



# Welcome to Level 4 Computing Science

# Honours Team

Role	Name
Honours head	Gerardo Aragon Camarasa
Level 3 head	Nicolas Pugeault
Level 4 head	Jake Lever
Level 5 Head	Yiannis Giannakopoulos
SE class head	Derek Somerville
Team project coordinator	Tim Storer
L4 Individual project coordinator	Paul Harvey
L5 Individual project coordinator	Yiannis Giannakopoulos
Placement coordinator	Derek Somerville
Senior Adviser	Gethin Norman
Learning, Teaching and Student Experience Manager	Una Marie Darragh
Honours Administrator	Heather Cassells

# Communication Channels

Please only use one communication channel (see “Who to contact?” Below)

- and do not send separate messages to multiple people
- this causes duplicated work and may slow down a response

Please be patient

- the standard expected time for a reply is **three to five working days**

Who to contact?

- **enrolment?** the [SoCS Helpdesk](#) or your adviser of studies
- **Exams?** the [SoCS Helpdesk](#)
- **academic queries?** contact your adviser of studies, [Year Head, Honours Head](#) or [Senior Adviser](#)
- **course issues during the semester?** contact the [Year Head or Honours Head](#)
- **student support queries?** the [Student Support Officer](#)
- **anything else?** the [SoCS Helpdesk](#) and they will pass it to the right person

# Enrolment

**You must enrol via MyCampus**

If you do not enrol correctly, you will not be able to access course material on Moodle, and will not be entered for course exams

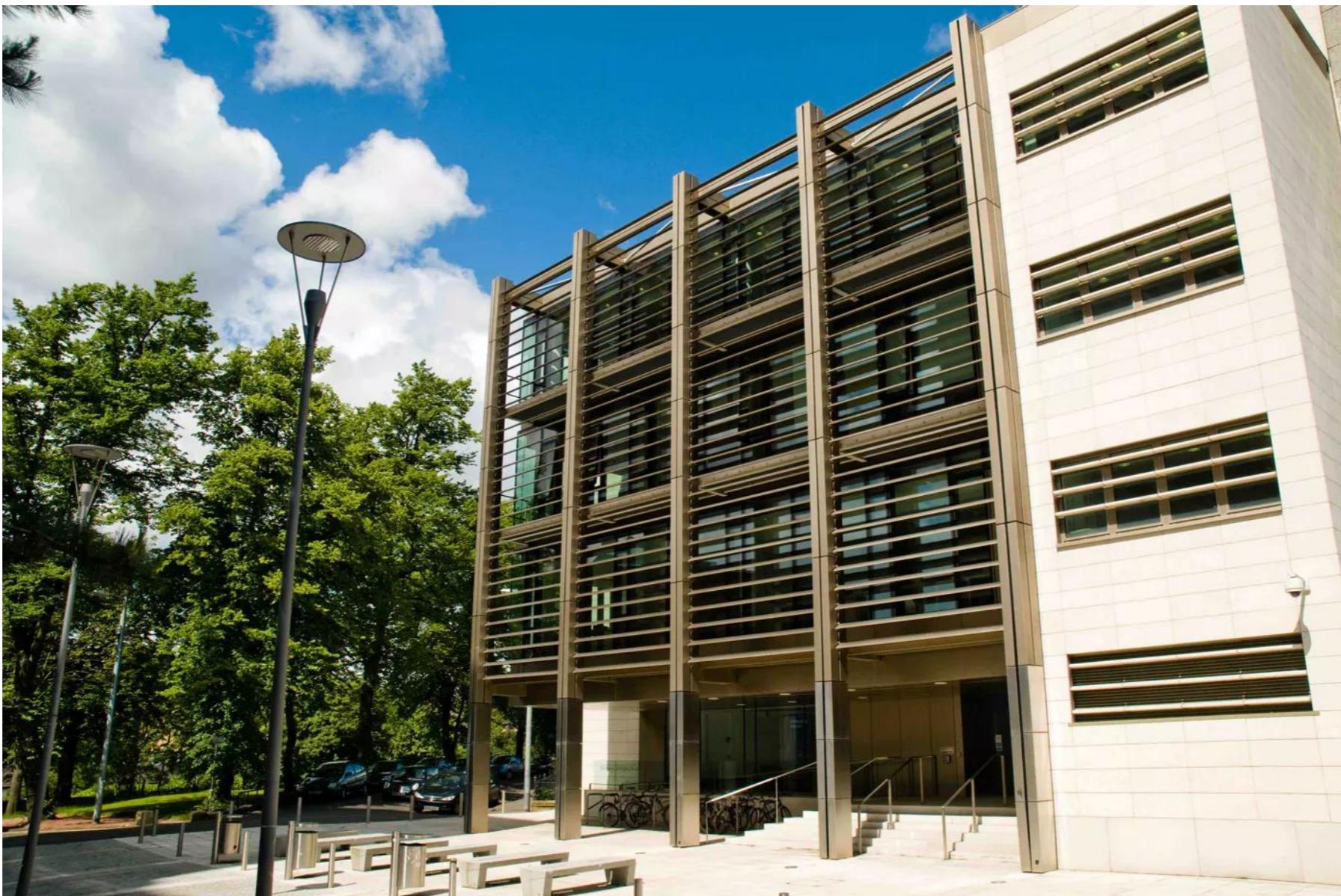
If you are having trouble with enrolment:

