

Undergraduate Programme Handbook for Electrical, Electronic and Computer Engineering (EECE)

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PART A – SCHOOL INFORMATION

1 Summary of Key Information

This handbook provides useful information about the Undergraduate (UG) degree programmes in Electrical, Electronic and Computer Engineering (EECE) in the School of Engineering and Physical Sciences (EPS). The programmes are:

MEng/BEng in Electrical and Electronic Engineering
MEng/BEng in Computing and Electronics

2 Welcome and Introduction

2.1 Welcome from the Principal of Heriot-Watt University

I am delighted to welcome you as a student of Heriot-Watt University!

Heriot-Watt University has a well earned reputation as Scotland's most international and outward-looking University. With three campuses in Scotland (attended by a high percentage of students from across the world), our new Campus in Dubai, and Learning Partner institutions across the world, we have a vibrant and diverse learning culture which is unique and unmatched by other universities in the United Kingdom. We are keen to give our students the opportunity to develop an international dimension to their studies which will enhance their opportunities for future growth .

Students at all our campus locations are an important part of our global community and I very much hope you enjoy your time with us.

Professor Steve Chapman
Principal and Vice-Chancellor

2.2 Welcome from Head of School, Professor Stephen McLaughlin

Whether you are a new or continuing student, you will, we hope, find it useful to have a one-stop source of information. This handbook is our attempt to provide with such a source. You will find the most immediately useful information in the first few sections, and these have been written by staff in your subject area. The later sections contain essential general University information and Web references where you can find more detail, should you need it. If you have any questions that are not answered, or if anything is at all unclear, do please ask your mentor or any other member of academic or support staff. They will be pleased to help if they can; if they cannot, they will refer you to someone who can!

3 General Information about the School/Institute

3.1 General

Electrical, Electronic & Computer Engineering belongs in the School of Engineering and Physical Sciences which is the largest school in the University. You are one of about 400 full-time students (about 100 of whom are postgraduates) within Electrical, Electronic and Computer Engineering. There is a complement of 20 members of academic staff supported by research assistants, technical and secretarial staff.

The organisation of our courses is handled by a number of staff members under the Academic Head.

3.2 Welcome from Academic Head Professor Andrew Wallace

Electrical, Electronic & Computer Engineering (EECE) is one of the disciplines within the School of Engineering and Physical Sciences (EPS). This discipline produces graduates who are highly sought after by employers both in the UK and abroad. EECE was the first to introduce UNIX in a University and has the oldest MEng programme in the UK. Other disciplines within EPS are; Physics, Chemistry, Mechanical Engineering, Chemical Engineering and Combined Studies. One advantage of studying in EPS is an increase in flexibility of choice and movement between degree programmes. The undergraduate degree programmes which we offer are as follows:

MEng/BEng in Electrical and Electronic Engineering
MEng/BEng in Computing and Electronics

An extensive range of material is covered in our taught programmes and with many strong industrial links, our staff are in the forefront of research. In choosing to study for a degree in our field you have selected a discipline that offers many exciting and challenging options. A great deal of hard work lies ahead of you, but a degree from us will provide an excellent foundation for an interesting and rewarding career.

Individual members of staff are mentors to small groups of students and maintain a keen interest in their welfare and progress - an essential in any university. The University has a long tradition of pastoral care and do care about the welfare of its students. If you have any difficulties with academic matters or with any other problems you may be experiencing, then discuss your anxieties with the staff. Please do not feel reticent about approaching members of staff; we are all here to help you.

Of course communication is a two way process, and this booklet is an attempt to present you with some basic information that will help you to settle in and make good progress on your programme. In time you may think of other details that should be included and I shall be pleased to receive constructive comments and suggestions from you.

I am delighted to welcome you in our Department and hope that you will enjoy your stay with us.

Good luck with your studies.

Professor Andrew M. Wallace
Academic Head, EECE

4 Key staff and office locations

Academic Head Professor Andrew M. Wallace Rm. 2.41

Degree Directors

UG and PG Programme Director	Dr. R. S. Dhariwal	Rm. 2.10
BEng Computing & Electronics	Dr. K.E. Brown	Rm. 2.42
BEng Electrical & Electronic Eng.	Dr. M.W. Dunnigan	Rm. 2.25
MEng in Computing & Electronics	Dr. J. McClean	Rm. 2.24
MEng Electrical & Electronic Eng	Dr. J. McClean	Rm. 2.24

Electrical Engineering Year Supervisors

1st Year Supervisor	Dr. M.W. Dunnigan	Rm. 2.25
2nd Year Supervisor	Dr. A. Belyaev	Rm. 2.29
3rd Year Supervisor	Dr Xu Wang	Rm. 2.07
4th Year Supervisor	Dr. J.Hong	Rm. 2.13

Special Needs

Any student with a special need should contact Dr Donald Reay, Room 2.08, for information and advice.

