded with:
(2BEE) Second University Examination in Engineering (Sports & Exercise)								
Group I								
	MA256	Engineering Calculus	3	1	1	2	2 nd Eng	
	MA254	Engineering Algebra	3	2	2	2	2 nd Eng	
	MA278	Engineering Statistics	3	2	2	2	2 nd Eng	
	MP254	Engineering Applied Mathematics I	3	1	1	2	2 nd Eng	
	MP252	Engineering Applied Mathematics II	3	2	2	2	2 nd Eng	
	CT229	Programming II	9	Full year	2	3	2BP, 2BLE	
Group II								
	EE206.i	Microprocessor Systems Engineering I	3	1	1	2	2BLE, 2BP, 3BSE, 2BEI	
	EE206.ii	Microprocessor Systems Engineering II	3	2	2	2	2BLE, 2BP, 2BEI	
	EE211	Analogue Systems Design I	6	Full Year	2	3	2BLE, 2BP, 2BEI, 2BSE	
	EE207	Digital Systems I	3	1	1	2	2BLE, 2BP, 2BEI, 3BSE, 3BEI	
Group III								
	AN230	Human Body Structure	6	1	1	2	2BG	
	SI204	Physiology for Sports & Exercise Engineering I	6	1	1	2		
	SI205	Physiology for Sports & Exercise Engineering II	6	2	2	2		
	EE215	Sports & Exercise Engineering Laboratory II	3	Full year	2	Practical		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								

Requisite Type: Prerequisite e Co- Requisite Exclusion	Course Code	Module Name	ECTS Credits	Taught in Semester(s)	Examined/ Submitted in Semester(s)	Duration of exam (hours)	Exam common to another group:	Bonded with:
(2BEI) Second University Examination in Engineering (Engineering Innovation - Electronic)								
Group I								
	MA256	Engineering Calculus	3	1	1	2	2 nd Eng	
	MA254	Engineering Algebra	3	2	2	2	2 nd Eng	
	MA278	Engineering Statistics	3	2	2	2	2 nd Eng	
	MP254	Engineering Applied Mathematics I	3	1	1	2	2 nd Eng	
	MP252	Engineering Applied Mathematics II	3	2	2	2	2 nd Eng	
	CT229	Programming II	9	Full Year	2	3	2EE, 2BLE	
Group II								
	EE206.i	Microprocessor Systems Engineering I	3	1	1	2	2BLE, 2BP, 2BEE, 3BSE	
	EE206.ii	Microprocessor Systems Eng II	3	2	2	2	2BLE, 2BP, 2BEE	
	EE207	Digital Systems I	3	1	1	2	2BLE, 2BP, 3BSE, 3BEI, 2BEE	
	EE214	Fundamentals of Electromagnetic Theory	3	1	1	2	2BP, 2BLE, 2BEE	
Group III								
	EE221	Electrical Circuits and Systems I	3	1	1	2	3BEE, 2BEI, 2BP, 2BM, 2BLE	
	EE222	Electrical Circuits and Systems II	3	2	2	2	2BEI, 2BP, 2BM, 2BLE	
	EE211	Analogue Systems Design I	6	Full year	2	3	2BLE, 2BP	
Group IV								
	EE216	Electronic Engineering Innovation Laboratory II	6	Full Year	2	Practical		
	MG524	Management I	3	1	1	2	MG524	
	MG872	Communications in Organisations	3	2	2	2	MG872	
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

Requisite Type:	Course Code	Module Name	ECTS Credits	Taught in Semester(s)	Examined/ Submitted in Semester(s)	Duration of exam (hours)	Exam common to another group:	Bonded with:
(2BSE) Second University Examination in Engineering (Energy Systems)								
Group I								
	MA256	Engineering Calculus	3	1	1	2	2 nd Eng	
	MA254	Engineering Algebra	3	2	2	2	2 nd Eng	
	MA278	Engineering Statistics	3	2	2	2	2 nd Eng	
	MP254	Engineering Applied Mathematics I	3	1	1	2	2 nd Eng	
	MP252	Engineering Applied Mathematics II	3	2	2	2	2 nd Eng	
	MA260	Engineering Numerical Analysis	3	1	1	2	2 nd Eng	
Group II								
	CE213	Strength of Materials	6	Full year	2	3	2BM, 2BG, 2BV, 2BCM, 2BE	
	ME208	Theory of Machines	3	1	1	2	2BM, 2BG, 2BLE, 3BEE	
	ME207	Introduction to Fluid Mechanics	3	2	2	2	2BM, 2BG	
Group III								
	EE221	Electrical Circuits and Systems I	3	1	1	2	3BEE, 2BEI, 2BP, 2BM, 2BLE	
	EE222	Electrical Circuits and Systems II	3	2	2	2	2BEI, 2BP, 2BM, 2BLE	
	EE211	Analogue Systems Design I	6	Full year	2	3	2BP, 2EE	
	CE202	Principles of Building	6	2	2	2	2BV, 2BE, 2BCM	
Group IV								
	EG217	Year's Work Energy Systems Engineering	6	Full year	2	c/a		
	ME213	Years Work (CADD) Computer Aided Design and Drafting	6	Full year	2	c/a	2BG, 2BM	
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(3BE) Third University Examination in Engineering (Civil)								
Group I								
	CE306	Year's Work in Civil Engineering	18	Full Year	2	c/a		
Group II								
	CE307	Environmental Engineering	6	1	1	3	3BV	
	CE330	Engineering Hydraulics I	6	1	1	3	3BV	
Group III								
	CE318	Construction Operations I	3	1	1	2	3BV	
	CE312	Elementary Soil Mechanics	3	2	Spring	2	3BV	
	CE313	Highway & Traffic Engineering I	3	2	Spring	2	3BV	
	CE319	Construction Operations II	3	2	Spring	2	4BV summer exam	
Group IV								
	CE320	Solids and Structures I	6	1	1	3	3BV	
	CE322	Design of Concrete Structures	3	1	1	2	3BV	
	CE321	Solids and Structures II	6	2	Spring	3		
	CE323	Design of Steel Structures	3	2	Spring	2	3BV	
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment =c/a</i>								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(3BV) Third University Examination in Engineering (Environmental)								
Group I								
	CE317	Year's Work in Environmental Engineering	18	Full Year	2	c/a		
Group II								
	CE330	Engineering Hydraulics I	6	1	1	3	3BE	
	CE307	Environmental Engineering	6	1	1	3	3BE	
	CH306	Analytical and Environmental Chemistry	3	2	Spring	2		CH205
	MI412	Advanced Environmental Microbiology	3	2	Spring	3		
Group III								
	CE318	Construction Operations I	3	1	1	2	3BE	
	LW361	Planning and Law I	3	1	1	2	4BV	
	CE312	Elementary Soil Mechanics	3	2	Spring	2	3BE	
	CE313	Highway & Traffic Engineering I	3	2	Spring	2	3BE	
Group IV								
	CE320	Solids and Structures I	6	1	1	3	3BE	
	CE322	Design of Concrete Structures	3	1	1	2	3BE	
	CE323	Design of Steel Structures	3	2	Spring	2	3BE	
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(3BN) Third University Examination in Engineering (Electronic)								
Group I								
	MG331	Business Management and Finance	6	Full Year	Spring	3	3BP	
	EE327	Professional Studies	3	Full Year	Spring	C/A	3BP	
Group II								
	EE302.I	Electrical Power and Machines I	3	1	1	2	3BM, 3BEE	
	EE302.II	Electrical Power and Machines II	3	2	Spring	2	3BM	
EE221	EE318	Linear Control Systems I	3	1	1	2	3BSE, 3BEI, 3BM, 4BEE	
EE318	EE329	Linear Control Systems II	3	2	Spring	2	3BSE	EE310
Group III								
	EE328	Engineering Electromagnetics	3	1	1	2	3BP, 3BEI, 4BEE	
	EE316	Digital Systems II	3	1	1	2	3BP, 4BEE	
	EE321	Analogue Systems Design II	3	1	1	2	3BP	
Group IV								
	EE308	Signals and Communications	6	Full Year	1 + Spring	2 + 2	3BP, 3BSE, 4BEE	P1: EE436
	EE314	Communication Systems Engineering	6	Full Year	Spring	3	3BP	
Group V								
	EE309	Electronic Engineering Laboratory	12	Full Year	Spring	Practical		
	EE326	Electronic Engineering Project	6	Full Year	Spring	Project		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(3BP) Third University Examination in Engineering (Electronic & Computer)								
Group I								
	MG331	Business Management and Finance	6	Full Year	Spring	3	3BN	
	EE327	Professional Studies	3	Full Year	Spring	3	3BN, 3BEI, 3BEE, 3BSE	
Group II								
	EE323	Infrastructure for Embedded Systems Programming	3	1	1	2		
	EE324	Embedded Systems Application Programming	3	2	Spring	2		
	CT326	Programming III	9	Full Year	Spring	3	3IF, 3BA, 3IS	
Group III								
	EE328	Engineering Electromagnetics	3	1	1	2	3BN, 4BEE, 3BEI	
	EE316	Digital Systems II	3	1	1	2	3BN, 4BEE	
	EE321	Analogue Systems Design II	3	1	1	2	3BN	
Group IV								
	EE308	Signals and Communications	6	Full Year	1 + Spring	2 + 2	3BN, 4BEE, 3BSE	
	EE314	Communication Systems Engineering	6	Full Year	Spring	3	3BP	
Group V								
	EE319	Electronic and Computer Engineering Laboratory	9	Full Year	Spring	Practical		
CT329 EX	EE325	Electronic and Computer Engineering Project	6	Full Year	Spring	Project		
EE325 EX	CT329	or Electronic and Computer Engineering Project	6	Full Year	Spring	Project		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(3BM) Third University Examination in Engineering (Mechanical)								
Group I								
	ME304	Mechanical Analysis & Design	6	Full year	Spring	3	3BG, 3BSE	
	ME314	Design Office	6	Full Year	Spring	c/a	3BG	
	ME319	Year's Work (Communications)	3	Full Year	2	c/a	3BG	
Group II								
	ME322	Thermodynamics and Heat Transfer	6	2	Spring	3	3BG, 3BSE	
	EE318	Linear Control Systems I	3	1	1	2	3BN, 3BSE, 3BEI, 4BEE	
	ME347	Mechanical Vibrations	3	2	Spring	2	3BSE	
	ME301	Fluid Dynamics	6	1	1	3	3BG, 3BSE	
Group III								
	ME317	Polymer Technologies Laboratory	3	1	1	c/a	3BG	
	ME323	Year's Work (Engineer in Society, Service Learning and Ethics)	6	Full Year	Spring	c/a	3BG	
	ME326	Metals & Metals Processing	3	Full Year	Spring	2	3BG, 3BSE	
Group IV								
	ME312	Automated Systems	3	Full Year	Spring	2	3BG	
	EE302.I	Electrical Power and Machines I	3	1	1	2	3BN, 3BEE	
	EE302.II	Electrical Power and Machines II	3	2	Spring	2	3BN	
	ME313	Years Work (Engineering Computing)	6	Full Year	Spring	c/a		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(3BG) Third University Examination in Engineering (Biomedical)								
Group I								
	ME304	Mechanical Analysis & Design	6	Full year	Spring	3	3BM, 3BSE	
	ME314	Design Office	6	Full Year	Spring	c/a	3BM	
	ME319	Year's Work (Communications)	3	Full Year	2	c/a	3BM	
Group II								
	ME322	Thermodynamics and Heat Transfer	6	2	Spring	3	3BM, 3BSE	
	ME417	Biomedical Production and Environmental Services	6	1	1	3	4BM, 4BG	
	ME301	Fluid Dynamics	6	1	1	3	3BM, 3BSE	
Group III								
	ME317	Polymer Technologies Laboratory	3	1	1	c/a	3BM	
	ME323	Year's Work (Engineer in Society, Service Learning and Ethics)	6	Full Year	Spring	c/a	3BM	
	ME326	Metals & Metals Processing	3	Full Year	Spring	2	3BM, 3BSE	
Group IV								
	SI317	Human Body Function	6	1	1	3		
	ME312	Automated Systems	3	Full Year	Spring	2		
	ME321	Biomaterials	6	Full Year	Spring	c/a		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