- first point of contact is the [SoCS Helpdesk](#)
- if this does not help: your adviser of studies or [Senior Adviser](#)

# Undergraduate Class Guide

- Read the undergraduate class guide carefully – it contains important information
- Available on the General Computing Science Information page on Moodle:

<https://moodle.gla.ac.uk/course/view.php?id=21505>



# Level 4 & Your Degree

# Structure

## Semester 1

- week 1: project seminar and strategic meeting with supervisor
- weeks 2–11: taught courses
- weeks 12–13: PSI exam and project work (no other deadlines)

## Semester 2

- weeks 17–26: taught courses
- week 27: project presentations and project hand-in

## Exams after Easter

- week 31: revision
- weeks 32–35: exams

# Degree Structure: CS4H

## Additional requirements:

- Professional Skills and Issues PSI(H) (semester 1 of level 4)
- One security course (semester 2 of level 3 or level 4)
- Individual 40 credit project (level 4)
- MSci students must take Research Methods and Techniques RMT(M) in level 4

## Remaining credits:

- from available optional courses as long as you meet the pre-requisites

# Degree Structure: SE4H

## Additional requirements:

- at least two from Coaching Software Teams CST(H/M), Data Product Engineering (H), Software Product Release Engineering SPRE(H/M) and Secured Software Engineering SSE(M) in level 4
- one security course in level 3 or 4
- Professional Skills and Issues PSI(H) in level 4
- MSci students must take Research Methods and Techniques RMT(M) in level 4

# Degree Structure: ESE4H

## Additional requirements:

- Engineering or CS ESE Project (40 credits) in level 4
- at least two from Coaching Software Teams CST(H/M), Data Product Engineering (H), Software Product Release Engineering SPRE(H/M) and Secured Software Engineering SSE(M) in level 4
- Professional Skills and Issues PSI(H)

# Degree Structure: Combined

## Level 4: 60 credits in Computing Science

- smaller individual project: 20 credits
- 40 credits from optional courses
- choices subject to timetabling constraints and pre-requisites
- MSci students must take Research Methods and Techniques RMT(M)

# Degree Structure: CS – Strands

You can add a strand (Specialism) to a CS degree:

- **data management, human-computer interaction, information security, parallel and distributed systems & theoretical computer science**

Each strand has requirements on the optional courses completed by the end of your degree (see following slides)

- BSc students: these must be completed over levels 3 and 4
- MSci students: these must be completed over levels 3,4 and 5

The individual project(s) must be in the area of the strand

- BSc students: level 4 individual project in the area of the strand
- MSci students: both the level 4 individual project and level 5 individual project must be in the area of the strand

# Data Management (choose at least 5 including DB)

Professional Software Development PSD(H)	Algorithmics I ALGI(H)	Data Fundamentals DF(H)	Human-Centred Systems Design and Evaluation HCSDE(H)	Systems Programming SP(H)	Team Project TP(H)
Professional Software Development PSD(H)	<b>Database Systems DB(H)</b>	Text as Data TD(H/M)	Robotic Foundations RF(H)		Team Project TP(H)
Artificial Intelligence AI(H/M)	Machine Learning ML(H/M)	Computer Vision Methods and Applications CVMA(H)		Professional Skills and Issues PSI(H)	Individual Project IP(H)
RS(H/M) or RF(H) or WSci(H/M)	Big Data BD(H/M)	Information Retrieval IR(H/M)	Deep Learning DL(M)	Text as Data TD(H/M)	Individual Project IP(H)