ELECTRICAL, ELECTRONIC & COMPUTER ENGINEERING STAFF

Staff	Room	Tel. Ext (0131 451 xxxx)	Email
Dr A. Belyaev	2.29	3437	A.Belyaev@hw.ac.uk
Dr. K.E. Brown	2.40	3351	K.E.Brown@hw.ac.uk
Mr. D. Campbell	G.83	3319	D.Campbell@hw.ac.uk
Dr. D.E. Clark	3.22	3323	D.E.Clark@hw.ac.uk
Professor A.M. Close	2.20	3358	A.M.Close@hw.ac.uk
Prof. M.P.Y. Desmulliez	2.20	3340	M.Desmulliez@hw.ac.uk
Dr. R.S. Dhariwal	2.10	3338	R.S.Dhariwal@hw.ac.uk
Dr. M.W. Dunnigan	2.25	3346	M.W.Dunnigan@hw.ac.uk
Dr. P. Favaro	2.26	3773	P.Favaro@hw.ac.uk
Dr. A.R. Harvey	2.05	3356	A.R.Harvey@hw.ac.uk
Dr. J.T. Herd	2.28	3349	J.T.Herd@hw.ac.uk
Dr. J. Hiley	G.83	3319	J.Hiley@hw.ac.uk
Dr. J. Hong	2.13	3339	J.Hong@hw.ac.uk
Professor D.M. Lane	2.17	3350	D.M.Lane@hw.ac.uk
Dr. J.A. McClean	2.24	3345	J.A.McClean@hw.ac.uk
Dr. Y.R. Petillot	3.20	8277	Y.R.Petillot@hw.ac.uk
Dr. D.S. Reay	2.08	3359	D.S.Reay@hw.ac.uk
Dr. P.M. Record	2.27	3341	P.Record@hw.ac.uk
Dr. N. Robertson	2.12	3325	N.M.Robertson@hw.ac.uk
Professor A.M. Wallace	2.41	3423	A.M.Wallace@hw.ac.uk
Dr. C. Wang	2.09	3903	C.Wang@hw.ac.uk
Dr. C-X. Wang	2.14	3329	Cheng-Xiang.Wang@hw.ac.uk
Dr. X. Wang	2.07	3775	X.Wang@hw.ac.uk

SUPPORT STAFF

Alistair Houstin (Building Superintendent)	1.31	3331	A.Houstin@hw.ac.uk
Gavin Burns	1.77	3354	G.H.Burns@hw.ac.uk
Hugh Conner	2.04	3337	H.M.Conner@hw.ac.uk
Reza Mohammadi (Computer Officers)	1.77	8037	R.Mohammadi@hw.ac.uk
Andy Haston (Supervisor) Electronics Workshop	1.77	3332	A.Haston@hw.ac.uk
Enquiries	2.40	3328 3286	S.E.McGill@hw.ac.uk S.White_1@hw.ac.uk
Mark Leonard MISEC Manager	G.22	8243	M.Leonard@hw.ac.uk

The Mountbatten Building

Electrical, Electronic and Computer Engineering is housed in the Mountbatten Building situated on the North Side of the Riccarton campus. The Building is open during term time from 8.00 a.m. to 7.00 p.m., Monday to Friday. Details of working outside these hours are indicated in Sections 7.6.3 and 7.6.4 under "Working in Laboratories Outside Normal Hours".

Undergraduates use rooms throughout the building. The numbering system for rooms uses prefix G for ground floor rooms and the floor number as a prefix for numbers on each of the other floors.

The main rooms of interest to undergraduates are as follows:

Ground Floor

- G.44 - Tutorial Room
- G.45 - Tutorial Room
- G.61 - Lecture Room
- G.81 - H.V. Laboratory
- G.85 - Electrical Machines Laboratory

First Floor

- 1.31 - Superintendent (Mountbatten)
- 1.70 - Lecture Room
- 1.79 - Electronic Stores (Service Counter in Lab. 1.81)
- 1.81 - 4th Year E&EE Project Laboratory
- 1.82 - Lecture Room
- 1.83 - Lecture Room
- 1.84 - Technology Laboratory

Second Floor

- 2.23 – MSc Teaching Laboratory
- 2.33 - Seminar Room
- 2.40 - EECE Administrative Office
- 2.44 - Lecture Room
- 2.45 - Linux Lab
- 2.50 – Main Linux Laboratory
- 2.52 - Computer Suite - Caledonia PCs

Third Floor

- 3.01 - Embedded Systems Laboratory - Caledonia PCs
- 3.02 - Lecture Room
- 3.03 - Lecture Room
- 3.06 - Lecture Room
- 3.07 - Lecture Room
- 3.33 - Microwave Laboratory
- 3.36 - Lecture Room

Timetabling Information

Timetable information for each programme of study and stage will be available to students from the Heriot-Watt University Timetable website

<http://www.hw.ac.uk/timetabling/teaching-timetables.htm>

Semester 1 and Semester 2 timetables will be available two weeks before the start of Semester 1 and two weeks before the end of Semester 1 respectively.

Information on the location of rooms on the published timetables can be found from

<http://www.hw.ac.uk/timetabling/building-information.htm>

all students are advised to ensure that they know the location of each timetabled activity that they are required to attend.

Students will be alerted to changes to the timetables made during semester from the course responsible person.

The timetable contains information about room location. The table below shows the room codes which appear on timetables.

Discipline	ROOM CODE
Biological Sciences	JM (John Muir Building)
Building	EC (Edwin Chadwick Building)
Chemical Engineering	JC (John Coulson Building)
Chemistry	WP (William Perkin Building)
Civil Engineering	WA (William Arrol Building)
Computer Science & Electrical Engineering	EM (Earl Mountbatten Building)
Computer Centre	CC (Computer Centre)
Languages	HP (Henry Prais Building)
Management	MG (Management)
Mathematics	SR (Scott Russell Building)
Mechanical Engineering	NS (James Nasmyth Building)
Physics	DB (David Brewster Building)

In addition, the four main lecture theatres in the Hugh Nisbet Building are given the designation LT

Example LT2 Lecture Theatre 2
 EM 1.84 Earl Mountbatten, Room 1.84

University Desktop Computer Service Labs

There are 11 PC Caledonia Labs available for everyone to use. There will be many occasions when some of these labs will be booked for teaching, then one or more of the other labs listed may be free.

JM G.56	35 machines	SR G.12	32 machines
EC 3.04	33 machines	SR G.13	16 machines
WP 1.02	20 machines	NS 2.03	20 machines

EM 2.52	81 machines	NS 2.08	20 machines
CC 24	7 machines	DB 1.57	40 machines
MG G.22	40 machines		

Seminar Room

Small rooms may be booked for studying (refer to Admin Office 2.40 for bookings). An overhead projector is available for presentation practice. A video player and monitor are also available.

Photocopying

A photocopier for student use is located in the Hugh Nisbet Building near the "Microbyte/Student Shop", the Library and Printing Services. **Please note that students wishing to photocopy onto transparencies must do this at the main university Printing Section.** Credit cards may be purchased at Printing Services or at the main foyer of the University.