<i>Requisite Type:</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(3BG2) Third University Examination in Engineering (Biomedical) – Purdue Exchange Programme								
Group I								
	ME344	Machine Design I (Purdue Code: ME35200)	8	Full year	Summer	c/a		
	ME343	Machine Design II (Purdue Code : ME37200)	8	Full year	Summer	c/a		
	ME331	Biomedical Engineering Professional Seminar (Purdue Code: BME 39000)	3	Full year	Summer	c/a		
	ME333	Global Aspects of Engineering (Purdue Code: ME29000)	3	Full year	Summer	c/a		
Group II								
	ME339	Thermodynamics I (Purdue Code : ME20000)	6	Full year	Summer	c/a		
	ME338	Thermodynamics II (Purdue Code: ME30000)	6	Full year	Summer	c/a		
	ME337	Biotransport Laboratory (Purdue Code: BME30600)	3	Full year	Summer	c/a		
	ME336	Biotransport/Transport Phenomena (Purdue Code: BME30400)	6	Full year	Summer	c/a		
	ME334	EPICS – Engineering Projects in Community Service (Purdue Code: EPICS302)	4	Full year	Summer	c/a		
Group III								
	ME341	Principles and Practices of Manufacturing processes (Purdue code: BME 36300)	6	Full year	Summer	c/a		
	ME335	Engineering Design using Modern Materials (Purdue Code: ME47300)	6	Full year	Summer	c/a		
	ME324	Biofluid and Biosolid Mechanics (Purdue Code: BME44200)	6	Full year	Summer	c/a		
	ME330	Biomechanics (Purdue Code: ME54000)	6	Full year	Summer	c/a		
	ME340	System Modelling and Analysis (Purdue Code: ME37500)	6	Full year	Summer	c/a		
Group IV								
	ME332	Biomolecules: Structure, function and engineering applications (Purdue Code: BME20100)	6	Full year	Summer	c/a		
	ME342	Medical Physiology and Mathematical Modeling (Purdue code: BME 25600)	6	Full year	Summer	c/a		
	ME329	Biomaterials (Purdue code: BME 59700)	6	Full year	Summer	c/a		
	ME340	System Modelling and Analysis (Purdue Code: ME37500)	6	Full year	Summer	c/a		
	ME345	Implantable Materials and Biological Response (Purdue code: BME38100)	6	Full year	Summer	c/a		
	ME329	Biomaterials (Purdue Code: BME58300)	6	Full year	Summer	c/a		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(3BCM) Third University Examination in Project and Construction Management								
Group I								
	IE321	Operations Research I	3	1	1	2		
	EC209	Managerial Economics	6	1	1	3	4BI	
	MG328	Management of Human Resources	3	1	1	2	BC	
Group II								
	CE318	Construction Operations I	3	1	1	2	3BE, 3BV	
	CE319	Construction Operations II	3	2	Spring	2	3BE, 3BV	
	CE327	Civil Engineering Infrastructure Design I	9	2	Spring	2 + 2		
	CE312	Soil Mechanics	3	2	Spring	2	3BE, 3BV	
Group III								
	LW214	Health & Safety Law	6	1	1	2		
	LW361	Planning & Law I	3	1	1	2	3BV	
	LW423	Advanced Business Law	3	1	1	2		
Group IV								
	CE328	Years Work in Project/Const. Management Incl.	18	Full year	2	c/a		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(3BEE) Third University Examination in Engineering (Sports & Exercise)								
Group I								
	EE214	Fundamentals of Electromagnetic Theory	3	1	1	2	2BLE, 2BP, 2BEI, 2BEE	
	EE321	Analogue Systems Design II	3	1	1	2	3BN, 3BP	
	EE221	Electrical Circuits & Systems I	3	1	1	2	2BLE, 2BP, 2BM, 2BEI, 2BSE	
	EE327	Professional Studies	3	Full Year	Spring	c/a	3BN, 3BP, 3BEI, 3BSE	
	CE333	Mechanics of Materials	6	Full Year	Spring	3		
Group II								
	ME208	Theory of Machines	3	1	1	2	2BLE, 2BM, 2BG, 2BSE	
	EE302.I	Electrical Power & Machines I	3	1	1	2	3BM, 3BN, 3BSE	
	EE330	Sports & Exercise Engineering Mini Project	6	1	1	c/a		
	EE332	Sports & Exercise Engineering Laboratory III	6	Full year	Spring	practical		
Group III								
	SI320	Exercise Physiology for Engineers	6	2	Spring	2		
	EE334	Kinesiology of Human Movement	6	2	Spring	2		
	EE335	Sports & Exercise Psychology	6	2	Spring	2		
	EE336	Exercise Prescription & Programming	6	2	Spring	2		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(3BSE) Third University Examination in Engineering (Energy Systems)								
Group I								
	CE329	Sustainable Energy	3	2	Spring	2		
	CE331	Offshore Energy I	3	1	1	2	4BE, 4BV	CE439
	EE327	Professional Studies	3	Full Year	Spring	c/a	3BP, 3BN	
	EE302.i	Electrical Power and Machines I	3	1	1	2	3BEE, 3BN	
	ME322	Thermodynamics and Heat Transfer	6	2	Spring	3	3BM, 3BG	
Group II								
Pre: E221	EE318	Linear Control Systems I	3	1	1	2	3BN, 3BM, 3BEI, 4BEE	EE310
	CT339	Object Oriented Programming	6	1	1	2	3BA1	CT335
	CT345	Introduction to Modelling	3	2	Spring	2	2BCT1	CT248
Group III								
	EG301	Energy Systems Engineering Laboratory	6	Full Year	2	c/a		
	EG302	Energy Systems Engineering Project	6	Full Year	2	c/a		
Group IV - Students must select Elective A OR B OR C								
Elective A - Electrical								
	EE302.ii	Electrical Power and Machines II	3	2	Spring	2	3BN	
Pre: EE318	EE329	Linear Control Systems II	3	2	Spring	2	3BN, 4BEE	EE310
	EE308	Signals and Communications	6	Full Year	1 + Spring	2 + 2	3BP, 3BN	
	EE206.i	Microprocessor Systems Engineering I	3	1	1	2	2BP, 2EE, 2BEI, 2BLE	
	EE207	Digital Systems I	3	1	1	2	2BP, 2BLE, 2BEE	
Elective B - Mechanical								
	ME304	Mechanical Analysis and Design	6	Full Year	Spring	3	3BG, 3BM	
	ME301	Fluid Dynamics	6	1	1	3	3BG, 3BM	
	ME347	Mechanical Vibrations	3	2	Spring	2	3BM	
	ME326	Metals and Metals Processing	3	Full Year	Spring	2	3BG, 3BM	
Elective C - Civil								
	CE318	Construction Operations I	3	1	1	2	3BV, 3BE, 3BCM	
	CE312	Elementary Soil Mechanics	3	2	Spring	2	3BV, 3BE, 3BCM	
	CE313	Highway and Traffic Engineering I	3	2	Spring	2	3BV, 3BE	

	CE332	Structures I	3	1	1	2		CE320
	CE322	Design of Concrete Structures	3	1	1	2	3BE, 3BV	CE445
	CE323	Design of Steel Structures	3	2	Spring	2	3BE, 3BV	CE327
<i>TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS</i>								

Requisite Type: Prerequisite Co-Requisite Exclusion	Course Code	Subject Name	ECTS Credits	Taught in Semester(s)	Examined/ Submitted in Semester(s)	Duration of exam (hours)	Exam common to another group:	Bonded with:
(3BEI) Third University Examination in Engineering (Engineering Innovations Electronic)								
Group I								
	IE446	Project Management	3	1	1	2	1APE	
	EE324	Embedded Systems Application Programming	3	2	2	2	3BP	
	MK871	Marketing I	3	1	1	2	1DB	
	EE327	Professional Studies	3	Full Year	Spring	3	3BN, 3BP, 3BEE, 3BSE	
Group II								
	EE323	Infrastructure for Embedded Systems Programming	3	1	1	2	3BP, 4BEE	
EE221	EE318	Linear Control Systems I	3	1	1	2	3BN, 3BSE, 3BM, 4BEE	
EE329	EE329	Linear Control Systems II	3	2	Spring	2	3BN, 4BEE, 3BSE	
Group III								
	EE328	Engineering Electromagnetics	3	1	1	2	3BN, 3BP	
	EE207	Digital Systems I	3	1	1	2	2BLE, 2BP, 3BSE, 2BEI, 3BEE	
	EE316	Digital Systems II	3	1	1	2	3BP, 3BN, 4BEE	
	EE321	Analogue Systems Design II	3	1	1	2	3BN, 3BP	
Group IV								
	EE308	Signals and Communications	6	Full Year	1 + Spring	2 + 2	3BN, 3BP, 4BEE, 3BSE	
	EE314	Communication Systems Engineering	6	Full Year	Spring	3	3BP, 3BN	
Group V								
	EE337	Engineering Innovation Electronic Laboratory III	9	Full Year	Spring	Practical		
	EE338	Engineering Innovation Electronic Project	6	Full Year	Spring	Project		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a								

Requisite Type:	Course Code	Module Name	ECTS Credits	Taught in Semester(s)	Examined/ Submitted in Semester(s)	Duration of exam (hours)	Exam common to another group:	Bonded with:
(4BE) B.E. Degree Examination (Civil)								
Group I								
	CE411	Year's Work in Civil Engineering	12	Full Year	2	c/a		
Group II								
	CE412	Engineering Project and Report	6	Full Year	2	Project		
Group III								
	CE451	Engineering Hydrology I	3	1	1	2	4BV	
	CE405	Design of Structures	6	1	1	2 + 2		CE427
	CE421	Structural Analysis I	3	1	1	2		
	CE439	Coastal Engineering	3	1	1	2	4BV	
	CE414	Geotechnical Engineering	6	2	2	3	4BV	
Group IV								
Students must present 21 credits from the following list. Not all modules will be offered in a given year. Student numbers on particular modules may be limited.								
	CE454	Sustainable Energy and Energy in Buildings	6	2	2	3	4BV	
	EOS410	Geology for Engineers II	3	1	1	2	4BV	
	CE418	Highway & Traffic Engineering II	3	1	1	2	4BV	
	CE419	Project Management	6	1	1	3	4BV, 4BM	
	CE441	Offshore Engineering	3	2	2	2	4BV	
	CE428	Advanced Concrete Design	3	2	2	2	4BV	
	CE429	Inelastic Structural Analysis	3	2	2	2		
	CE442	Design of Water, Wastewater and Waste Treatment Systems	6	1	1	3	4BV	
	CE434	Bituminous Materials	3	2	2	2	4BV	
	CE413	Computational Methods in Civil Engineering	6	2	2	2 (+1 hr practical)	4BV	
	CE440	Structural Analysis II	3	2	2	2		
CE330 PR	CE452	Engineering Hydraulics II	3	2	2	2	4BV	
EH406/ CE451 PR	CE453	Engineering Hydrology II	3	2	2	2	4BV	
	MG330	Business Management & Finance	6	Full Year	2	3	4BM, 4BG, 4BV, 4BI	
	MP452	Applied Mathematics	6	Full Year	2	3	4BV	
	CE448	The Built Environment (Architecture & Planning)	3	1	1	2	4BV, 4BCM	
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a								

At the discretion of the Examiners, Oral and/or Practical Examinations may be held in each of the modules of the Examination. No candidate shall pass the B.E. Degree Examination

(Civil Engineering) who fails to satisfy the Examiners in the Year's Work in Civil Engineering; no candidate shall be awarded honours whose Engineering Report or Project fails to satisfy the Examiners.