Yellow: compulsory Green: optional

# Human-Computer Interaction (choose at least 4)

Professional Software Development PSD(H)	Algorithmics I ALGI(H)	Data Fundamentals DF(H)	Human-Centred Systems Design and Evaluation HCSDE(H)	Systems Programming SP(H)	Team Project TP(H)
Professional Software Development PSD(H)			Mobile Human Computer Interaction MobHCI(H/M)	Conversational Interfaces CI(M)	Team Project TP(H)
Human Computer Interaction HCI(H/M)	Computational Social Intelligence CSI(H/M)	Patient Centred Health Technologies PCHT(H)	Extended Reality Interaction XRI(M)	Professional Skills and Issues PSI(H)	Individual Project IP(H)
Human Centred Security HCS(M)	Mobile Human Computer Interaction MobHCI(H/M)	Conversational Interfaces CI(M)			Individual Project IP(H)

Yellow: compulsory Green: optional

# Information Security (choose at least 4 including CSF)

Professional Software Development PSD(H)	Algorithmics I ALGI(H)	Data Fundamentals DF(H)	Human-Centred Systems Design and Evaluation HCSDE(H)	Systems Programming SP(H)	Team Project TP(H)
Professional Software Development PSD(H)	<b>Cyber Security Fundamentals CSF(H)</b>		Cryptography and Secure Development CSD(M)	Forensics For(M)	Team Project TP(H)
				Professional Skills and Issues PSI(H)	Individual Project IP(H)
Cryptography and Secure Development CSD(M)	Human Centred Security HCS(M)	Forensics For(M)	Secured Software Engineering SSE(M)		Individual Project IP(H)

Yellow: compulsory Green: optional

# Parallel and Distributed Systems (choose at least 5 including NS and OS)

Professional Software Development PSD(H)	Algorithmics I ALGI(H)	Data Fundamentals DF(H)	Human-Centred Systems Design and Evaluation HCSDE(H)	Systems Programming SP(H)	Team Project TP(H)
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Professional Software Development PSD(H)	<b>Network Systems NS(H)</b>	<b>Operating Systems OS(H)</b>			Team Project TP(H)
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Computer Architecture CA(H)	Functional Programming FP(H)	Distributed Parallel Technologies DPT(H/M)		Professional Skills and Issues PSI(H)	Individual Project IP(H)
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Software Product Release Engineering SPRE(H/M)	Advanced System Programming ASP(H/M)	Advanced Networked Systems ANS(H)	Secured Software Engineering SSE(M)	Cloud Systems CS(H/M)	Individual Project IP(H)
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Yellow: compulsory Green: optional

# Theoretical Computer Science (choose at least 4)

Professional Software Development PSD(H)	Algorithmics I ALGI(H)	Data Fundamentals DF(H)	Human-Centred Systems Design and Evaluation HCSDE(H)	Systems Programming SP(H)	Team Project TP(H)		
Professional Software Development PSD(H)	Programming Languages PL(H)	Quantum Computing QC(H)			Team Project TP(H)		
Algorithmics II ALGII(H)	Functional Programming FP(H)	Machine Learning ML(H)	Modelling Reactive Systems MRS(H/M)	Computational Game Theory CGT(M)	Constraint Programming CP(M)	Professional Skills and Issues PSI(H)	Individual Project IP(H)
Programming Languages PL(H)	Theory of Computation TC(H)	Quantum Computing QC(H)					Individual Project IP(H)

Yellow: compulsory Green: optional

# GPAAs and Final Classifications

Final classifications based on weighted GPA over levels 3 and 4 (and 5). The weighting of credits varies between cohorts:

- CS/SE/CS+ H: 40 : 60 (level 3 : level 4)
- ESEH: 35 : 65 (level 3 : level 4)
- CS/SE MSci: 24 : 36 : 40 (level 3 : level 4 : level 5)
- SEYP MSci: 30 : 20 : 50 (Level 3 : Level 4 : Level 5)

(Summer placement course included in level 4 courses)

In Moodle, there's a GPA calculator! ☺

**Students that fail to meet the College MSci requirements over levels 1 and 2, are permitted to switch to the MSci if they meet the requirement of a GPA of 15.0 over level 3 Computing Science.**