Lockers

Lockers are available for use by students. Lockers are situated in various sites throughout the building and keys are available, for a deposit of £10.00. Signs regarding issue point and times for keys will be sited at locker locations and the Superintendent's notice board outside Office 1.31.

Refectories

The main dining areas are all in the Hugh Nisbet Building. Facilities are also available in the Student Union.

Institution of Engineering Technologies (I.E.T.)

At some stage in your career you will become a member of the Institution of Electrical Engineers (M.I.E.T.). As a student you should be aware of the functions of the I.E.T. and as an introduction you should know about the student and graduate web site www.circuit.iee.org.

I.E.T. Circuit is a community website for students, graduates and young professionals which acts as a one-step gateway for young engineers to find I.E.T. information which is relevant to them, their studies and career development along with essential news, global contacts and useful weblinks. The site also features up to date information about how to get the most out of I.E.T. membership as well as invaluable careers resources and job opportunities.

Riccarton Bus Service

There is an adequate bus service between the city centre and the Riccarton campus. The journey time is about 30 minutes and there are three services, viz., Nos. 45, 34, 25, and N25 Throughout the working day, the service is every 10-15 minutes. There is also a more limited bus service X40 to the South Gyle.

The above information is necessarily sparse. Such services and timetables are liable to change at fairly short notice. Seek the latest information from the Reception Desk at the James Watt Centre or from www.lothianbuses.co.uk.

Car Parking

Cars should be parked in the car park at the east entrance to the campus.

A limited number of car parking permits for car parks close to the Mountbatten Building may be available to students. A short written statement detailing your special needs must be submitted to the Mountbatten Building Office Room 2.40 at the beginning of Term 1.

5 Programme Overview

EECE offers full-time programmes leading to the following degrees:

MEng/BEng in Electrical and Electronic Engineering
MEng/BEng in Computing and Electronics

The Bachelor's programmes are four-year Honours programmes with a major project being completed in the final year. However, an Ordinary degree can be awarded upon successful completion of the first three years. At the end of the third year selected students from some programmes can complete two further years of study for the degree of Master of Engineering (M.Eng.).

Any problems relating to classes should first of all be brought to the attention of the appropriate lecturer. Remaining difficulties can be discussed with the year supervisor or degree director. If satisfactory resolution of difficulties cannot be reached then the matter may be referred to the Academic Head.

Problems which only affect individual students should be raised with the mentor (see Section 2) or year supervisor.

Heriot-Watt University reserves the right to update materials from time to time and will ensure that advance notification concerning changes to materials is provided to students on the relevant section of the University website. It is the responsibility of students to check the website, particularly if they are returning to studies after a period during which their studies have been in abeyance.

6 Programme Structure and Delivery

The first year of each programme in Electrical, Electronic and Computer Engineering comprises four components:

Core:	Subject specialism and mandatory component of programme
Analysis:	Mathematical Methods and Applications relevant to core subject
Praxis:	Skills based methods and applications relating to core subject
Option	free choice of subject from school or university (choice does not exist for all programmes, i.e. those courses with more core elements)

6.1.1 Analysis

The analysis courses comprise two main parts: (mathematical) methods where you are taught the theory and principles of mathematical techniques and applications where you apply these methods to problems in engineering (putting your mathematics knowledge into practice). The courses are taught by staff from the School of Engineering and Physical Sciences and is assessed by examination and course work. There will be tutorials to support the course.

6.1.2 Praxis

The praxis courses are skills based courses closely associated with the core subject area. The first semester Course is particularly concerned with ensuring that all students have a basic understanding of computers for communication (email) analysis of data (spreadsheets), creating of reports (word) and accessing information (www/virtual learning environment). These skills are fundamental and will be built on throughout your programme. The praxis courses also have practical laboratories and will have an extensive electronics build project that will help develop the practical skills required for electronics design.

The praxis modules also have an element of Professional Development Planning (PDP). PDP is the method by which you record evidence of your skills and abilities. Employers are not just looking to employ graduates based on a degree classification but differentiate between applicants based on whether or not these applicants can demonstrate other attributes such as leadership, ability to take decisions, communication skills, group working and independence. Unless you record your experiences throughout your programme, you are unlikely to convince a recruitment panel of your suitability for employment. PDP is an integral part of your programme but it is your responsibility to keep it current. In the first semester you will start a PDP by recording evidence of skills (collection of assignments and laboratory reports) and the completion of exercises reflecting on experiences and performance throughout the first year.

Electrical and Electronic Engineering Programme Structure

	Semester 1	Semester 2	Semester 1	Semester 2	
Stage 1	8 courses: 7 mandatory 1 elective	Semester 1 Praxis electronic design B37VA Introduction to EE and circuits B37EA EPS Maths 1 B87AM	Semester 2 Praxis programming B37VB Digital design and project B37DA Integrated electronic system design B37VF EPS Maths 2 B87AN	1 Elective from: Mechanics and Waves B27MW Mechanics and Optics B27MO Mechanical Engineering Science 1 B57EA Management 1 C17MA	
Stage 2	8 courses: 8 mandatory	Circuits and analysis B38EB Digital design and programming B38DB Business awareness, safety and sustainability B49CB EPS maths 3 B88AO	Electromechanical systems B38EC Signals and systems B38SA Computer architecture and embedded systems B38DF EPS maths 4 B88AP		
Stage 3	7 courses including one 30-credit course 7 mandatory	Physical electronics and semiconductors B39MB Engineering mathematics and statistics B39AX System project B39VS (30 credits)	Analogue electronics B39EE Electrical energy systems B39ES Electromagnetism B39MA Time and frequency signal analysis B39SB		
Stage 4	7 courses Including one 30 credit course 2 mandatory 5 optional	4th year Project 1 B30UB (15 credits)	4th year Project 2 B30UC (30 credits)	Subject to timetabling constraints Choose 3 (including at least two level 10 courses) Linear Control B30EJ Advanced Analogue Electronics B30EI Communications B30SQ Digital Signal Processing B31SC Embedded Systems B31DD	Subject to timetabling constraints Choose 2 Sustainable Energy and Power Systems B30EK Microwave Techniques B30MT Advanced Digital Electronics B31DE Image Processing B31SE