Requisite Type:	Course Code	Module Name	ECTS Credits	Taught in Semester(s)	Examined/ Submitted in Semester(s)	Duration of exam (hours)	Exam common to another group:	Bonded with:
(4BV) B.E. Degree Examination (Environmental)								
Group I								
	CE435	Year's Work in Environmental Engineering	12	Full Year	2	c/a		
Group II								
	CE412	Engineering Project and Report	6	Full Year	2	Project		
Group III								
	CE454	Sustainable Energy and Energy in Buildings	6	2	2	3	4BE	
	CE414	Geotechnical Engineering	6	2	2	3	4BE	
	CE442	Design of Water, Wastewater and Waste Treatment Systems	6	1	1	3		
Group IV								
	CE439	Coastal Engineering	3	1	1	2	4BE	
	CE427	Design of Concrete Structures	3	1	1	2	4BE	CE405
	CE432	Airborne Pollution	3	1	1	1.5	4BE	
	CE451	Engineering Hydrology I	3	1	1	2	4BE	
Group V								
Students must present 12 credits from the following list. Not all modules will be offered in a given year. Student numbers on particular modules may be limited.								
	CE418	Highway & Traffic Engineering II	3	1	1	2	4BE	
	CE419	Project Management	6	1	1	3	4BE, 4BM	
	CH304	Analytical and Industrial Chemistry	3	1	1	2		
	EOS410	Geology for Engineers II	3	1	1	2	4BE	
	CE319.II	Construction Operations II	3	2	2	2	3BE Spring exam	
	CE413	Computational Methods in Civil Engineering	6	2	2	3	4BE	
	CE441	Offshore Engineering	3	2	2	2	4BE	
	CE428	Advanced Concrete Design	3	2	2	2	4BE	
	CE434	Bituminous Materials	3	2	2	2	4BE	
CE330 PR	CE452	Engineering Hydraulics II	3	2	2	2	4BE	
EH406/CE451 PR	CE453	Engineering Hydrology II	3	2	2	2	4BE	
	MG330	Business Management & Finance	6	Full Year	2	3	4BM, 4BG, 4BE, 4BI	
	MP452	Applied Mathematics	6	Full Year	2	3	4BE	
	CE448	The Built Environment (Architecture & Planning)	3	1	1	2	4BE, 4BCM	
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

No candidate shall pass the B.E. Degree Examination (Environmental Engineering) who fails to satisfy the Examiners in the Year's Work in Environmental Engineering; no candidate shall be awarded honours whose Engineering Report or Project fails to satisfy the Examiners.

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(4BN) B.E. Degree Examination (Electronic)								
Group I								
	EE315	Semiconductor Technology	3	1	1	2	4BP	
	EE432	Advanced RF Engineering Electromagnetics	3	2	2	2	4BP	
	EE409	Digital Signal Processing	6	Full Year	1 + 2	2 + 2	4BP	
	EE423	Telecommunications Software Applications	6	Full Year	1 + 2	2 + 2	4BP	
Group II								
Pre: EE302.1, EE302.2	CT407 Or EE438	Applied Software Engineering	6	Full Year	2	3	4IF, 4BP	CT406
		Power Systems	6	Full Year	2	3	4BM	
	EE427	Digital Systems Design and VHDL	6	Full Year	1 + 2	2 + 2	4BP	
Group III								
	CT440	Systems Engineering	6	Full Year	2	Project		CT438
	EE411	Power Electronics	6	Full Year	1 + 2	2 + 2		
Group IV								
	EE413	Electronic Engineering Project	12	Full Year	2	Project		
Group V								
	EE412	Electronic Engineering Laboratory	6	Full Year	2	Practical		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(4BP) B.E. Degree Examination (Electronic & Computer)								
Group I								
	EE315	Semiconductor Technology	3	1	1	2	4BN	
	EE432	Advanced RF Engineering Electromagnetics	3	2	2	2	4BN	
	EE409	Digital Signal Processing	6	Full Year	1 + 2	2 + 2	4BN	
	EE423	Telecommunications Software Applications	6	Full Year	1 + 2	2 + 2	4BN	
Group II								
	CT404	Graphics and Image Processing	3	1	1	2	4IF	
	EE427	Digital Systems Design & VHDL	6	Full Year	1 + 2	2 + 2	4BN	
Group III								
	CT414	Distributed Systems and Co-Operative Computing	3	1	1	2.5		
	CT470	Object Oriented Programming	3	2	2	2		CT862
	CT407	Applied Software Engineering	6	Full Year	2	3	4BN	CT406
Group IV								
CT434 EX	EE426	Electronic and Computer Engineering Project	12	Full Year	2	Project		
EE426 EX	CT434	Electronic and Computer Engineering Project	12	Full Year	2	Project		
Group V								
	CT429	IT Laboratory	3	Full Year	2	Practical		
	EE430	Electronic and Computer Engineering Laboratory	6	Full Year	2	Practical		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

Requisite Type: Prerequisite Co-Requisite Exclusion	Course Code	Module Name	ECTS Credits	Taught in Semester(s)	Examined in which Semester	Duration of exam (hours)	Exam common to another group:	Bonded with:
(4BI) B.E. Degree Examination (Industrial Engineering & Information Systems)								
Group I								
	IE436	Engineering Report	3	1	1	Project		
	IE405	Project	12	Full Year	2	Project		
Group II								
	IE450	Lean Systems	3	1	1	2 + c/a		
	IE424	Operations Strategy	3	2	2	3	4IF	IE434
	MG330	Business Management & Finance	6	Full Year	2	3	4BM, 4BG, 4BE, 4BV	
	CT440	Systems Engineering	6	Full Year	2	Project		
Group III								
	IE446	Project Management	3	1	1	2	4HF1	
	IE317	Business Logistics	3	2	2	2	Commerce	IE329
	IE433	Quality Engineering	3	2	2	2		
	IE417	Ergonomic Design of the Workplace	6	Full Year	Spring	3	3HF1	
	IE444	Human & Systems Reliability	6	Full Year	1 + 2	2 + 2	4HF1	
Candidates are required to take one 6 credit module from the following electives:								
	SP434	Industrial Sociology/Sociology Seminar*	6	1	1	3+c/a		
	EC209	Managerial Economics	6	1	1	3	Commerce	
AY208 CR	AY207	Management Accountancy 1	3	1	1	2.5	Commerce	AY201
AY207 CR	AY208	Business Finance 1	3	2	2	2.5		
MK203 CR	MK204	Marketing Principles	3	1	1	2	Commerce	
MK204 CR	MK203	Buyer Behaviour	3	2	2	2		
	FR252	French	6	Full Year	2	3	4BG, 4BM	
	GR352	German	6	Full Year	2	3		
	IE437	Advanced Engineering Design	6	Full Year	2	Project		
	IE342	Safety Systems Design	6	Full Year	1 + c/a	2	3HF1	
	PS411	Industrial Psychology	6	Full Year	2	3		
	IE451	Technology Innovation and Entrepreneurship	6	Full Year	2	Project	AP1, AP2	
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a								
*SP434 - 50% of the marks for this module may be allocated to Continuous Assessment								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(4BM) B.E. Degree Examination (Mechanical)								
Group I								
	ME501	Finite Element Methods in Engineering Analysis	9	1	1	3	4BG	
	ME424	Energy Conversion	6	1	1	3	4BG	
	ME420	PEP Report and Project	15	Full Year	2	Project	4BG	
Group II								
	IE451	Technology Innovation & Entrepreneurship	6	Full Year	2	c/a	1APE, 4BG, 4BCM	
	ME402	Advanced Mechanical Analysis and Design	6	2	2	3	4BG	
	ME423	Polymers and Polymer Composites	6	Full Year	2	3	4BG	
Group III								
Elective Modules: Candidates must also present TWO of the following:								
	CE419	Project Management	6	1	1	3	4BE, 4BG, 4BV	
	ME417	Biomedical Production & Environmental Services	6	1	1	3	3BG, 4BG	
	ME426	Turbomachines and Advanced Fluid Mechanics	6	2	2	3		
Pre: EE302.1 EE302.2	EE438	Power Systems	6	Full Year	2	3	4BN	
	MG330	Business Management & Finance	6	Full Year	2	3	4BG, 4BE, 4BV, 4BI	
	FR252 Or GR352	French Or German	6 6	Full Year Full Year	2 2	3 3	4BG 4BG	
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(4BG) B.E. Degree Examination (Biomedical)								
Group I								
	ME501	Finite Element Methods in Engineering Analysis	9	1	1	3	4BM	
	ME422	Tissue Engineering	6	2	2	c/a	1MV	
	ME420	PEP Report and Project	15	Full Year	2	Project	4BM	
Group II								
	ME416	Biomechanics	6	1	1	3		
	PA405	Elements of Pathology	3	1	1	2		
	SU405	Surgical Practice	3	2	2	c/a		
	ME421	Medical Implant & Device Design	6	2	2	3		
	ME423	Polymers and Polymer Composites	6	Full Year	2	3	4BM	
Group III								
Elective Modules: Candidates must also present ONE of the following:								
	IE451	Technology Innovation & Entrepreneurship	6	Full Year	2	c/a	1APE, 4BM, 4BCM	
	ME424	Energy Conversion	6	1	1	3	4BM	
	CE419	Project Management	6	1	1	3	4BE, 4BM, 4BV	
	MG330	Business Management & Finance	6	Full Year	2	3	4BM, 4BE, 4BV, 4BI	
	FR252 Or GR352	French Or German	6 6	Full Year Full Year	2 2	3 3	4BG 4BG	
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(4BCM) Fourth University Examination in Project and Construction Management								
Group I								
	CE447	Final Year Project	12	Full Year	2	c/a		
Group II								
	CE449	Years Work in Project and Construction Management	12	Full Year	2	c/a		
Group III								
	MG206	Management of Organisational Change	3	2	2	2		
	IE332	Quality Management	3	2	2	2		
	IE451	Technology Innovation & Entrepreneurship	6	Full Year	2	c/a	4BG, 4BM, 1APE	
Group IV								
	CE445	Civil Engineering Infrastructure Design II	3	1	1	2		
	CE448	The Built Environment (Architecture & Planning)	3	1	1	2		
	CE446	Advanced Project Management	6	2	2	c/a		
Group V								
	IE448	Safety & Construction	6	1	1	2		
	EC386	Public Economics	6	2	2	2		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								

<i>Requisite Type: Prerequisite Co-Requisite Exclusion</i>	<i>Course Code</i>	<i>Subject Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(4BEE) B.E. Degree Examination (Sports & Exercise Engineering)								
Group I								
	EE439	Linear Control Systems I	3	1	1	2	3BN, 3BSE, 3BM, 3BEI	
	EE437	Linear Control Systems II	3	2	2	2		
	EE436	Signals & Communication	6	Full Year	1+ 2	2 + 2		EE308 paper I only
	EE328	Engineering Electromagnetics	3	1	1	2	3BN, 3BP, 3BEI	
Group II								
	ME427	Mechanical Analysis & Design	6	Full Year	2	C/A		
	EE323	Infrastructure for Embedded Systems Programming	3	1	1	2	3BP, 3BEE	
	EE435	Embedded Systems Application Programming	3	2	2	2		
	EE316	Digital Systems II	3	1	1	2	3BN, 3BP	
Group III								
	EE434	Sports & Exercise Engineering Laboratory IV	6	Full Year	2	c/a		
	EE433	Sports & Exercise Engineering Project	12	Full Year	2	c/a		
	CT440	Systems Engineering	6	Full Year	2	Project	4BN	CT438
	CT439	Programming III	6	Full Year	2	3		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
<i>Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a</i>								

UNDERGRADUATE ENGINEERING EXAMINATIONS REGULATIONS

1. Registration

Final year students will not be permitted to register for more than 60 ECTS. Neither will they be permitted to change their module choice outside of the Registration Office “change of mind period”, save in exceptional circumstances.

2. Methods of Assessment

Modules may be assessed by written, oral or practical examination, continuous assessment or projects or a combination of these. The examiners in each module will decide on the breakdown of marks between the different methods of assessment and will provide this information to the students at the beginning of the semester in which the module is taught.

Up to 30% of engineering and IT modules may be examined by continuous assessment. Up to 40% of management modules may be examined by continuous assessment.

3. Timing of Examinations

Written examinations in First Year Engineering modules may be held at the end of Semester I, or at the end of Semester II. Supplementary/repeat examinations are held in the Autumn.

Written examinations in Second Year Engineering modules will be held at the end of Semester I and at the end of Semester II. Supplementary/repeat examinations are held in the Autumn.

Written examinations in Third Year Engineering modules will be held at the end of Semester I and in Spring. Semester II examinations will be brought forward to Spring to accommodate the Professional Experience Programme (P.E.P.) and are so indicated in the Calendar. Supplementary/repeat examinations are held in the Autumn subject to the constraints in 7 below.

Written examinations in Fourth Year Engineering modules will normally be held at the end of Semester I and Semester II. There are normally no supplementary / repeat examinations in Fourth year (see 7 below)

4. Return of Marks to the Examinations Office

Marks should be returned to the Examinations Office as a percentage.

