Welcome to the Computer Science Department

Rob Stewart
First Year Coordinator

http://tiny.cc/hwu-macs2019
Today’s Schedule

10:00 Introduction to Computer Science
  • Some useful information
  • Courses and timetables
  • Assessment and progression
  • Support and personal tutors
  • Staff-student expectations

11:30 Meet Your Fellow Students  Postgraduate Centre 2.01

12:15 Lunch  Earl Mountbatten Crush Area

13:15 Student-Led Campus Orientation  Earl Mountbatten Crush Area
Some People You'll Meet Today

**Lyonell Boulton**  
Director of Learning and Teaching

**Andrew Ireland**  
Head of Computer Science

**Rob Stewart**  
Year 1 Coordinator

**Stefano Padilla**  
Computer Science Programme Director

**Jenny Coady**  
Information Systems Programme Director
Who am I?

• First year coordinator
• Teaching
  • Software Development 3 in year 1
  • Programming Languages in year 2
  • Parallel and Distributed Technologies in year 4

• Research: high performance & embedded parallel computing
  • programming languages
  • verification
Heriot-Watt University
Heriot-Watt University

Set up by the Victorians in 1821
- Formally became a University in 1966
- Named after the local hero James Watt
- Later funded by George Heriot's Trust
- The first Scottish university to admit women
- Riccarton campus opened in 1971
Computer Science

~170 first year students

Edinburgh

~80 first year students

Dubai*

Orkney

Galashiels

Malaysia

*Go Global inter-campus transfer
https://www.hw.ac.uk/students/studies/go-global.htm
Computer Science

Heriot-Watt has been teaching computer science for a long time

• We celebrated our 50th anniversary recently

• We were the 1st university in Scotland, and the 3rd in the UK, to introduce a computer science degree programme

• We have about 40 academics
Some Useful Information
Your School Office

Location: Earl Mountbatten Building EMB1.25

Opening Times: 10am to 4pm Monday to Friday

Telephone: 0131 451 3324
E-mail: macs-schooloffice@hw.ac.uk
Web site: http://www.macs.hw.ac.uk/students/
Finding your way around

• Take a bit of time to find your way around the campus

• Any room number which starts with “EM” is in Earl Mountbatten building
  • School office EM 1.25 (first floor)
  • my office EM G.56 (ground floor)

• “CM” = Colin McLaurin building (Maths)
The Edinburgh Campus

Please cycle on canal towpaths with consideration for other towpath users. We suggest you cycle with a buddy, cycle training, wear hi-vis clothing and lights, and carry basic repair equipment with you on your bicycle.
Computer Labs

• MACS computer labs are in
  • EM G.46, G.47, 2.45 (Windows)
  • EM 2.50 (Linux)

• University wide computer labs in
  • EM 2.52, plus university library (Windows)
  • GRID building (Linux and Windows)

MACS = School of Mathematical and Computer Sciences
Computer access

You need two different user accounts:

• **University login**
  • For Vision, email and central IT services
  • You will get this after enrolment
  • For help with university computers email [ithelp@hw.ac.uk](mailto:ithelp@hw.ac.uk)

• **MACS login**
  • For lab sessions in courses you will be studying
  • And generally for computers in the department
  • For help with MACS computers email [help@macs.hw.ac.uk](mailto:help@macs.hw.ac.uk)
Computer access

- You will be signing up for your MACS computer account next week, in the laboratory session at 14:15 on Monday 16th after 1st Praxis lecture
  - Forms handed out during lab session
  - **Please fill this in**
  - You need to know your student number
    - H number on ID enrolment card
Email

Email is our primary means of contacting and communicating with you outside lectures

• Please check your university email at least every two days during the week

• Can forward to another email account
  • Google “outlook office 365 forwarding”

• Always use your HW account to email us
  • so we know that it is you sending the email
Twitter

• @MACSHW for news, class cancellations etc
• @HWUcareers for info on vacancies
• @CSResearchHWU for research news from the department

• @HWUnion
• @HWUAdviceHub
• @HWU_IS
• @HeriotWattUni

• @HW_RAG
• @HeriotWatt_ISAO
• @CompSocHW
• @HWISSoc
Facebook

• School of Maths and Computer Science
  https://www.facebook.com/hwu.macs/

• Heriot-Watt GameDev Society
  https://www.facebook.com/groups/hwgamedev/
If you need to work late

• You can remain in the building until 10pm on weekdays, though you cannot enter the building after 7pm

• You can also access our machines from the computer labs in the university library
  • [http://www.macs.hw.ac.uk/cs/localinfo/facil/macs-cs-faq.html#Qnx](http://www.macs.hw.ac.uk/cs/localinfo/facil/macs-cs-faq.html#Qnx)
  • Open 24 hours during semester time
Courses & Timetables
Courses this semester