<p style="text-align: center;">Stage 4 (MEng)</p>	<p>7 courses Including one 30 credit course 3 mandatory 4 optional</p>	<p>4th year MEng Group Project 1 B30UD (15 credits)</p> <p>New product and process development B81NP</p>	<p>4th year MEng Group Project 2 B30UE (30 credits)</p>	<p>Subject to timetabling constraints Choose 2</p> <p>(Including at least one level 10 course)</p> <p>Linear Control B30EJ Advanced Analogue Electronics B30EI Communications B30SQ</p> <p>Digital Signal Processing B31SC Embedded Systems B31DD</p>	<p>Subject to timetabling constraints Choose 2</p> <p>Sustainable Energy and Power Systems B30EK Microwave Techniques B30MT</p> <p>Advanced Digital Electronics B31DE Image Processing B31SE</p> <p>4th year Individual Project B30UF (30 credits) (only available to students transferring to BEng degree)</p>
<p style="text-align: center;">Stage 5</p>	<p>5 courses Including one 60 credit course 1 mandatory 4 optional</p>	<p>Project placement or research B31VL (60 credits)</p>			<p>Subject to timetabling constraints Choose 4</p> <p>Advanced Digital Electronics B31DE Image Processing B31SE Advanced Reading B31RA Software Engineering 2 B31PB Embedded Software B31DG Principles of Mobile Communication B31SI RF Mobile Communication Systems B31SH Distributed Generation B31GB Renewable Generation and Conversion B31GC High Voltage Engineering B31GD Demand Management & Energy Storage B51GK</p>

Computing and Electronics Programme Structure

		Semester 1	Semester 2	Semester 1	Semester 2
Stage 1	8 courses: 8 mandatory	Semester 1 Praxis electronic design B37VA Introduction to EE and circuits B37EA EPS Maths 1 B87AM Software development 1 F27SA	Semester 2 Digital design and project B37DA EPS Maths 2 B87AN Software development 2 F27SB Software development 3 F27SG		
Stage 2	8 courses: 8 mandatory	Circuits and analysis B38EB Digital design and programming B38DB Internet, Communications and Mobility F28IM Data Structures and Algorithms F28DA	Software design F28SD Signals and systems B38SA Computer architecture and embedded systems B38DF EPS maths 4 B88AP		
Stage 3	7 courses including one 30-credit course 6 mandatory 1 optional	Software Engineering F29SO System project B39VS (30 credits)	Professional development F29PD Operating Systems & Concurrency F29OC Time and frequency signal analysis B39SB Formal Specification F29FS	Subject to Timetabling constraints Choose 1 Artificial Intelligence and Intelligent Agents F29AI Computer Graphics F29GR	

Stage 4	7 courses Including one 30 credit course 2 Mandatory 5 optional	4th year Project 1 B30UB (15 credits)	4th year Project 2 B30UC (30 credits)	Subject to timetabling constraints Choose 3 Linear Control B30EJ Communications B30SQ Digital Signal Processing B31SC Embedded Systems B31DD Data Mining and Machine Learning F21DL Distributed Systems Programming F21DS 3D Modelling and Animation F21MA Mobile Communications and Programming F21MC Robotics and Automation F21RO Web Intelligence F21WI	Subject to timetabling constraints Choose 2 Advanced Digital Electronics B31DE Image Processing B31SE Biologically Inspired Computation F21BC Distributed & Parallel Technologies F21DP Computer Games Programming F21GP Information Systems Methodologies F21IF Network Applications F21NA Virtual Environments F21VE
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Stage 4 (MEng)	<p>7 courses Including one 30 credit course</p> <p>3 mandatory 4 optional</p>	<p>MEng group Project 1 B30UD (15 credits)</p> <p>New product and process development B81NP</p>	<p>MEng Group Project 2 B30UE (30 credits)</p>	<p>Subject to timetabling constraints Choose 2</p> <p>Linear Control B30EJ Communications B30SQ</p> <p>Digital Signal Processing B31SC Embedded Systems B31DD Data Mining and Machine Learning F21DL Distributed Systems Programming F21DS 3D Modelling and Animation F21MA Mobile Communications and Programming F21MC Robotics and Automation F21RO Web Intelligence F21WI</p>	<p>Subject to timetabling constraints Choose 2</p> <p>Advanced Digital Electronics B31DE Image Processing B31SE Biologically Inspired Computation F21BC Distributed & Parallel Technologies F21DP Computer Games Programming F21GP Information Systems Methodologies F21IF Network Applications F21NA Virtual Environments F21VE</p> <p>4th year Individual Project B30UF (30 credits) (only available to students transferring to BEng degree)</p>
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<p style="text-align: center;">Stage 5</p>	<p>5 courses Including one 60 credit course 1 mandatory 4 optional</p>	<p>Project placement or research B31VL (60 credits)</p>		<p>Subject to timetabling constraints Choose 4</p> <p>Advanced Digital Electronics B31DE Embedded Software B31DG Advanced Reading B31RA Image Processing B31SE Biologically Inspired Computation F21BC Distributed & Parallel Technologies F21DP Computer Games Programming F21GP Information Systems Methodologies F21IF Network Applications F21NA Software Engineering Master Class F21SM Virtual Environments F21VE</p>
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PART B – UNIVERSITY INFORMATION

The Academic Registry is responsible for producing Part B of the handbook to provide information and assistance on University policies and support services. Kathy Patterson is the Academic Registrar and Deputy Secretary.

Students should contact the appropriate School/Institute in the first instance for any academic query or assistance.

Please note that the following sections are standard sources of information provided to all students. However, certain aspects are programme-specific and students should refer to Part A where directed.

B1. ORDINANCES AND REGULATIONS

Heriot-Watt University has a detailed set of rules which governs the operation and management of University business. These are referred to as Ordinances and these Ordinances are set by the Court, which is the governing body of the University. The University Ordinances are also supported by University Regulations which detail the rules, policies and practices which Staff and Students must adhere to for all academic matters.