5. Provisional Results

Provisional results of Semester I examinations will be communicated by departments to students by means of the following grades:

Percentage	Grade
70 - 100	A
60 - 69	B
50 - 59	C
40 - 49	D
35 - 39	E+
30 - 34	E-
0 - 29	F

6. Professional Experience Programme (P.E.P.)

All Third year Engineering students are required to complete the Professional Experience Programme (P.E.P.) element of the course, or an equivalent exercise as specified by the head of the department concerned. Except in exceptional circumstances approved by the College, the P.E.P. or equivalent exercise must be undertaken in the period between the end of the Third Year Examinations and the beginning of the Fourth Year (Degree Year). In the absence of such approval by the College, students who fail to participate in the P.E.P. or an approved equivalent exercise during this timeframe will not be permitted to progress to the Fourth Year (Degree Year) of the programme.

Students are obliged to comply with all arrangements put in place by the College of Engineering and Informatics and the University Placement Office for the allocation of placements.

Performance on the P.E.P. or approved equivalent exercise will be graded as "satisfactory" or "unsatisfactory". Students will not be awarded the B.E. Degree until P.E.P. or an equivalent exercise has been graded as "satisfactory". In the case of programmes in which P.E.P. is more formally assessed, a "satisfactory" grade requires a score of 40%.

Students who undertake the P.E.P. but fail to achieve a "satisfactory" result may, at the discretion of the College, progress to the Fourth Year (Degree Year) but will be required to repeat the P.E.P. at the end of Fourth Year and to achieve a result of "satisfactory" therein.

7. Eligibility to Undertake Supplementary/Repeat Examinations

Where a student fails a group overall, he/she will be required to repeat all failed modules within the group (subject to the 25% rule set out in 9 below) and will be permitted to carry forward any pass marks.

Students at the Summer examinations who are deficient in their attendance at academic exercises, or in the submission of Year's Work may, on the recommendation of the Board of Examiners, be excluded from admission to the relevant Autumn examination.

Supplementary / repeat examinations in modules of the Third Engineering Examination will be held in the Autumn. Students may participate in these examinations subject to the following condition:

Third Year Engineering students who pass in at least 80% of the Third Year programme i.e. in material accounting for 800 marks out of 1,000 marks (or 48 ECTS out of 60 ECTS credits) should normally, on the recommendation of the Board of Examiners, be allowed to repeat Engineering examinations in the Autumn. (Note: This does not apply to students who are repeating third year)

Where 20% of a student's credits are made up of a combination of fails and deferrals, the student's eligibility to repeat in autumn will be at the discretion of the board.

Supplementary / repeat examinations in Fourth Year modules are **not** normally held in the Autumn, but may be allowed in exceptional circumstances when a deferral or resit is granted by the College such as in cases of bereavement, hospitalisation and medically certified illness.

It will not be possible to repeat Year's Work / continuously assessed material over the Summer period. Allowances may be made but only in exceptional circumstances.

8. Deferral of Examinations

A student who is unable to sit an examination module may apply for a deferral. The deferral can only be obtained in exceptional circumstances and this includes bona fide grounds of ill-health, bereavement or serious personal circumstances which can be verified independently.

A student seeking a deferral should apply to the relevant Head of Discipline/course director and this should be accompanied by appropriate documentary evidence. A decision on the request will then be made following review by the Dean.

Deferrals will only be granted for modules that are specifically listed in the request. Deferred examinations are normally retaken in the autumn examination period.

9. Pass Standard

Candidates for the B.E. Degree are required to pass the First, Second and Third Engineering examinations and the Degree examination. The First Examination must be completed within two years of entry upon the course.

The Second Engineering Examination must be completed within two years of passing the First Examination and the Third Examination must be completed within two years of passing the Second Examination. The Degree Examination must, save in exceptional circumstances, be completed within three years of passing the Third University Examination in Engineering.

No candidate will be admitted to the Third Examination in Civil Engineering who has failed to complete satisfactorily the specified Surveying Fieldwork.

The Pass Standard will be 40% on average across all modules in a group. Students will be required to achieve the 40% standard in each group. Students must reach a minimum of 25% in each module in a group except in exceptional circumstances as agreed by the College Board of Examiners.

There are some exceptions to the average of 40% in a group and these are now noted.

- (i) No candidate shall pass the Examination whose Laboratory Work, Computer Work, Project or Year's Work fail to satisfy the Board of Examiners.
- (ii) Irrespective of performance in other modules of the group, students are required to attain a clear Pass (40%) in the modules listed in Table 1 below.
- (iii) Students must also reach a satisfactory standard for each module in a group, as determined by the department concerned, irrespective of their marks for other modules in the group.

Table 1: Course Requirements

1BM	ME107	Years work workshop practice
1BLE	EE132	Electrical & Electronic Engineering Laboratory I
1BP	EE133	Electronic & Computer Engineering Laboratory I
1BEE	EE120	Sports & Exercise Engineering Laboratory I
1BEI	EE114	Engineering Innovation Electronic Laboratory I
	IE121	Industrial Innovation
	IE214	Graphical Communications
1BSE	EG100	Introduction to Energy Systems
2BSE	EG217	Year's Work Energy Systems Engineering
2BI1	IE212	Workshop laboratory
2BLE	EE218	Electrical & Electronic Engineering Laboratory II
2BP	EE210	Electronic and Computer Engineering Laboratory II
2BEE	EE215	Sports & Exercise Engineering Laboratory II
2BEI	EE216	Engineering Innovation Electronic Laboratory II
3BN	EE326	Electronic Engineering Project
	EE309	Electronic Engineering Laboratory
3BP	EE325/CT329	Electronic and Computer Engineering Project
	EE319	Electronic and Computer Engineering Laboratory
3BEE	EE330	Sports & Exercise Engineering Mini Project
	EE332	Sports & Exercise Engineering Laboratory III
3BSE	EG301	Energy Systems Engineering Laboratory
	EG302	Energy Systems Engineering Project
3BEI	EE337	Engineering Innovation Electronic Laboratory III
	EE338	Engineering Innovation Electronic Project
4BN	EE413	Electronic Engineering Project
	EE412	Electronic Engineering Laboratory
4BP	CT429	IT Laboratory
	EE430	Electronic and Computer Engineering Laboratory
	EE426/CT434	Electronic and Computer Engineering Project
4BEE	EE433	Sports & Exercise Engineering Project
	EE434	Sports & Exercise Engineering Laboratory IV
4BM	ME420	PEP Report and Project
4BG	ME420	PEP Report and Project
4BI1	IE405	Project
	IE436	Engineering Report

10. Carrying Forward Marks

Where a student fails a group, all failed modules within the group must be repeated, except in exceptional circumstances.

Examinations in Engineering must each be passed as a whole. However, in the case of a student who obtains at any examination sitting, a mark of 40% or more of the marks in one or more modules, or groups of modules, but has failed the overall exam, the Board may decide to allow students to hold these marks in perpetuity.

In the case where a candidate fails a module, but has obtained a passing mark in elements or individual examinations of the module, the board may decide to carry forward these marks to all succeeding examinations within the following time limit: two years from the date of entering the year of the programme concerned.

11. Honours Standard

The four year degree programmes in the College of Engineering and Informatics are Honours Degree programmes at the University.

First Class Honours is 70%, Second Class Honours, Grade I, 60%; Second Class Honours Grade II, 50%.

In a given year, Honours will be awarded on the aggregate of marks achieved in that year. However, for the purpose of determining the award of Honours in the Fourth Year (Degree Year) examination, the Board may take into account a student's performance in the Third Year examination. A student's gross percentage mark for this purpose will be computed by adding together 30% of the percentage marks he/she obtained in the Third Year Examination and 70% of the percentage marks he/she obtained in the Fourth Year (Degree Year) examination.

When a deferral is granted, the candidate will be eligible for Honours. However where a student has a combination of deferrals and fails/absents (or carrying a fail) at an exam session, then honours will not normally be awarded.

Candidates who transfer into any year of the degree programme and are granted exemptions based on prior learning will **not** be eligible for Honours in that year.

POSTGRADUATE ENGINEERING EXAMINATIONS

Repeat Examinations for Postgraduate Students

Repeat examinations are not normally held in the Autumn, but may be allowed in exceptional circumstances when a deferral or resit is granted by the College such as in cases of bereavement, hospitalisation and medically certified illness.

Carrying Forward Marks

In the case where a candidate fails a module, but has obtained a passing mark in elements or individual examinations of the module, the board may decide to carry forward these marks to all succeeding examinations within the following time limit: two years from the date of entering the programme.

Exemptions

Exemptions are not permitted on postgraduate taught programmes except in exceptional circumstances.

M.E. DEGREE EXAMINATION

The examination shall be in:

- (i) The Special Branch of Engineering selected by the Candidate.
- (ii) The subject matter of the Dissertation or any matter intimately connected with it.

The following exemption may be granted from the Examination in (i) above:

A Candidate who obtained First Class Honours or Second Class Honours, Grade 1 with the B.E. Degree or who submits satisfactory evidence in the form of designs executed and a written account of work carried out by him or her, that he or she has been engaged on works of considerable importance may, on the report of the Examiners, be exempted.

The Dissertation shall consist of a record (published or not) of original work, or of an essay on some branch of Engineering involving criticism. The latest date for submission of Dissertation for Autumn M.E. shall be May 1st.

A Candidate for the Degree shall fulfil one of the following conditions:

- (i) He/she shall have been engaged in a responsible capacity for a period of not less than three years in the design and construction of Engineering works of an approved character. A detailed statement as to such experience vouched for by the Engineers in charge must be submitted.
- or
- (ii) He/she shall have been engaged for at least two years in research Work in Engineering Science in an adequately equipped Laboratory and submit a Dissertation on the result of his/her work, vouched for by the Professor or Head of the Laboratory.
Honours are not awarded at the M.E. Degree Examination.

Standards:

Degree Awarded

M.E. Degree = 90 ECTS per year (Yrs 1 and 2)

M.ENG.SC. QUALIFYING EXAMINATION

A candidate holding a Bachelor of Engineering (B.E.) (Pass) or equivalent as determined by the College will be eligible for admission to the Degree of Master of Engineering Science Qualifying Examination.

A candidate will normally be expected to reach an overall average standard of Second Class Honours, Grade 1 in the modules examined in order to be allowed to proceed towards completion of the M.Eng.Sc. Degree. The candidate must attain the standard indicated in a number of modules totalling 40 ECTS (generally four 10 ECTS modules).

M.Eng.Sc.Qualifier = 40 ECTS

M.ENG.SC. DEGREE EXAMINATION

A Candidate who has obtained the Degree of Bachelor of Engineering (B.E.) (honours) or equivalent shall be eligible to obtain the Degree of Master of Engineering Science (M.Eng.Sc.) under the following conditions as provided in the Statutes of the University:

- (1) He/she shall have pursued a full-time Internal Post-Graduate course for at least three Terms after obtaining the Primary Degree (B.E.).
- (2) He/she shall have written and presented a Dissertation prepared during the course which in the opinion of the Examiners is of sufficient merit.
- (3) He/she shall have passed an examination on the subject matter of the Dissertation or on any matter intimately connected with it if the Examiners so decide.

Candidates for the degree of Master of Engineering Science in Civil Engineering Design and Analysis must pass the examination in each prescribed course and submit a minor dissertation which, in the opinion of the examiners, is of sufficient merit. Candidates for the Degree of Master of Engineering Science in Mechanical Engineering Design and Analysis must pass the Examination in each prescribed Course and submit a minor dissertation which, in the opinion of the Examiners is of sufficient merit.