<table>
<thead>
<tr>
<th>Course</th>
<th>Lecturers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interactive Systems</td>
<td>Frank Broz, Theo Georgiou</td>
</tr>
<tr>
<td>Software Development 1</td>
<td>Michael Lones, Lilia Georgieva</td>
</tr>
<tr>
<td>Logic and Proof</td>
<td>Mark Lawson</td>
</tr>
<tr>
<td></td>
<td><em>(Not Information Systems)</em></td>
</tr>
<tr>
<td>Praxis</td>
<td>Tessa Berg</td>
</tr>
</tbody>
</table>
Courses this semester

- **Software Development 1 (SD1)**
  - An introduction to programming principles and object-oriented programming
  - The beginning of the software engineering strand
  - Will be followed by SD2 this year, SD3 next year
Courses this semester

• Introduction to Interaction Design
  • requirements gathering, design theory and techniques in interaction design.
  • an introduction to commonly used design techniques and pattern for user interfaces.
  • selection of routine skills and methods involved in working with users.
Courses this semester

• Praxis
  • Developing wider skills such as **working with others, self-directed study**, and an appreciation of the **wider context of CS and IS**
  • These are important **skills** required for the **rest of your degree**
Courses this semester

• Logic and Proof (*Computer Science*)
  • Introduction to techniques of logic and proof
  • The beginning of the theoretical CS strand
Courses this semester

• Logic and Proof (Computer Science)
  • Introduction to techniques of logic and proof
  • The beginning of the theoretical CS strand

OR

• Elective course (Information/Computer Systems)
  • You need to choose one of these
  • See sheet in your pack for options
  • Computer Systems students can pick an elective or choose to do logic and proof
### Timetable for BSc Computer Science, BSc Computer Systems* and MEng Software Engineering

* Showing logic and proof as an elective: check online timetable for other electives

Timetables available from [https://www.hw.ac.uk/students/studies/timetables.htm](https://www.hw.ac.uk/students/studies/timetables.htm)
Timetable for BSc Information Systems*

* Not showing elective: check online timetable for this

Timetables available from [https://www.hw.ac.uk/students/studies/timetables.htm](https://www.hw.ac.uk/students/studies/timetables.htm)
Course code: F27PX-S1
Location: PGG01
Schedule: Week 1 – Week 12

Lecturer(s): Dr T. Berg
Lec = Lecture
Tut = Tutorial
CLab = Computer Laboratory

Praxis

13:15 – 14:15
Teaching Rooms

Edinburgh Campus
www.hw.ac.uk/directions

Please cycle on canal towpaths with consideration for other towpath users. We suggest you cycle slowly, and when you are not cycling, wear hi-vis clothing and lights, and carry basic repair equipment with you on your bicycle.
Initial Sessions

• All courses begin with a lecture in Week 1
  • Praxis: Monday, 13:15, PGG01
  • Logic & Proof: Tuesday, 13:15, LT3
  • Interactive Systems: Friday, 09:15, PGG01
  • Software Development 1: Friday, 13:15, LT4

• Most labs & tutorials begin in Week 2
  • With the exception of Praxis, which has a lab in Week 1
  • If there are multiple lab or tutorial sessions, you’ll be told which one to attend (this is the case for most courses)
Self Study

• We expect you to spend 150 hours of study time on each course
  • This includes direct contact time, i.e. lectures, labs, tutorials
  • And the time you spend on assessments
  • But also plenty of self study, e.g. reading lecture slides & books, doing exercises, thinking etc.
Self Study

- Gaps in the timetable are not gaps in your study

I am not a gap!
We expect you to be here...

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>9–13 September 2019</td>
<td>Welcome Week</td>
</tr>
<tr>
<td>16 September – 6 December 2019</td>
<td>Semester 1 teaching</td>
</tr>
<tr>
<td>9–20 December 2019</td>
<td>Semester 1 exams</td>
</tr>
<tr>
<td>23 December 2019 – 10 January 2020</td>
<td>Semester 1 break</td>
</tr>
<tr>
<td>13 January – 3 April 2020</td>
<td>Semester 2 teaching</td>
</tr>
<tr>
<td>6–24 April 2020 (Easter: 12 April 2020)</td>
<td>Semester 2 break</td>
</tr>
<tr>
<td>27 April – 22 May 2020</td>
<td>Semester 2 exams</td>
</tr>
<tr>
<td>6–14 August 2020</td>
<td>Resit exams</td>
</tr>
</tbody>
</table>

(Hopefully not here!)