The following section on Academic Support Services often refers to Ordinances and Regulations. These links will provide you with information and guidance on all matters relating to your academic life.

A full list of Ordinances and Regulations are available at the following weblink:

<http://www.hw.ac.uk/ordinances/regulations.pdf>

B2. QUICK FINDER GUIDE TO ACADEMIC SUPPORT SERVICES

Subject Area		For More Information Please Refer to:
1. Academic Support		
1.1	Mentoring	http://www.hw.ac.uk/quality/studentssupport.htm and http://www.hw.ac.uk/registry/enrolment.htm <i>Please refer to the programme-specific information in Part A of this handbook for further details on Mentoring.</i>
1.2	Professional Development Planning	http://www.hw.ac.uk/careers/pdp/index.php <i>Please refer to the programme-specific information in Part A of this handbook for further details on Professional Development Planning.</i>
1.3	Student Feedback	http://www.hw.ac.uk/quality/studentfeedback.htm and http://www.HWUnion.com

		<i>Please refer to the programme-specific information in Part A of this handbook for further details on Student Feedback.</i>
2. Enrolment, Attendance and Periods of Study		
2.1	Absence from University	http://www.hw.ac.uk/ordinances/regulations.pdf Regulation 1 – General Regulation, paragraph 6 Regulation 3 (new) – Modular First Degrees, paragraph 11 Regulation 4 – Postgraduate Diplomas and Graduate Diplomas, paragraph 12 Regulation 18 – Postgraduate Certificates and Graduate Certificates, paragraph 12
2.2	Accreditation of Prior Learning	http://www.hw.ac.uk/ordinances/regulations.pdf Regulation 46 – Accreditation of Prior Learning (APL)
2.3	Amendment to Registration	Application Form: http://www.hw.ac.uk/registry/resources/amendmenttoregistration.doc
2.4	Attendance	Policy on Student Attendance: http://www.hw.ac.uk/registry/resources/studentattendancepolicy.pdf Withdrawal from University: http://www.hw.ac.uk/registry/resources/withdrawalprocedures.pdf
2.5	Change of Address	Application Form: http://www.hw.ac.uk/registry/resources/ChangeofAddress.pdf
2.6	Enrolment	http://www.hw.ac.uk/registry/enrolment.htm <i>Please refer to the programme-specific information in Part A of this handbook for further details on enrolment.</i>
2.7	Periods of Study	http://www.hw.ac.uk/ordinances/regulations.pdf Regulation 3 (new) – Modular First Degrees, paragraph 5 Regulation 4 – Postgraduate Diplomas and Graduate Diplomas, paragraph 10 Regulation 18 – Postgraduate Certificates and Graduate Certificates, paragraph 10
2.8	Student Personal Information (Data Protection)	www.hw.ac.uk/students/data_protection_policy.pdf
2.9	Suspension of Studies	Application Form: http://www.hw.ac.uk/registry/resources/studentappealform.doc
2.10	Teaching Timetables	www.hw.ac.uk/timetabling
3. Guidance on Assessment		
3.1	Assessment	http://www.hw.ac.uk/ordinances/regulations.pdf Regulation 3 (new) – Modular First Degrees, paragraphs 13 -19 Regulation 4 – Postgraduate Diplomas and Graduate Diplomas, paragraphs 13 – 19 Regulation 18 – Postgraduate Certificates and Graduate Certificates, paragraphs 13 - 19
3.2	Common	http://www.hw.ac.uk/registry/policies.htm

Assessment and Progression System (CAPS)		
3.3	Extension to Assessment Deadlines	http://www.hw.ac.uk/registry <i>Please refer to the programme-specific information in Part A of this handbook for further details on extensions to assessment deadlines.</i>
3.4	Ill Health and Extenuating Circumstances - Assessment	<p>A University wide policy on Special Circumstance in Relation to Assessment is in the final stages of development. This will be made available on the Registry website as soon as possible at:</p> <p>http://www.hw.ac.uk/registry/policies.htm</p> <p>http://www.hw.ac.uk/ordinances/regulations.pdf</p> <p>Regulation 1 – General Regulation, paragraph 6 Regulation 3 (new) – Modular First Degrees, paragraph 11, 16, 26 Regulation 4 – Postgraduate Diplomas and Graduate Diplomas, paragraph 12, 17, 21 Regulation 18 – Postgraduate Certificates and Graduate Certificates, paragraph 12, 17, 21</p>
3.5	Non-Submission of Assessment	<i>Please refer to the programme-specific information in Part A of this handbook for further details on non-submission of assessments.</i>
3.6	Submission of Assessment	<i>Please refer to the programme-specific information in Part A of this handbook for further details on submission of assessment.</i>
4. Examination and Re-assessment Procedures		
4.1	Assessment Results	http://www.hw.ac.uk/registry/examinations.htm <i>Please refer to the programme-specific information in Part A of this handbook for further details on assessment results.</i>
4.2	Discretionary Credits	http://www.hw.ac.uk/ordinances/regulations.pdf Regulation 3 – Modular First Degrees, paragraph 23 Regulation 4 – Postgraduate Diplomas and Graduate Diplomas, paragraph 20 Regulation 18 – Postgraduate Certificates and Graduate Certificates, paragraph 20
4.3	Examinations	http://www.hw.ac.uk/ordinances/ordinances.pdf Ordinance 2 – Fees, Charges, Fines and Debts <i>Please refer to the programme-specific information in Part A of this handbook for further details on examinations.</i>
4.4	Examination Diets	http://www.hw.ac.uk/registry/examinations.htm <i>Please refer to the programme-specific information in Part A of this handbook for further details on examinations diets.</i>
4.5	Examination Timetables	http://www.hw.ac.uk/registry/examinations/timetable.htm <i>Please refer to the programme-specific information in Part A of this handbook for further details on examination timetables .</i>
4.6	Ill Health and Extenuating Circumstances – Examinations	http://www.hw.ac.uk/ordinances/regulations.pdf Regulation 1 – General Regulation, paragraph 6 Regulation 9 – Assessments and Examinations, paragraphs 9 and 12 <i>Students should refer to the programme-specific information in Part</i>