Standards:

Degree Awarded

M.Eng. Sc. Mode I Programmes = 90 ECTS per year (Yrs 1 and 2) or 45 ECTS per year (Yrs 1, 2, 3 and 4) parttime

M.Eng.Sc. Mode II Programmes = 150 ECTS (over 2 years fulltime or 4 years part time)

M.ENG.SC. DEGREE IN CIVIL ENGINEERING DESIGN AND ANALYSIS (MODE II)

Written papers (Examination in each prescribed course totalling a minimum of 40 ECTS and not exceeding a maximum of 60 ECTS)	ECTS 40-60
Years Work	20
Research Thesis	Balance of Credits
Total	150

M.ENG.SC. DEGREE IN MECHANICAL ENGINEERING DESIGN AND ANALYSIS (MODE II)

Written papers (Examination in each prescribed course totalling a minimum of 40 ECTS and not exceeding a maximum of 60 ECTS)	ECTS 40-60
Approved Courses include:	
ME601 Advanced Finite Element Applications	
ME602 Advanced Expert System Applications	
MP451 Applied Mathematics	
CE504 Ocean Wave Dynamics	
ME501 Finite Element Method in Engineering Analysis	
ME502 Expert System Applications in Engineering	
ME504 Advanced Heat Transfer	
ME505 Mechanics of Composite Materials	
ME507 Engineering Acoustics and Noise	

ME503 Research Dissertation

Years Work	20
Research Thesis	Balance of Credits
Total	150

M.ENG.SC. DEGREE IN ENGINEERING HYDROLOGY (MODE II)

	ECTS
Written papers (Examination in each prescribed course totalling a minimum of 40 ECTS and not exceeding a maximum of 60 ECTS)	40-60
Approved Courses include:	
EH504 Applied Hydrology I (Deterministic)	
EH505 Applied Hydrology 2 (Stochastic)	
EH506 Applied Hydrology 3 (Groundwater Hydrology)	
EH512 Applied Hydrology 4 (Special Topics)	
EH501 Physical Process in Hydrology	
EH503 Hydraulics of pipes and open channels	
EH502 Hydrological Computation	
EH511 Water Quality and Water Quality Modelling	
Years Work	20
Research Thesis	Balance of Credits
Total	150

M.ENG.SC. DEGREE IN INDUSTRIAL ENGINEERING AND INFORMATION SYSTEMS (MODE II)

	ECTS
Written papers (Examination in each prescribed course totalling a minimum of 40 ECTS and not exceeding a maximum of 60 ECTS)	40-60
Years Work	20
Research Thesis	Balance of Credits
Total	150

MASTER OF APPLIED SCIENCE

The conditions/regulations for entry to the Master of Applied Science are detailed in the Calendar. Candidates will be examined in either Mode 1 or Mode 2.

	ECTS
<u>Master of Applied Science Research Programme (Mode I)</u>	
Research Thesis	180
Total	180

Standards:
Degree Awarded

Master of Applied Science Taught Programme (Mode II)

One Year Taught Fulltime	
Written Papers (including years work/research reports) (Examination in each prescribed course totalling a minimum of 30ECTS and not	30-60

exceeding a maximum of 60ECTS)

Research Thesis

Balance of Credits

Total ECTS over 12 months:

90

September to August

Two Year Taught Parttime

Written Papers (including years work/research reports)

30-60

(Examination in each prescribed course totalling a minimum of 30ECTS and not

exceeding a maximum of 60ECTS)

Research Thesis

Balance of Credits

Total ECTS over 24 months:

Year 1: September to August

Year 2: September to August

90

- (1) Candidates must pass separately all modules and thesis.
- (2) Candidates who fail to achieve at least 40% in any continuous assessment component of a module shall not pass that module.
- (3) Repeat Examinations are not normally held in the Autumn, but may be allowed in exceptional circumstances.
- (4) Exam board meetings will take place in Summer and Winter.
- (5) **Standards:**
 - H1 = 70%
 - H2.1 = 60%
 - H2.2 = 50%
 - Pass = 40%

MASTER OF APPLIED SCIENCE (ENTERPRISE SYSTEMS)

Code	Subject Name	ECTS	Taught in Semester	Examined In Semester	Duration of Exam
IE451	Technology Innovation & Entrepreneurship	10	1 & 2	2	Project
IE446	Project Management	5	1	1	2
CT602	Applied Innovation	10	1 & 2	2	Project
IE419	Product Design & Development	10	1 & 2	2	Project
IE828	Operations Management	10	1 & 2	2	3
IE424	Operations Strategy	5	2	2	3
IE317	Business Logistics	5	2	2	2
IE321	Operations Research	5	1	1	2
IE450	Lean Systems	5	1	1	2
CT602	Industrial Automation	10	1 & 2	Spring	3
ME417	Biomedical Production and Environmental Services	10	1	1	3
ME312	Automated Systems	5	1 & 2	1 & 2	3
IE332	Quality Management	5	2	2	2
IE444	Human & Systems Reliability	10	1 & 2	1 & 2	2
IE447	Regulatory Affairs and Case Study	10	1	1	3
IE520	Ergonomics	10	1	1	3
IE522	Safety and Risk Management	10	1 & 2	2	3
MS814	Decision Systems & Business	5	2	2	2

	Analytics				
MS403	Information Systems Strategy and Planning	5	2	2	2
CT303	Networks and Communications	10	1 & 2	Spring	3
CT422	Modern Information Management	10	1 & 2	2	3
ME520	Research Methods* (Years Work)	10	1 & 2	2	Project
IE591	Thesis (Industrial)*	30	1 & 2	2	Project

*Mandatory

THE HIGHER DIPLOMA IN ENGINEERING

A candidate for the Higher Diploma in Engineering must pass the examination in each prescribed course, including Year's Work

	ECTS
Written Papers	40
Year's Work (Year 1)	20
Total	60

Candidates must pass separately Written Papers and Year's Work.

Standards:

The aggregate of marks for the whole examination will decide the standard as follows:-

H1	=	70%
H2.1	=	60%
H2.2	=	50%
Pass	=	40%

Candidates who reach Honours standard in the examination may, with the approval of College, proceed to the M.E.D. course in lieu of graduating with the Higher Diploma in Engineering.

The University Examination will be held in Summer and Autumn. Except in exceptional circumstances Honours will not be awarded to candidates who have repeated the examination in one or more modules.

Compensation:

Compensation may be exercised only in the following circumstances:

- (i) if the candidate's marks do not fall below 30 per cent in any individual module or
- (ii) if the candidate's marks do not fall below 40 per cent in any combination of modules for which the weighting totals more than 12 ECTS credits.

Excess in marks above pass standard must be double the deficiency in marks in other modules for compensation.

Carrying Forward Marks:

The University Examination must be passed as a whole, provided, however that in the case of a candidate who obtains at the Summer Examination 45 per cent of the marks in two or more modules, the Board may decide to carry forward those marks to the following Autumn Examination. If the candidate does not then pass, he/she must present all modules at the next attempt unless the board decides to grant exemptions in these modules.

MASTER OF ENGINEERING DESIGN (M.E.D.)

A candidate for the Degree of Master of Engineering Design must:

- (a) have attained at least Second Class Honours Grade II standard in the Higher Diploma in Engineering and
- (b) complete a design project and present a thesis on the project which is considered satisfactory by the Examiners.

The results of (a) and (b) above will be taken into account in determining the grade of degree awarded.

	ECTS
Written Papers and Year's Work (Higher Diploma in Engineering)	60
Design Project/Thesis	60
Total	120

Candidates must pass separately the Written Papers, Year's Work and Design Project/Thesis.

Standards:

For the purpose of determining the grade of degree, the aggregate of marks obtained in this examination and in the University Examination of the Higher Diploma in Engineering will decide the standard as follows:

H1	=	70%
H2.1	=	60%
H2.2	=	50%
Pass	=	40%

Candidates who fail to reach the required standard in this examination may, at the discretion of the Examiners, be awarded the Higher Diploma in Engineering on condition that they have fulfilled all the requirements for such an award.

Course Instance	new	Duration of Course	1 year
Course Type	Masters Research	NQAI Level	
Title (in full)	MSc in Bio-innovation	Full/Part Time	Full time
ECTS (per yr)	90	Mode of Study	Full time

Marks	Marks returned out of 100% (Pass 65%)
Board Meetings	1 st Sitting - <input type="checkbox"/> Spring <input type="checkbox"/> Summer x <input type="checkbox"/> Autumn <input type="checkbox"/> Winter 2 nd Sitting - <input type="checkbox"/> Spring <input type="checkbox"/> Summer <input type="checkbox"/> Autumn <input type="checkbox"/> Winter
Marks Entry	x <input type="checkbox"/> Results will be returned at level 1 <input type="checkbox"/> Results will be returned at level 2
Title of Award	MSc (Bio-innovation) <i>Please indicate on the final year template the title of Award for the Programme e.g. Degree of Master of Science</i>

Honours or Degree Awarded	Degree Awarded
Honours and Pass Standards <i>Please choose the appropriate % for each Grade relevant to this course instances</i>	H1 H2 H21 H22 Pass Distinction Degree Awarded x <input type="checkbox"/> <i>Honours will be removed at every level where a student fails overall.</i>
Honours Rules	Honours can be awarded in 1 st <input type="checkbox"/> and / or 2 nd <input type="checkbox"/> Sitting
Award (where applicable)	Based on final year -or- Final year and penultimate year to the benefit of the student <input type="checkbox"/> x Final Year alone (100%) of the penultimate year and of the final year <input type="checkbox"/> Either of the above to the benefit of the student

Carrying Forward	Yes <input type="checkbox"/> A candidate fails the examination as a whole, but has obtained a passing mark or more in one or more subjects, they can be carried forward. No x <input type="checkbox"/>
Progression Rules	<input type="checkbox"/> Candidates must clearly pass one year in order to progress to the next year x <input type="checkbox"/> Not Applicable
Special Requirements (where applicable) <i>No longer than three lines</i>	Pass Standard = 65% Research = 60ECTS Modules = 30 ECTS (15 x 2) <i>Note: Where there are specific Course Requirements to be passed outright or 0 ECTS (Pass/Fail) modules on the course structure please give details including the module code</i>

Course Instance	SPE	Duration of Course	4 years
Course Type	Structured PhD	NQAI Level	10
Title (in full)	Structured PhD in Engineering and Informatics	Full/Part Time	Full time
ECTS (per yr)	90	Mode of Study	Taught and research

Marks	Marks returned as pass/fail
Board Meetings	1 st Sitting - Autumn
Marks Entry	Results will be returned at level 1
Title of Award	PhD <i>Please indicate on the final year template the title of Award for the Programme e.g. Degree of Master of Science</i>

Honours or Degree Awarded	Degree awarded
Honours and Pass Standards <i>Please choose the appropriate % for each Grade relevant to this course instances</i>	Degree Awarded
Honours Rules	
Award (where applicable)	

Carrying Forward	Yes A candidate fails the examination as a whole, but has obtained a passing mark or more in one or more subjects, they can be carried forward.
Progression Rules	Not Applicable
Special Requirements (where applicable) <i>No longer than three lines</i>	<i>Note: Where there are specific Course Requirements to be passed outright or 0 ECTS (Pass/Fail) modules on the course structure please give details including the module code</i>

INFORMATION TECHNOLOGY PROGRAMMES

Modules of Examination

<i>Requisite Type:</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(1BCT) First University Examination in Computer Science & Information Technology								
Group I								
	CT101	Computing Systems	9	Full Year	2	3		
	CT102	Algorithms & Information Systems	6	Full Year	2	3		
	EE130	Fundamentals of Electrical & Electronic Engineering I	3	1	1	2	1BLE, 1EG, 1BP, 1BG, 1BM, 1BEE, 1BSE, 1BEI	
Group II								
	CT103	Programming	12	Full Year	2	3	1PT, 1BP, 1BLE, 1BEE, 1BEI	
Group III								
PR: Maths HL	MA160 Or MA190	Mathematics	12	Full Year	2	3 + 3	1BS, 1BCM	
		Mathematics (honours)	12	Full Year	2	3 + 3	1BS	
	PH108	Principles of Physics	6	2	2	2	1MR, 1HF	
Group IV								
	CT108	Next-generation Technologies I	12	Full Year	2	3		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a								

Requisite Type:	Course Code	Module Name	ECTS Credits	Taught in Semester(s)	Examined in Semester(s)	Duration of exam (hours)	Exam common to another group:	Bonded with:
(2BCT) Second University Examination in Computer Science & Information Technology								
Group I								
	CT216	Software Engineering I	9	Full Year	2	3		
	CT231	Professional Skills I (Continuous Assessment)	3	Full Year	2	c/a		
Group II								
	CT213	Computer Systems and Organisation	9	Full Year	2	3		CT223
	CT248	Introduction to Modelling	3	2	2	2	3BSE (CT345)	
Group III								
	CT230	Database Systems I	3	1	1	2		
	CT229	Programming II	9	Full Year	2	3	2PT, 2BLE, 2BP	
Group IV								
CR: GV	MP209	Methods of Mathematical Physics I	3	1	1	2		
ER: GVI	MA296	Linear Algebra MA203 & Discrete Mathematics MA204	6	Full Year	1 + 2	2 + 2		
	MA237/8	Statistics I & II	6	Full Year	1 + 2	2 + 2		
Group V								
CR: GIV	CT249	Game Design and Programming I	6	Full Year	2	3		
ER: GVI	CT254	Information Systems in Health Care	3	1	1	2		
Group VI								
ER: GIV & GV	MA283/4	Discrete Maths/Linear Algebra	9	Full Year	2	3		
PRE: MA190	MA286/7 or MP207/8	Analysis/Complex Analysis or Methods of Maths Physics I&II	9	Full Year	2	3		
	MA237/8	Statistics I & II	6	Full Year	1 + 2	2 + 2		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a								

Groups I, II and III are compulsory. Students must take either a combination of (a) Groups (IV and V) or (b) Group VI. Only students who have taken MA190 (Honours Module) in 1BCT are eligible to take Group VI.