See https://www.hw.ac.uk/study/apply/academic-calendar.htm
Assessment & Progression
Assessment

• Courses are assessed through exams and/or coursework – see programme handbooks at: https://www.macs.hw.ac.uk/students/cs/

• E.g., for first semester courses:
  • Software Development 1: 50% exam, 50% coursework
  • Interactive Systems: 100% coursework
  • Praxis: 100% coursework
  • Logic & Proof: 80% exam, 20% coursework
Assessment

• These grades are awarded for each course:
  • A – usually 70% or more
  • B – usually between 60 and 70%
  • C – usually between 50 and 60%
  • D – usually between 40 and 50%
  • E – usually between 30 and 40%
  • F – Fail, usually below 30%

• There are no “quotas”
  • Your mark is based on how you perform, regardless of how other students perform
Assessment

• These grades are awarded for each course:
  • A – usually 70% or more  ⇒ "first" class degree
  • B – usually between 60 and 70%  ⇒ "two-one"
  • C – usually between 50 and 60%  ⇒ "two-two"
  • D – usually between 40 and 50%  ⇒ "third"
  • E – usually between 30 and 40%
  • F – Fail, usually below 30%

• There are no “quotas”
  • Your mark is based on how you perform, regardless of how other students perform
Other Schools

• Some of you will be taking electives and/or core courses from other schools

• Bear in mind that different schools follow different rules regarding assessment

• E.g. School of Social Sciences (SoSS)
  • E – usually between 35% and 40%
  • F – Fail, usually below 35%
Progression

• You take 8 courses per year

• Each course you pass gives you credits
  • 15 credits per course
  • You need at least an E to get the credits

• You need a certain number of credits to progress, and to get a degree
  • 120 (i.e. 15 x 8) to move from year 1 to year 2
Progression

• You also need to get a D in all core courses to progress from Year 1 to Year 2
  • For Computer Science and Computer Systems, these are all courses apart from Praxis
  • For Information Systems, there are 5 core courses (see list in handbook)

• See programme handbook for full details:
  • Available at https://www.macs.hw.ac.uk/students/cs/
Progression

• If you don’t get:
  • At least an E in a course
  • Or at least a D in a core course

• Then you have to resit the course

• Note, only your initial result is recorded on your degree transcript
  • So much better to pass first time!
  • You also have to pay an admin fee to resit...
Progression Board

• At the end of the year we hold a board to determine progression
  • Hopefully to the next year, but we also allow some students to repeat a year
  • We take into account marks
  • We also consider engagement and attendance
  • Decisions are made collectively by all academics who teach
When do I find out if I have passed?

• For first semester, exam results will be available online around mid January

• For second semester, exam results will be available online around the start of June

• You get feedback on your coursework within 15 working days of submitting it
Support
Your Personal Tutor

• Look in your pack to see who your personal tutor is
• They are there to help you. Contact them if something is affecting your studies, such as:
  • Health problems
  • Family circumstances
  • Financial difficulties

• They can direct you to the right place for help
• And can often help you negotiate with lecturers if you need an extension due to ill health
You'll be meeting your personal tutor tomorrow morning
Other Key Contacts

Rob Stewart
Year 1 Coordinator
R.Stewart@hw.ac.uk
• First year issues
• Mitigating circumstances

Stefano Padilla
Undergraduate Studies Director
s.padilla@hw.ac.uk
• Advice about programme transfers

Jenny Coady
Info. Systems Director
j.coady@hw.ac.uk
• Information systems degree issues and transfers

Tessa Berg
Disability Officer
t.berg@hw.ac.uk
• Support for students with disabilities
Mitigating circumstances

• If something unavoidable affects your academic performance
  • Fill in a “mitigating circumstances” form
  • [https://www.hw.ac.uk/students/studies/examinations/mitigating-circumstances.htm](https://www.hw.ac.uk/students/studies/examinations/mitigating-circumstances.htm) (or ask at school office)

• For example, if you are ill during an exam
  • Visit your doctor and get a medical certificate
  • Submit the form as soon as possible, even if evidence has to come later
Other sources of support

• Student Wellbeing Services
  • Disability support
  • Counselling service
  • More info at 10:55 talk tomorrow, Lecture Theatre 3

• The Student Union’s “Advice Hub”
  • Offers independent advice to students
  • http://www.hwunion.com/advice-hub
Heriot-Watt CS Department supports students in purchasing new technology with the Student Equipment Fund.

Rolling submissions with cut-off dates in October, January and May.

Apply to run hands-on experiments with new tools for a personal or course project.