		A of this handbook for related procedures in Schools.
4.7	Policy on Student Fees and Charges	http://www.hw.ac.uk/policy/student_fees.pdf
4.8	Re-assessment	Application Form: http://www.hw.ac.uk/registry/examinations/reassessmentprocedures.htm Please refer to the programme-specific information in Part A of this handbook for further details on re-assessment.
4.9	Use of Calculators and Dictionaries in Examinations	http://www.hw.ac.uk/registry/policies.htm http://www.hw.ac.uk/ordinances/regulations.pdf Regulation 9 – Assessments and Examinations, paragraph 8
5. Grading, Awards and Qualifications		
5.1	Honours Classification and Grading	http://www.hw.ac.uk/ordinances/regulations.pdf For information regarding the qualifying courses used to determine honours classifications, please refer to: Regulation 3 (new) – Modular First Degrees, paragraph 15 For information on credit levels relating to degree awards can be found at: Regulation 3 (new) – Modular First Degrees, paragraph 21
5.2	Intermediate Award	http://www.hw.ac.uk/registry/awards/intermediateawards.htm
6. Graduation		
6.1	Graduation Information and Application Forms	http://www.hw.ac.uk/registry/graduation.htm
7. Conduct, Discipline and Appeals		
7.1	Academic Conduct (including copying, plagiarism and collusion)	Further Information is available from: http://www.hw.ac.uk/ordinances.htm Ordinance 9 – Student Discipline Regulation 9 – Assessment and Examinations, Paragraph 8 Regulation 50 – Student Discipline
7.2	Appeals	Further Information is available from: http://www.hw.ac.uk/ordinances/regulations.pdf Regulation 36 – Student Appeals
7.3	Detection of Plagiarism	http://www.hw.ac.uk/registry/discipline.htm http://www.hw.ac.uk/registry/resources/plagiarismjiscnote.pdf
7.4	Guidelines for Students and Staff on Student Discipline Procedures	http://www.hw.ac.uk/registry/resources/discguidelines.pdf
7.5	Plagiarism	Further Information is available from: http://www.hw.ac.uk/registry/discipline/plagiarism.htm

		<p>Plagiarism Guide: For an English language version, please refer to http://www.hw.ac.uk/registry/resources/plagiarismguide.pdf (this document is attached in Appendix A)</p> <p>For the Chinese language version, please refer to http://www.hw.ac.uk/registry/resources/plagiarismguidechinese.pdf</p> <p>For the Arabic language version, please refer to http://www.hw.ac.uk/registry/resources/plagiarismguidearabic.pdf</p>
8. Deferred Progression, Suspension and Withdrawal		
8.1	Deferred Progression	<p>Students should complete an Amendment to Registration Form (Approval by School/Institute) available from:</p> <p>http://www.hw.ac.uk/registry/resources/amendmenttoregistration.doc</p>
8.2	Exit Awards	http://www.hw.ac.uk/registry/awards/exitawards.htm
8.3	Suspension	<p>Students should complete an Amendment to Registration Form (Approval by School/Institute) in the first instance:</p> <p>http://www.hw.ac.uk/registry/resources/amendmenttoregistration.doc</p> <p>Further Information is available from: http://www.hw.ac.uk/ordinances/regulations.pdf</p> <p>Regulation 3 (new) – Modular First Degrees, paragraph 20 Regulation 4 – Postgraduate Diplomas and Graduate Diplomas, paragraph 10 Regulation 18 – Postgraduate Certificates and Graduate Certificates, paragraph 10</p>
8.4	Withdrawal	<p>Application Form to withdraw from studies is available from: http://www.hw.ac.uk/registry/studentrecords.htm</p>
9. Student Fees and Charges		
9.1	Charges for Transcripts, Certifications, Late Enrolment and Student Identity Cards	<p>Follow the link for Additional Notes on Fees at: http://www.hw.ac.uk/registry/resources/additionalfees.pdf</p>
9.2	Fees Status Enquiry Form	http://www.hw.ac.uk/support/isao/docs/Fee%20Form%202011.pdf
9.3	Information on Student Fees	<p>www.hw.ac.uk/student-life/scholarships/tuition-fees.htm and http://www.hw.ac.uk/ordinances/ordinances.pdf Ordinance 2 – Fees, Charges, Fines and Debts</p>
9.4	Policy on Student Fees and Charges	http://www.hw.ac.uk/policy/student_fees.pdf
9.5	Re-assessment Fees and Procedures	http://www.hw.ac.uk/registry/examinations/reassessmentprocedures.htm

9.6	Repeated Courses	Policy on Additional Courses: http://www.hw.ac.uk/students/AdditionalCoursesPolicy.pdf
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B3. QUICK FINDER GUIDE TO STUDENT ADMINISTRATION AND SUPPORT SERVICES

Much of the detail this handbook provides guidance and links for the academic operations of a complex institution like Heriot-Watt University. However, as well as helping to inform students, the University also hopes to ensure that students are happy members of a vibrant community.

This section outlines the range of services available for students to help them get the most out of their time here and to assist with any problems they may experience along the way.