<i>Requisite Type:</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Exam common to another group:</i>	<i>Bonded with:</i>
(3IF) Third University Examination in Information Technology								
Group I								
	CT318	Human Computer Interaction	6	1	1	2	3BA, 1SD	CT865
	CT306	Formal Methods	6	1	1	2	ISD	
	CT338	Software Engineering and Project Management	9	Full Year	Spring	3		
Group II								
	CT331	Programming Paradigms	3	1	1	2		
	CT326	Programming III	9	Full Year	Spring	3	3BP	
	CT249.II	Game Design and Programming II	3	2	Spring	2		
Group III								
	CT303	Networks and Communications	9	Full Year	Spring	3		
	CT332	Databases Systems II	9	Full Year	Spring	3		
Group IV								
	CT360	Next-Generation Technologies III	6	Full year	Spring	3		
TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS								
Where there is no examination indicated it may be assumed that the examination is by continuous assessment = c/a								

Requisite Type:	Course Code	Module Name	ECTS Credits	Taught in Semester(s)	Examined/ Submitted in Semester(s)	Duration of exam (hours)	Exam common to another group:	Bonded with:
(4IF) Fourth University Examination in Information Technology								
Group I								
	CT417	Software Engineering III	6	1	1	3		
	CT423	Systems Theory	3	1	1	2	3BA	CT317
	CT436	Advanced Professional Skills	3	1	1	c/a		
Group II								
	CT420	Real Time Systems	6	Full Year	2	3		
	CT432	Distributed Systems & Co-operative Computing	6	Full Year	2	3	4BP	
Group III								
	CT404	Graphics and Image Processing	3	1	1	2	4BP (CT336) 3BA, 1SD	
	CT422	Modern Information Management	6	Full Year	2	3		
	CT437	Computer Security and Forensic Computing	6	Full Year	2	3		
Group IV								
	CT413	Final Year Project	15	Full Year	2	Project		
Group V								
Students Choose ONE of the Electives Below								
Elective 1: Information Technology with European Language - Select 6 ECTS from the following list:								
	CT421	Artificial Intelligence	6	Full Year	2	3		
	FR411	French Language IV or	6	Full Year	2	3		
	GR431	German Language IV or	6	Full Year	2	3		
	SH401	Spanish Language IV	6	Full Year	2	Essay + oral		
Elective 2: Information Technology with Business Studies								
	CT421	Artificial Intelligence	6	Full Year	2	3		
Elective 3: Information Technology with Next Generation Technologies								
	CT421	Artificial Intelligence	6	Full Year	2	3		
<i>TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS</i>								
<i>Note: CT421 is only available as an option for students who have NOT already taken CT341 in third year</i>								

UNDERGRADUATE COMPUTER SCIENCE & INFORMATION TECHNOLOGY EXAMINATIONS REGULATIONS

1. Methods of Assessment

Modules may be assessed by written, oral or practical examination, continuous assessment or projects or a combination of these. The examiners in each module will decide on the breakdown of marks between the different methods of assessment and will provide this information to the students at the beginning of the semester in which the module is taught.

Up to 30% of engineering and IT modules may be examined by continuous assessment. Up to 40% of management modules may be examined by continuous assessment

2. Timing of Examinations

Written examinations in First Year Information Technology modules may be held at the end of Semester I, or at the end of Semester II. Supplementary/repeat examinations are held in the Autumn.

Written examinations in Second Year Information Technology modules will be held at the end of Semester I and at the end of Semester II. Supplementary/repeat examinations are held in the Autumn.

Written examinations in Third Year Information Technology modules will be held at the end of Semester I and in Spring. Semester II examinations will be brought forward to Spring to accommodate the Professional Experience Programme (P.E.P.) and are so indicated in the Calendar. Supplementary/repeat examinations are held in the Autumn subject to the constraints in 10 below.

Written examinations in Fourth Year Information Technology modules will normally be held at the end of Semester I, Semester II and Autumn (except for Final Year Project – see 8 below).

3. Pass Standard

The Pass Standard will be 40% across all modules in a group. Students will be required to achieve the 40% standard in each group. Students must reach a minimum of 25% in each module in a group, except in exceptional circumstances as agreed by the Information Technology Board of Examiners.

4. Honours Standard

The B.Sc. (Information Technology) is an Honours Degree at the University.

In all years: First Class Honours is 70%; Second Class Honours, Grade I, 60%; Second Class Honours, Grade II, 50%.

In a given year, Honours will be awarded on the aggregate marks achieved in that year.

When a deferral is granted, the candidate will be eligible for Honours. However where a student has a combination of deferrals and fails/absents (or carrying a fail) at an exam session, then honours will not normally be awarded.

Candidates who transfer into any year of the B.Sc. (Information Technology) programme and are granted exemptions based on prior learning will not be eligible for Honours in that year.

5.

The First, Second, Third and Fourth University Examinations in Information Technology must be passed as a whole. However, in the case where a candidate fails in the examination as a whole, but has obtained a mark of 40% or more in one or more modules, the Board may decide to carry forward these marks to **ALL** succeeding examinations within the following time-limit: in the case of the First Information Technology Examination, within two years of entering the course; in the case of the Second University Examination within two years of passing the First Information Technology Examination; in the case of the Third University Examination

within two years of passing the Second Information Technology Examination and in the case of the Fourth University Examination within two years of passing the Third Information Technology Examination.

Where a student fails a group overall, he/she will be required to repeat all failed modules within the group (subject to the 25% rule set out in 3 above) and will be permitted to carry forward any pass marks.

6.

In all examinations a proportion of the marks, up to a maximum of 30%, may be awarded for (any combination of) course work - orals, practicals, projects.

7.

In CT103 (Programming), up to a maximum of 60% may be awarded for (any combination of) assignments, laboratory exams, and projects.

8.

There is no facility to repeat the Final Year Project (or any component of it) in the Autumn Examinations. Students who fail the Final Year Project may repeat the module during the following academic year.

9.

All students are required to complete the Professional Experience Programme (PEP) element of the course, or an equivalent exercise as specified by the Head of the Department of Information Technology, in the period between the end of the Third Year Examinations and the beginning of the B.Sc.(IT) Degree Academic Year. Students will not be awarded the B.Sc.(IT) Degree until the Professional Experience Programme or equivalent exercise requirement has been fulfilled, as prescribed in the regulations for the B.Sc.(IT) Degree programme in the College Calendar.

10.

Regarding the eligibility of third year students to repeat summer examinations during their Professional Experience Programme, only those who pass in at least 70% of the modules (i.e. modules accounting for 42 ECTS out of 60) **and** those not failing more than three modules should normally be allowed to repeat Information Technology examinations in the Autumn.

Where 30% of a student's credits are made up of a combination of fails and deferrals, the student's eligibility to repeat in autumn will be at the discretion of the board.

11. Deferral of Examinations

A student who is unable to sit an examination module may apply for a deferral. The deferral can only be obtained in exceptional circumstances and this includes bona fide grounds of ill-health, bereavement or serious personal circumstances which can be verified independently.

A student seeking a deferral should apply to the relevant Head of Discipline/course director and this should be accompanied by appropriate documentary evidence. A decision on the request will then be made following review by the Dean.

Deferrals will only be granted for modules that are specifically listed in the request. Deferred examinations are normally retaken in the autumn examination period.

12. Provisional Results

Provisional results of Semester I examinations will be communicated by the IT Department to students by means of the following grades:

Percentage	Grade
70-100	A
60-69	B

50-59	C
40-49	D
35-39	E+
30-34	E-
0-29	F

POSTGRADUATE INFORMATION TECHNOLOGY EXAMINATIONS

MSC DEGREE IN COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

The conditions/regulations for entry to the MSc in Computer Science and Information Technology are detailed in the Calendar.

	ECTS
Thesis	90 credits per year for
	2 years
Total	180

Standards:
Degree Awarded

These regulations also apply to the Cláir Mháistreachta trí Thaighde sa Teicneolaíocht Faisnéise.

MASTER OF INFORMATION TECHNOLOGY

Requisite Type:	Course Code	Module Name	ECTS Credits	Taught in Semester(s)	Examined/ Submitted in Semester(s)	Duration of exam (hours)	Bonded with:
(1IT1) Masters Degree in Information Technology							
Group I : IT Modules							
	CT516	Computer Architecture and Operating Systems	3	1	1	2	CT861
	CT534	User Centred Design*	3	1	1	2	1SD
	CT533	ICT Development Technologies*	(12)				
	CT509	Programming	6	1	1	3	
	CT511	Databases	3	1	1	2	
	CT532	Internet Programming	3	2	2	2	
	CT558	IT Project	3	2	-	c/a	
	CT514	IT Strategy*	3	2	2	2	1SD
	CT517	Computer Communications	3	2	2	2	CT866
	CT503	Software Engineering*	6	Full Year	2	3	CT871, CT522
			33				
Group II: Behavioural Sciences							
	SP501	Industrial Sociology*	3	1	1	c/a	
	PI502	Philosophy of Technology	3	1	1	c/a	
	MG576	Change Management	3	2	2	2	
	LW502	IT: Law and Regulation*	3	2	2	2	
			12				
Group III: Business							
	AY505	Financial Management*	3	1	1	2.5	
	EC507	Economics*	3	1	1	2	
	MG533	Strategic Management*	3	1	1	2	
	MG562	Innovation & Technology Management*	3	2	2	3	
	MK569	E-Business Marketing	3	1	1	2	
			15				
<i>TOTAL FOR THE COMPUTATION OF MARKS = 60 ECTS</i>							
<i>*Up to 50% of marks for any module may be allocated to Year's Work</i>							
(2IT1) Masters Degree in Information Technology							
	CT507	Thesis	60		2	-	
<i>TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS</i>							

Standards:

H1	=	70%
H2.1	=	60%
H2.2	=	50%
Pass	=	40%

Candidates will be required to obtain an average of at least 40% in each group. No candidate shall pass the examination in any one of the groups above, if their marks in any one of the components of that group falls below 25%. A mark of at least 40% must be obtained in the thesis.

The First Year Examinations will normally be held in Summer (however, some First Year Examinations may be held at the end of the first semester). An Autumn examination may be held at the discretion of the Examinations Board.

Except in exceptional circumstances to be decided on by the Examinations Board, candidates must pass the First Year Examination before sitting for the Degree Examination.

Except in exceptional circumstances to be decided on by the Examinations Board, candidates will be allowed only two attempts (i.e. the Summer and Autumn Examinations of their first year of registration) in each module.

An aggregate of the first and second year results will be used for the purpose of determining the grade of degree.

Carrying Forward Marks:

The University Examinations must be passed as a whole, provided that the candidate obtains 40 per cent of the marks in any module he/she may carry forward these marks.

Exemptions:

Exemptions are not permitted on postgraduate taught programmes except in exceptional circumstances.