More information at tiny.cc/hwsef

2019-20
Staff-Student Expectations

http://www.macs.hw.ac.uk/macshome/StaffStudentExpectationsHWCS.pdf
What students can expect from staff

• Commitment to helping you learn
• Politeness and respect
• A regular office hour slot for face to face meetings
• Written feedback and a mark for coursework within 15 working days after the hand-in time
• A reply to general email questions within 5 working days
• A response from your personal tutor within 2 working days
What students can expect from staff

• If you would like to see your exam script to see where you went wrong
  • go along to the school office and ask for a form to request this
  • It’ll take a bit of time to get the paper out of archives

• You can also make an appointment with the lecturer to get advice on your work.
What staff expect from students

• **Commitment to your learning**
• **Politeness and respect**
• **Attendance at classes**, unless they are specifically identified as voluntary. It is **your responsibility** to be available on campus to **attend classes** and in particular **class tests**.
• **Attention, courtesy and participation** during classes
• Preparation and practice for classes as specified by the lecturers. **For every hour of timetabled class, we expect you to spend 2-3 hours in private study.**
• **Practice, practice, practice!** In order to become a good programmer, you need to program regularly.
What staff expect from students

• Basic **organisation skills**: come prepared to **take notes**, use a calendar so you don’t forget **deadlines** and **appointments**
• If you **can’t make a scheduled meeting** with a staff member, **please notify them** in advance
• **Check your email** and *log into Vision* at least **every other day**
• **Reply to email** from staff within **5 working days** (if required!)
• **Pay attention** to the **feedback we give you**, and attempt to improve your work based on that feedback.
• Keep yourself **informed about developments** in computer science. **The department is full of experts.** Seek them out!
• **If you have a problem** which is interfering with your studying, please **discuss it with your personal tutor**.
Attendance

• Attending lectures and labs is really important
  • Students who don’t attend tend to fail

• For this reason, we monitor attendance in first year courses
  • Sign-in sheets in lectures and labs
  • We follow up on non-attendance
  • So let your lecturer know if you’ll be absent
Attendance

• Be aware of the university's attendance policy:
  • "In order to achieve course and programme learning outcomes, students are expected to attend all scheduled learning sessions (e.g. timetabled lectures, seminars, tutorials, workshops and laboratory sessions)"
  • Repeated non-attendance may lead to compulsory withdrawal from course assessment or even to compulsory withdrawal from the programme
Programming practice

• The most important skill you will develop in the first year
  • You will need this skill throughout your degree
  • You can only learn programming by doing it

• If you are struggling
  • Make use of the laboratory helpers
  • Attend the Code Clinic (see next slide)
  • Talk to your personal tutor or the course lecturer
Code Clinic
get help with programming questions
Tue 1:15 – 2:15pm
or email
code-clinic@macs.hw.ac.uk
EM 2.50
(Linux Lab, left)

from: http://classroomclipart.com/
Plagiarism

• Plagiarism is the copying of someone else's work without attribution

• The university takes plagiarism very seriously
  • *We use software to detect plagiarism* in written assessments and programming assignments
  • *Penalties* include compulsory withdrawal

• You'll hear more about plagiarism, and how to avoid it, in the Praxis course
Students’ views matter to us

• Each year has a class representative
  I'll be recruiting soon, so please consider standing

• If you have a complaint about a course, talk to the
  lecturer first (or ask the class rep to do it)

• If that doesn’t help, talk to your programme
  director (Stefano Padilla or Jenny Coady), or year
  coordinator (Rob Stewart)

• Tell us in time for us to help you!
Learning at University
A few myths about learning

There are some common but unhelpful myths that many people believe about learning:

1. I am rubbish at this subject so practice won’t help
2. Learning goes smoothly on an upwards path
3. Learning can happen without mistakes
4. I am taking a long time to learn something, so I must be stupid.
5. Experience is the same as intelligence
What makes a successful learner?

• *Curiosity*: enjoying puzzles and challenges
• *Courage*: saying “I don’t know... yet”. Not minding making mistakes
• Being willing to *explore, investigate and experiment for yourself*
• *Imagination*
What makes a successful learner?

• *Reason* and *discipline*

• *Sociability:* sharing ideas, working in groups

• *Being willing to reflect:* step back and think about how you could do something differently
My point?

• Don’t worry if you think you can’t do a topic to start with
• If you put in time and effort you will get better at it
• Every one of you can get a good degree if you persevere
Thank you

• Next:
  • **Meet Your Fellow Students @ 11:30**
    • Postgraduate Centre 2.01
  • **Lunch @ 12:15**
    • Earl Mountbatten Crush Area
  • **Student-Led Campus Orientation @ 13:15**
    • Earl Mountbatten Crush Area