Student Administration and Support Service		
1	Academic Counselling and Skills Coaching	http://www.hw.ac.uk/sbc/library/academic_skills/index.htm
2	Academic Registry	http://www.hw.ac.uk/registry
3	Careers Advisory Service	http://www.hw.ac.uk/careers
4	Centre for Sport and Exercise	Edinburgh Campus: http://www.hw.ac.uk/sports/
5	Chaplaincy	http://www.hw.ac.uk/chaplaincy/
6	Computing Services	Regulation 29 'Use of Computing Facilities': http://www.hw.ac.uk/it/Rules_%20Regulations/conditionsofuse.html General IT information and Help: http://www.hw.ac.uk/it/Help_Support/index.html or contact IT Help on +44 (0)130 451 4050 Freewire: http://www.freewiretv.com/hw
7	Development and Alumni Office	http://www.hw.ac.uk/alumni.htm
8	Equality and Diversity Service	http://www.hw.ac.uk/equality
9	Finance Office	http://www.hw.ac.uk/student-life/scholarships-fees.htm or contact Finance@hw.ac.uk
10	Guide to Student Life	http://www.hw.ac.uk/student-life.htm
11	Health Service	http://www.hw.ac.uk/health
12	Heriot Watt University Students' Association	http://HWUnion.com or contact hwusa@hw.ac.uk
13	Information Security (Data Protection)	To find out more please contact foi@hw.ac.uk

14	International Student Advice	http://www.hw.ac.uk/support/isao/about-us.htm
15	Library	http://www.hw.ac.uk/library/
16	Sports Union	http://www.hw.ac.uk/sports/sports-union.htm
17	Student Service Centre	http://www.hw.ac.uk/studentcentre
18	Student Support and Accommodation	http://www.hw.ac.uk/support/isao/accommodation.htm or contact - studentsupport@hw.ac.uk
19	Wider Access Unit	Information on the Wider Access Unit can be found at: http://www.undergraduate.hw.ac.uk/wider-access/

University Policy and Guidance

The University publishes many policies and reference information on its website that may be of use and of interest to students throughout their programme of studies at Heriot-Watt University

Wherever practicable, University policies are designed to include all members of the University's community, both in and outwith the main campus environments. Policies of specific interest and relevance to students can be accessed via:

www.hw.ac.uk/registry

and,

Freshers' Guide

<http://www.hw.ac.uk/registry/resources/freshersguide.pdf>

STUDENT GUIDE TO PLAGIARISM ¹

Plagiarism is intellectual theft and is a major offence which the University takes seriously in all cases. Students must therefore avoid committing acts of plagiarism by following these guidelines and speaking to academic staff if they are uncertain about what plagiarism means. Those who are found to have plagiarised will be subject to the University's disciplinary procedures, which may result in penalties ranging from the deduction of credits and courses already achieved by students to compulsory termination of studies. Students are advised to refer to Regulation 50 at <http://www.hw.ac.uk/ordinances/regulations.pdf> and to the Guidelines for Staff and Students on Discipline at <http://www.hw.ac.uk/registry/discipline.htm> for further details of how the University deals with all acts of plagiarism.

1 Introduction

- 1.1 This guide is intended to provide students at Heriot-Watt University with a clear definition of plagiarism and examples of how to avoid it.
- 1.2 The guide may also be of use to members of staff who seek to advise students on the various issues outlined below.

2 Definition

- 2.1 Plagiarism involves the act of taking the ideas, writings or inventions of another person and using these as if they were one's own, whether intentionally or not. Plagiarism occurs where there is no acknowledgement that the writings or ideas belong to or have come from another source.
- 2.2 Most academic writing involves building on the work of others and this is acceptable as long as their contribution is identified and fully acknowledged. It is not wrong in itself to use the ideas, writings or inventions of others, provided that whoever does so is honest about acknowledging the source of that information. Many aspects of plagiarism can be simply avoided through proper referencing. However, plagiarism extends beyond minor errors in referencing the work of others and also includes the reproduction of an entire paper or passage of work or of the ideas and views contained in such pieces of work.

3 Good Practice

- 3.1 Academic work is almost always drawn from other published information supplemented by the writer's own ideas, results or findings. Thus drawing from other work is entirely acceptable, but it is unacceptable not to acknowledge such work. Conventions or methods for making acknowledgements can vary slightly from subject to subject, and students should seek the advice of staff in their own School/Institute about ways of doing this. Gene APPENDIX A systems fall into the Harvard (where the text citation is by author and date) and number systems (where the text citation is by using a number). Both systems refer readers to a list at the end of the piece of work where sufficient information is provided to enable the reader to locate the source for themselves.
- 3.2 When a student undertakes a piece of work that involves drawing on the writings or ideas of others, they must ensure that they acknowledge each contribution in the following manner:
- **Citations:** when a direct quotation, a figure, a general idea or other piece of information is taken from another source, the work and its source must be acknowledged and identified where it occurs in the text;

¹ The author acknowledges the following sources of information used in preparing this guide to Plagiarism: "Plagiarism – A Good Practice Guide", Carroll, J and Appleton, J (2001) and various extracts from Student/Programme Handbooks 2004/2005, Schools and Institutes at Heriot-Watt University

- **Quotations:** inverted commas must always be used to identify direct quotations, and the source of the quotation must be cited;
- **References:** the full details of all references and other sources must be listed in a section at the end of any piece of work, such as an essay, together with the full publication details. This is normally referred to as a “List of References” and it must include details of any and all sources of information that the student has referred to in producing their work. (This is slightly different to a Bibliography, which may also contain references and sources which, although not directly referred to in your work, you consulted in producing your work).

3.3 Students may wish to refer to the following examples which illustrate the basic principles of plagiarism and how students might avoid it in their work by using some very simple techniques:

3.3.1 Example 1: A Clear Case of Plagiarism

Examine the following example in which a student has simply inserted a passage of text (*in italics*) into their work directly from a book they have read:

University and college managers should consider implementing strategic frameworks if they wish to embrace good management standards. *One of the key problems in setting a strategic framework for a college or university is that the individual institution has both positive and negative constraints placed upon its freedom of action.* Managers are employed to resolve these issues effectively.

This is an example of bad practice as the student makes no attempt to distinguish the passage they have inserted from their own work. Thus, this constitutes a clear case of plagiarism. Simply changing a few key words in such a passage of text (e.g. replace ‘*problems*’ with ‘*difficulties*’) does not make it the student’s work and it is still considered to be an act of plagiarism.