MSC SOFTWARE DESIGN AND DEVELOPMENT**Examination:**

Students will be examined in the following modules:

<i>Requisite Type: Prerequisite Co- Requisite Exclusion</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>	<i>Bonded with:</i>
(IMF1) MSc Software Design and Development							
Group I							
	CT854	Applications Programming	8	1	1	3	CT519, CT509
	CT862	GUI & Object Oriented Programming	8	2	2	3	CT520, CT470
	CT853	Algorithms & Logical Methods	4	1	1	2	CT518, CT232
Group II							
	CT861	Computer Architecture & Operating Systems	4	1	1	2	CT516
	CT866	Computer Communications	4	2	2	2	CT517
	CT870	Internet Programming	4	2	2	2	CT532
Group II electives: Application Domain Modules (select 1 of the following blocks):							
Block 1							
CT863CR	CT336	Graphics & Image Processing	4	1	1	2 + C/A	CT404
CT336CR	CT863	Interactive Media Technologies	4	2	2	2	CT411
Block 2							
CT319CR	CT306	Formal Methods	4	1	1	2	
CT306CR	CT319	Artificial Intelligence	4	1	1	2	
Block 3							

CT868CR	CT865	Human Computer Interaction	4	1	1	2	CT318
CT865CR	CT868	Technical Writing	4	2	2	c/a	CT337
Block 4							
	CT602	Industrial Automation	8	Full Year	Spring	3	
Block 5							
CS402CR	EP355	Computational Physics	4	1	1	1.5	
EP355CR	CS402	Cryptography	4	Full Year	2	3	MA492
Block 6							
MP307CR	MP305	Modelling I	4	1	1	2	
MP305CR	MP307	Modelling II	4	2	2	2	
Block 7							
MG876CR	MG851	Business Organisation	4	1	1	2.5	MG524, MG875
MG851CR	MG876	Communication in Organisations	4	2	2	2	MG872
Block 8							
CT534CR	CT514	IT Strategy	4	2	2	2	1IT
CT514CR	CT534	User Centred Design	4	2	2	2	1IT
Group III							
	CT871	Software Engineering Methods	8	Full year	2	3	CT522, CT503
	CT872	Research Methods/Software Design & Development Project	8	Full Year	1 + 2	c/a	CT869
	CT857	Database Development	4	1	1	2	CT521, CT511
<i>TOTAL FOR THE COMPUTATION OF MARKS = 60 ECTS</i>							
(2MF1) MSc Software Design and Development							
	CT525	Research Project and Thesis	60	Full Year			
<i>TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS</i>							

Graduate students of NUI Galway are not allowed to select any elective they have already taken as part of a previous qualification.

Standards:

H1	=	70%
H2.1	=	60%
H2.2	=	50%
Pass	=	40%

The University Examination will be held in Winter, Summer and Autumn. Except in exceptional circumstances, Honours will not be awarded to candidates who have repeated the examination in one or more modules.

In all examinations a proportion of the marks, up to a maximum of 40 per cent, may be awarded for (any combination of) course work – orals, practicals and projects.

Honours will not be awarded in the first year.

An aggregate of the first and second year results will be used for the purpose of determining the grade of degree.

Grouping of Modules:

Candidates will be required to obtain an average of at least 40% in each group. No candidate shall pass the examination in any one of the groups above, if their marks in any one of the components of that group falls below 25%. Candidates that fall into this category have to pass all failed examinations and are not eligible for Honours.

Carrying Forward Marks:

The University Examinations must be passed as a whole, provided that the candidate obtains 40 per cent of the marks in any module he/she may carry forward these marks.

Exemptions:

Exemptions are not permitted on postgraduate taught programmes except in exceptional circumstances.

MSC SOFTWARE DESIGN AND DEVELOPMENT- STREAM 2

Requisite Type: Prerequisite Co- Requisite Exclusion	Course Code	Module Name	ECTS Credits	Taught in Semester(s)	Examined/ Submitted in Semester(s)	Duration of exam (hours)	Bonded with:
(1MF2) MSc Software Design and Development							
Group I							
Exempt	CT854	Applications Programming	8	1	1	3	CT509
Exempt	CT862	GUI and Object Oriented Programming	8	2	2	3	CT470
Exempt	CT853	Algorithms and Logical Methods	4	1	1	2	CT232
Group II							
Exempt	CT861	Computer Architecture and Operating Systems	4	1	1	2	CT516
Exempt	CT866	Computer Communications	4	2	2	2	CT517
Exempt	CT870	Internet Programming	4	2	2	2	CT532
Exempt	CT336	Graphics & Image Processing	4	1	1	2 + C/A	CT404
Exempt	CT863	Interactive Media Technologies	4	2	2	2	CT411
Group III							
Exempt	CT871	Software Engineering Methods	8	Full year	2	3	CT503
Exempt	CT872	Research Methods/ Software Design & Development Project	8	Full Year	1 + 2	c/a	CT869
Exempt	CT857	Database Development	4	1	1	2	CT511
	CT873	Research Methodology	0	2	2	c/a	
(2MF2) MSc Software Design and Development							
	CT539	Research Project and Thesis	60	Full Year			
<i>TOTAL FOR THE COMPUTATION OF HONOURS = 60 ECTS</i>							

Graduate students of NUI Galway are not allowed to select any elective they have already taken as part of a previous qualification.

Standards:

H1	=	70%
H2.1	=	60%
H2.2	=	50%
Pass	=	40%.

The University Examination will be held in Winter, Summer and Autumn. Except in exceptional circumstances, Honours will not be awarded to candidates who have repeated the examination in one or more modules.

In all examinations a proportion of the marks, up to a maximum of 40 per cent, may be awarded for (any combination of) course work – orals, practicals and projects.

The award of honours will be based on CT539 only.

A mark of at least 40% must be obtained in the thesis. The award of honours will be based on second year results only.

Grouping of Modules:

Candidates will be required to obtain an average of at least 40% in each group. No candidate shall pass the examination in any one of the groups above, if their marks in any one of the components of that group falls

below 25%. Candidates that fall into this category have to pass all failed examinations and are not eligible for Honours.

Carrying Forward Marks:

The University Examinations must be passed as a whole, provided that the candidate obtains 40 per cent of the marks in any module he/she may carry forward these marks.

Exemptions:

Exemptions are not permitted on postgraduate taught programmes except in exceptional circumstances.

HIGHER DIPLOMA IN SOFTWARE DESIGN AND DEVELOPMENT

Examination:

Students will be examined in the following modules:

Requisite Type: Prerequisite Co- Requisite Exclusion	Course Code	Module Name	ECTS Credits	Taught in Semester(s)	Examined/ Submitted in Semester(s)	Duration of exam (hours)	Bonded with:
(1SD1) Higher Diploma in Applied Science (Software Design & Development)							
Group I							
	CT854	Applications Programming	8	1	1	3	CT519, CT509
	CT862	GUI & Object Oriented Programming	8	2	2	3	CT520, CT470
	CT853	Algorithms & Logical Methods	4	1	1	2	CT518, CT232
Group II							
	CT861	Computer Architecture & Operating Systems	4	1	1	2	CT516
	CT866	Computer Communications	4	2	2	2	CT517
	CT870	Internet Programming	4	2	2	2	CT532
Group II electives: Application Domain Modules (select 1 of the following blocks):							
Block 1							
CT863CR	CT336	Graphics & Image Processing	4	1	1	2 + C/A	CT404
CT336CR	CT863	Interactive Media Technologies	4	2	2	2	CT411
Block 2							
CT319CR	CT306	Formal Methods	4	1	1	2	
CT306CR	CT319	Artificial Intelligence	4	1	1	2	
Block 3							
CT868CR	CT865	Human Computer Interaction	4	1	1	2	CT318
CT865CR	CT868	Technical Writing	4	2	2	c/a	CT337
Block 4							
	CT602	Industrial Automation	8	Full Year	Spring	3	
Block 5							
CS402CR	EP355	Computational Physics	4	1	1	1.5	
EP355CR	CS402	Cryptography	4	Full Year	2	3	MA492
Block 6							
MP307CR	MP305	Modelling I	4	1	1	2	
MP305CR	MP307	Modelling II	4	2	2	2	
Block 7							
MG876CR	MG851	Business Organisation	4	1	1	2.5	MG524, MG875
MG851CR	MG876	Communication in Organisations	4	2	2	2	MG872
Block 8							
CT534CR	CT514	IT Strategy	4	2	2	2	IIT
CT514CR	CT534	User Centred Design	4	2	2	2	IIT
Group III							
	CT871	Software Engineering Methods	8	Full year	2	3	CT522, CT503
	CT872	Research Methods/Software Design & Development Project	8	Full Year	1 + 2	c/a	CT869
	CT857	Database Development	4	1	1	2	CT521, CT511
TOTAL FOR THE COMPUTATION OF MARKS = 60 ECTS							

Graduate students of NUI Galway are not allowed to select any elective they have already taken as part of a previous qualification.

Standards:

H1	=	70%
H2.1	=	60%
H2.2	=	50%

Pass = 40%

The University Examinations will be held in Winter, Summer and Autumn. Except in exceptional circumstances, Honours will not be awarded to candidates who have repeated the examination in one or more modules.

In all examinations a proportion of the marks, up to a maximum of 40%, may be awarded for (any combination of) course work - orals, practicals, projects.

Grouping of Modules:

Candidates will be required to obtain an average of at least 40% in each group. No candidate shall pass the examination in any one of the groups above, if their marks in any one of the components of that group falls below 25%. Candidates that fall into this category have to pass all failed examinations and are not eligible for Honours.

Carrying Forward Marks:

The University Examinations must be passed as a whole, provided that the candidate obtains 40 per cent of the marks in any module he/she may carry forward these marks.

Exemptions:

Exemptions are not permitted on postgraduate taught programmes except in exceptional circumstances.

MSC SOFTWARE ENGINEERING & DATABASE TECHNOLOGIES (BY DISTANCE LEARNING)

Examination:

Students will be examined in the following modules:

<i>Requisite Type:</i>	<i>Course Code</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught in Semester(s)</i>	<i>Examined/ Submitted in Semester(s)</i>	<i>Duration of exam (hours)</i>
MSc in Software Engineering & Database Technologies (by distance learning)						
Core Syllabus (Software Development)						
	CT610	Software Engineering	6	1 or 2*	1 or 2*	2
	CT611	Computer Architecture and Operating Systems	6	1 or 2*	1 or 2*	2
Ex: CT619	CT612	Application Programming Or	6	1 or 2*	1 or 2*	2
Prereq ♦♦ Ex: CT612	CT619	Object Oriented Programming	6	1 or 2*	1 or 2*	2
Core Syllabus (Information Systems)						
	CT613	Database Architecture	6	1 or 2*	1 or 2*	2
	CT614	Database Concepts	6	1 or 2*	1 or 2*	2
	CT615	Database Administration	6	1 or 2*	1 or 2*	2
Prereq ♦	CT616.a	Middleware Architectures and Database Applications	6	1 or 2*	1 or 2*	2
Prereq ♦ PR: CT616.a	CT617.a	XML Concepts for Database Development	6	1 or 2*	1 or 2*	2
Elective Modules (any 2 of)						
Prereq ♦♦	CT618	Object Oriented Design	6	1 or 2*	1 or 2*	2
Prereq ♦♦	CT620	Distributed Systems	6	1 or 2*	1 or 2*	2
Prereq ♦♦	CT621	Artificial Intelligence	6	1 or 2*	1 or 2*	2
Prereq ♦♦	CT622	Real-Time Systems	6	1 or 2*	1 or 2*	2
Prereq ♦♦	CT623	Graphics Programming	6	1 or 2*	1 or 2*	2
Capstone Modules						
	CT626	Thesis	30	1 or 2*	1 or 2*	thesis
TOTAL FOR THE COMPUTATION OF HONOURS = 90 ECTS						
Up to 50% of marks for any module may be allocated to Year's Work						
<p align="center">*All modules will be taught and examined twice per year, i.e. once in each semester</p> <p align="center">Prereq ♦ This module requires that the first 3 Information Systems Modules be completed first</p> <p align="center">Prereq ♦♦ This module requires that the 3 Software Development Modules be completed first</p> <p align="center">Prereq ♦♦♦ This module requires that the first 3 Information Systems Modules and the 3 Software Development Modules be completed first</p>						

Standards:

H1	=	70%
H2.1	=	60%
H2.2	=	50%
Pass	=	40%

The University Examination will be held in Winter and Summer. Candidates obtain credit for any modules passed at an examination sitting.

A minimum pass mark of 40% is required in each module for the award of credit. Up to a maximum of 50% of marks may be allocated to a year's work.

Course Instance	1SI1	Duration of Course	48 months
Course Type	Masters	NQAI Level	Level 9
Title (in full)	MSc Software Engineering & Database Technologies	Full/Part Time	Part Time
ECTS (per yr)	90 ECTS	Mode of Study	Taught

Marks	Marks returned out of 100%
Board Meetings	1 st Sitting - <input type="checkbox"/> Spring <input type="checkbox"/> Summer <input type="checkbox"/> Autumn <input checked="" type="checkbox"/> Winter 2 nd Sitting - <input type="checkbox"/> Spring <input type="checkbox"/> Summer <input type="checkbox"/> Autumn <input type="checkbox"/> Winter
Marks Entry	<input checked="" type="checkbox"/> Results will be returned at level 1 <input type="checkbox"/> Results will be returned at level 2

Honours or Degree Awarded	Honours awarded at the Award Level
Honours and Pass Standards <i>Please choose the appropriate % for each Grade relevant to this course instances</i>	H1 70% H2 H21 60% H22 50% Pass 40% Distinction Degree Awarded <input checked="" type="checkbox"/> <i>Honours will be removed at every level where a student fails overall.</i>
Honours Rules	Honours can be awarded in 1 st <input checked="" type="checkbox"/> and / or 2 nd <input type="checkbox"/> Sitting
Award (where applicable)	Based on final year -or- Final year and penultimate year to the benefit of the student <input checked="" type="checkbox"/> Final Year alone (100%) of the penultimate year and of the final year
Carrying Forward	Yes <input checked="" type="checkbox"/> A candidate fails the examination as a whole, but has obtained a passing mark or more in one or more modules, they can be carried forward. No <input type="checkbox"/>
Progression Rules	<input type="checkbox"/> Candidates must clearly pass one year in order to progress to the next year <input checked="" type="checkbox"/> Not Applicable
Special Requirements (where applicable) <u>No longer than three lines</u>	- Degree awarded on accumulation of 90 ECTS. - Compensation may not be applied. - Grades in the following modules (co-ordinated by the partner university) may not be altered at the examination board - CT613, CT614, CT615, CT616.A, CT617.A. <i>Note: Where there are specific Course Requirements to be passed outright or 0 ECTS (Pass/Fail) modules on the course structure please give details including the module code</i>

Course Instance	1SI2	Duration of Course	48 months
Course Type	Masters	NQAI Level	Level 9
Title (in full)	MSc Software & Information Systems	Full/Part Time	Part Time
ECTS (per yr)	90 ECTS	Mode of Study	Taught

Marks	Marks returned out of 100%
Board Meetings	1 st Sitting - <input type="checkbox"/> Spring <input type="checkbox"/> Summer <input type="checkbox"/> Autumn <input checked="" type="checkbox"/> Winter 2 nd Sitting - <input type="checkbox"/> Spring <input type="checkbox"/> Summer <input type="checkbox"/> Autumn <input type="checkbox"/> Winter
Marks Entry	<input checked="" type="checkbox"/> Results will be returned at level 1 <input type="checkbox"/> Results will be returned at level 2

Honours or Degree Awarded	Honours awarded at the Award Level
Honours and Pass Standards <i>Please choose the appropriate % for each Grade relevant to this course instances</i>	H1 70% H2 H21 60% H22 50% Pass 40% Distinction Degree Awarded <input checked="" type="checkbox"/> <i>Honours will be removed at every level where a student fails overall.</i>
Honours Rules	Honours can be awarded in 1 st <input checked="" type="checkbox"/> and / or 2 nd <input type="checkbox"/> Sitting
Award (where applicable)	Based on final year -or- Final year and penultimate year to the benefit of the student <input checked="" type="checkbox"/> Final Year alone (100%) of the penultimate year and of the final year
Carrying Forward	Yes <input checked="" type="checkbox"/> A candidate fails the examination as a whole, but has obtained a passing mark or more in one or more modules, they can be carried forward. No <input type="checkbox"/>
Progression Rules	<input type="checkbox"/> Candidates must clearly pass one year in order to progress to the next year <input checked="" type="checkbox"/> Not Applicable
Special Requirements (where applicable) <u>No longer than three lines</u>	Degree awarded on accumulation of 90 ECTS . 90 ECTS can be accumulated over any number of years. Award is calculated on the average of 90 ECTS attained over any number of years. <i>- Compensation may not be applied.</i> <i>- Grades in the following modules (co-ordinated by the partner university) may not be altered at the examination board - CT613, CT614,CT615, CT616, CT617.</i> <i>Note: Where there are specific Course Requirements to be passed outright or 0 ECTS (Pass/Fail) modules on the course structure please give details including the module code</i>

Course Instance	2SI1	Duration of Course	12 months
Course Type	Masters	NQAI Level	Level 9
Title (in full)	MSc Software & Information Systems	Full/Part Time	Part Time
ECTS (per yr)	60 ECTS	Mode of Study	Taught

Marks	Marks returned out of 100%
Board Meetings	1 st Sitting - <input type="checkbox"/> Spring <input type="checkbox"/> Summer <input type="checkbox"/> Autumn <input checked="" type="checkbox"/> Winter 2 nd Sitting - <input type="checkbox"/> Spring <input type="checkbox"/> Summer <input type="checkbox"/> Autumn <input type="checkbox"/> Winter
Marks Entry	<input checked="" type="checkbox"/> Results will be returned at level 1 <input type="checkbox"/> Results will be returned at level 2

Honours or Degree Awarded	Honours awarded at the Award Level
Honours and Pass Standards <i>Please choose the appropriate % for each Grade relevant to this course instances</i>	H1 70% H2 H21 60% H22 50% Pass 40% Distinction Degree Awarded <input checked="" type="checkbox"/> <i>Honours will be removed at every level where a student fails overall.</i>
Honours Rules	Honours can be awarded in 1 st <input checked="" type="checkbox"/> and / or 2 nd <input type="checkbox"/> Sitting
Award (where applicable)	Based on final year -or- Final year and penultimate year to the benefit of the student <input type="checkbox"/> Final Year alone (100%) 33.333% of the penultimate year and 66.666% of the final year

Carrying Forward	Yes <input type="checkbox"/> A candidate fails the examination as a whole, but has obtained a passing mark or more in one or more modules, they can be carried forward. No <input type="checkbox"/>
Progression Rules	<input type="checkbox"/> Candidates must clearly pass one year in order to progress to the next year <input type="checkbox"/> Not Applicable
Special Requirements (where applicable) <u>No longer than three lines</u>	- Compensation may not be applied. - Grades in the following modules (co-ordinated by the partner university) may not be altered at the examination board - CT613, CT614, CT615, CT616, CT617. <i>Note: Where there are specific Course Requirements to be passed outright or 0 ECTS (Pass/Fail) modules on the course structure please give details including the module code</i>

Course Instance	ISED1	Duration of Course	48 months
Course Type	Masters	NQAI Level	Level 9
Title (in full)	MSc Software Engineering & Database Technologies	Full/Part Time	Part Time
ECTS (per yr)	90 ECTS	Mode of Study	Taught

Marks	Marks returned out of 100%
Board Meetings	1 st Sitting - <input type="checkbox"/> Spring <input type="checkbox"/> Summer <input type="checkbox"/> Autumn <input checked="" type="checkbox"/> Winter 2 nd Sitting - <input type="checkbox"/> Spring <input type="checkbox"/> Summer <input type="checkbox"/> Autumn <input type="checkbox"/> Winter
Marks Entry	<input checked="" type="checkbox"/> Results will be returned at level 1 <input type="checkbox"/> Results will be returned at level 2

Honours or Degree Awarded	Honours awarded at the Award Level
Honours and Pass Standards	H1 70% H2 H21 60% H22 50% Pass 40% Distinction Degree Awarded <input checked="" type="checkbox"/> <i>Honours will be removed at every level where a student fails overall.</i>
Honours Rules	Honours can be awarded in 1 st <input checked="" type="checkbox"/> and / or 2 nd <input type="checkbox"/> Sitting
Award (where applicable)	Based on final year -or- Final year and penultimate year to the benefit of the student <input checked="" type="checkbox"/> Final Year alone (100%) of the penultimate year and of the final year
Carrying Forward	Yes <input checked="" type="checkbox"/> A candidate fails the examination as a whole, but has obtained a passing mark or more in one or more modules, they can be carried forward. No <input type="checkbox"/>
Progression Rules	<input type="checkbox"/> Candidates must clearly pass one year in order to progress to the next year <input checked="" type="checkbox"/> Not Applicable
Special Requirements (where applicable) <u>No longer than three lines</u>	- Degree awarded on accumulation of 90 ECTS. 90 ECTS can be accumulated over any number of years. - Compensation may not be applied. - Grades in the following modules (co-ordinated by the partner university) may not be altered at the examination board - CT613, CT614, CT615, CT616.A, CT617.A. - Transfer credit will be considered on a case by case basis. <i>Note: Where there are specific Course Requirements to be passed outright or 0 ECTS (Pass/Fail) modules on the course structure please give details including the module code</i>

Course Instance	ISED2	Duration of Course	48 months
Course Type	Masters	NQAI Level	Level 9
Title (in full)	MSc Software Engineering & Database Technologies	Full/Part Time	Part Time
ECTS (per yr)	90 ECTS	Mode of Study	Taught

Marks	Marks returned out of 100%
Board Meetings	1 st Sitting - <input type="checkbox"/> Spring <input type="checkbox"/> Summer <input type="checkbox"/> Autumn <input checked="" type="checkbox"/> Winter 2 nd Sitting - <input type="checkbox"/> Spring <input type="checkbox"/> Summer <input type="checkbox"/> Autumn <input type="checkbox"/> Winter
Marks Entry	<input checked="" type="checkbox"/> Results will be returned at level 1 <input type="checkbox"/> Results will be returned at level 2

Honours or Degree Awarded	Honours awarded at the Award Level
Honours and Pass Standards <i>Please choose the appropriate % for each Grade relevant to this course instances</i>	H1 70% H2 H21 60% H22 50% Pass 40% Distinction Degree Awarded <input checked="" type="checkbox"/> <i>Honours will be removed at every level where a student fails overall.</i>
Honours Rules	Honours can be awarded in 1 st <input checked="" type="checkbox"/> and / or 2 nd <input type="checkbox"/> Sitting
Award (where applicable)	Based on final year -or- Final year and penultimate year to the benefit of the student <input checked="" type="checkbox"/> Final Year alone (100%) of the penultimate year and of the final year
Carrying Forward	Yes <input checked="" type="checkbox"/> A candidate fails the examination as a whole, but has obtained a passing mark or more in one or more modules, they can be carried forward. No <input type="checkbox"/>
Progression Rules	<input type="checkbox"/> Candidates must clearly pass one year in order to progress to the next year <input checked="" type="checkbox"/> Not Applicable
Special Requirements (where applicable) <u>No longer than three lines</u>	Degree awarded on accumulation of 90 ECTS. 90 ECTS can be accumulated over any number of years. Award is calculated on the average of 90 ECTS attained over any number of years. - Compensation may not be applied. - Grades in the following modules (co-ordinated by the partner university) may not be altered at the examination board - CT613, CT614, CT615, CT616, CT617. <i>Note: Where there are specific Course Requirements to be passed outright or 0 ECTS (Pass/Fail) modules on the course structure please give details including the module code</i>

STRUCTURED PHD IN ENGINEERING AND INFORMATICS

Course Instance	SPE	Duration of Course	4 years
Course Type	Structured PhD	NQAI Level	10
Title (in full)	Structured PhD in Engineering and Informatics	Full/Part Time	Full time
ECTS (per yr)	90	Mode of Study	Taught and research

Marks	marks returned as pass/fail
Board Meetings	1 st Sitting - Autumn
Marks Entry	Results will be returned at level 1
Title of Award	PhD <i>Please indicate on the final year template the title of Award for the Programme e.g. Degree of Master of Science</i>

Honours or Degree Awarded	Degree awarded
Honours and Pass Standards <i>Please choose the appropriate % for each Grade relevant to this course instances</i>	Degree Awarded
Honours Rules	
Award (where applicable)	

Carrying Forward	Yes A candidate fails the examination as a whole, but has obtained a passing mark or more in one or more subjects, they can be carried forward.
Progression Rules	Not Applicable
Special Requirements (where applicable) <i>No longer than three lines</i>	<i>Note: Where there are specific Course Requirements to be passed outright or 0 ECTS (Pass/Fail) modules on the course structure please give details including the module code</i>