3.4 What follows are examples of the measures that students should employ in order to correctly cite the words, thought or ideas of others that have influenced their work:

3.4.1 Example 2: Quoting the work of others

APPENDIX A

If a student wishes to cite a passage of text in order to support their own work, the correct way of doing so is to use quotation marks (e.g. “ ”) to show that the passage is someone else’s work, as follows:

“One of the key problems in setting a strategic framework for a college or university is that the individual institution has both positive and negative constraints placed upon its freedom of action”.

3.4.2 Example 3: Referencing the work of others

In addition to using quotation marks as above, students must also use a text citation. If the work being cited is a book, page numbers would also normally be required. Thus, using the Harvard system for a book:

“One of the key problems in setting a strategic framework for a college or university is that the individual institution has both positive and negative constraints placed upon its freedom of action” (Jones, 2001, p121).

The same reference could also be made to a book using the numeric system:

“One of the key problems in setting a strategic framework for a college or university is that the individual institution has both positive and negative constraints placed upon its freedom of action” (Ref.1, p121).

More often, a piece of work will have multiple references and this serves to show an examiner that the student is drawing from a number of sources. For example, articles by Brown and by Smith may be cited as follows in the Harvard system

“It has been asserted that Higher Education in the United Kingdom continued to be poorly funded during the 1980’s [Brown, 1991], whereas more modern writers [Smith, 2002] argue that the HE sector actually received, in real terms, more funding during this period than the thirty year period immediately preceding it”.

or as follows using the numeric system:

“It has been asserted that Higher Education in the United Kingdom continued to be poorly funded during the 1980’s [Ref 1], whereas more modern writers [Ref 2] argue that the HE sector actually received, in real terms, more funding during this period than the thirty year period immediately preceding it”.

3.4.3 Example 4: Use of reference lists

APPENDIX A

Whichever system is used, a list must be included at the end, which allows the reader to locate the works cited for themselves. The Internet is also an increasingly popular source of information for students and details must again be provided. You should adhere to the following guidelines in all cases where you reference the work of others:

If the source is a book, the required information is as follows:

- Author’s name(s)
- Year of Publication
- Title of Book
- Place of Publication
- Publishers Name
- All Page Numbers cited
- Edition (if more than one, e.g. 3rd edition, 2001)

If the source is an article in a journal or periodical, the required information is as follows:

- Author’s name(s)
- Year of Publication
- Title of Journal
- Volume and part number
- Page numbers for the article

If the source is from the Internet, the required information is as follows:

- Author’s or Institution’s name (“Anon”, if not known)
- Title of Document
- Date last accessed by student
- Full URL (e.g. <http://www.lib.utk.edu/instruction/plagiarism/>)
- Affiliation of author, if given (e.g. University of Tennessee)

The way in which the information is organised can vary, and there are some types of work (for example edited volumes and conference proceedings) where the required information is slightly different. Essentially, though, it is your responsibility to make it clear where you are citing references within your work and what the source is within your reference list.

Failure to do so is an act of plagiarism.

3.5 Students may find the following examples² of common plagiarism mistakes made by other students useful when reflecting on their own work:

- “I thought it would be okay as long as I included the source in my bibliography” [without indicating a quotation had been used in the text]
- “I made lots of notes for my essay and couldn’t remember where I found the information”
- “I thought it would be okay to use material that I had purchased online”
- “I thought it would be okay to copy the text if I changed some of the words into my own”
- “I thought that plagiarism only applied to essays, I didn’t know that it also applies to oral presentations/group projects etc”
- “I thought it would be okay just to use my tutor’s notes”

² Extract from ‘Plagiarism at the University of Essex’ advice copyrighted and published by the Learning, Teaching and Quality Unit at the University of Essex (<http://www.essex.ac.uk/plagiarism/pages/reasons.htm>), reproduced with kind permission.

- “I didn't think that you needed to reference material found on the we’ ”
- “I left it too late and just didn't have time to reference my sources”

APPENDIX A

None of the above are acceptable reasons for failing to acknowledge the use of others' work and thereby constitute plagiarism.

- 3.6 Students are encouraged to use a style of acknowledgement that is appropriate to their own academic discipline and should seek advice from their mentor, programme leader or other appropriate member of academic staff. There are also many reference sources available in the University Library which will provide useful guidance on referencing styles.

4 Managing Plagiarism

- 4.1 Students, supervisors and institutions have a joint role in ensuring that plagiarism is avoided in all areas of academic activity. Each role is outlined below as follows:

How you can ensure that you avoid plagiarism in your work:

- Take responsibility for applying the above principles of best practice and integrity within all of your work
- Be aware that your written work will be checked for plagiarism and that all incidents of plagiarism, if found, are likely to result in severe disciplinary action by the University. The standard penalty is to annul all assessments taken in the same diet of examinations (for details please refer to Regulation 50 at <http://www.hw.ac.uk/ordinances/regulations.pdf> and to the Guidelines for Staff and Students on Discipline at <http://www.hw.ac.uk/registry/discipline.htm>).

How your School/Institute will help you to avoid plagiarism:

- Highlight written guidance on how you can avoid plagiarism and provide you with supplementary, verbal guidance wherever appropriate
- Regularly check student work to ensure that plagiarism has not taken place (this may involve both manual and electronic methods of checking, an example of the latter being use of the Joint Information Standards Committee (JISC) “Turnitin” plagiarism detection software).
- Alert you to the procedures that will apply should you be found to have committed or be suspected of having committed an act of plagiarism and explain how further action will be taken in accordance with University policy and procedures.

How the University will endeavour to reduce student plagiarism:

- Provide clear written guidance on what constitutes plagiarism and how to avoid it directly to your School/Institute and to you
- Alert you and staff in your School/Institute to the penalties employed when dealing with plagiarism cases
- Take steps to ensure that a consistent approach is applied when dealing with cases of suspected plagiarism across the institution
- Take the issue of academic dishonesty very seriously and routinely investigate cases where students have plagiarised and apply appropriate penalties in all proven cases.

For information on plagiarism-detection software used across the University, please refer to:

www.hw.ac.uk/registry/resources/plagiarismjiscnote.pdf