# Courses & Project

# Optional Courses

## New courses:

- COMPSCI5123 Trustworthy Systems: Verification and Synthesis (M)

## Courses not running

- None

course	semester	level	notes and pre/co-requisites
Professional Software Development H	1&2	3	Compulsory in level 3. Prerequisites: ADS2, JP2, OOSE2
Algorithmics I H	1	3 or 4	Compulsory in level 3 for CSH, SEH and SEWPH
Data Fundamentals H	1	3 or 4	Compulsory in level 3 for CSH, SEH and SEWPH
Human-Centred Systems Design and Evaluation H	1	3 or 4	Compulsory in level 3 for CSH, SEH and SEWPH
Systems Programming H	1	3 or 4	Compulsory in level 3 for CSH, SEH, SEWPH and ESEH
Computing Science Education Theory and Practice H	2	3 or 4	
Conversational Interfaces M	2	3 or 4	
Cyber Security Fundamentals H	2	3 or 4	
Database Systems H	2	3 or 4	Prerequisites: JP2, OOSE2 and WAD2
Mobile Human-Computer Interaction H/M	2	3 or 4	Prerequisites: IS
Network Systems H	2	3 or 4	Compulsory in level 3 for ESEH. Prerequisites: ADS2, NOSE2, JP2, OOSE2 and SP (OS is recommended)
Operating Systems H	2	3 or 4	Compulsory in level 3 for ESEH. Prerequisites: ADS2, NOSE2, JP2, OOSE2 and SP (NS is recommended)
Programming Languages H	2	3 or 4	Prerequisites: JP2 and OOSE2
Quantum Computing H	2	3 or 4	Prerequisites: AF2, ALGI and DF
Robotics Foundations H	2	3 or 4	Prerequisites: DF
Text as Data H/M	2	3 or 4	Prerequisites: DF
Algorithmics II H	1	4	Prerequisites: ALGI
Artificial Intelligence H/M	1	4	Prerequisites: DF
Computational Game Theory M	1	4	Prerequisites: ALGI
Computational Social Intelligence H/M	1	4	Recommended: AI, DF and ML
Computer Architecture H	1	4	Prerequisites: OS
Computer Vision: Methods and Applications H	1	4	Prerequisites: DF
Constraint Programming M	1	4	
Distributed and Parallel Technologies H/M	1	4	
Extended Reality Interaction M	1	4	Prerequisites: MHCI
Functional Programming H	1	4	
Human-Computer Interaction H/M	1	4	Prerequisites: IS
Machine Learning H/M	1	4	Prerequisites: DF
Patient Centred Health-Technologies H	1	4	
Professional Skills and Issues H	1	4	Compulsory in level 4 for CSH, SEH, SEWPH and ESEH
Research Methods and Techniques M	1	4	
<b>Trustworthy Systems: Verification and Synthesis M</b>	<b>1</b>	<b>4</b>	<b>Prerequisites: ALGI</b>
Advanced Networked Systems H	2	4	Prerequisites: NS, OS and SP
Advanced Systems Programming H/M	2	4	Prerequisites: SP, OS, NS and FP
Big Data H	2	4	Prerequisites: DF and DB
Cloud Systems H/M	2	4	Prerequisites: IOOP2, NOSE2, OOSE2, SP (OS and BD are recommended as pre- or corequisites)
Cryptography and Secure Development M	2	4	Prerequisites: CSF
Deep Learning M	2	4	Prerequisites: DF and ML
Cyber System Forensics M	2	4	
Human-Centred Security M	2	4	
Information Retrieval H/M	2	4	Prerequisites: DF and TD
Recommender Systems H/M	2	4	Prerequisites: DF and TD
Secured Software Engineering M	2	4	Prerequisites: PSD and OOSE
Software Product Release Engineering H/M	2	4	Prerequisites: JP2, OOSE, PSD, Summer/Year Placement (can be unassessed)
Start Up Growth Engineering H	2	4	Prerequisites: PSD and TP
Theory of Computation H	2	4	Prerequisites: ALGI
Web Science H/M	2	4	
Coaching Software Teams H/M	1&2	4	Prerequisites: JP2, OOSE, PSD, Summer/Year Placement (can be unassessed)

# Optional Courses

All courses are scheduled over a single day and

Some courses are timetabled on the same day

- this can mean you are very busy on one day, but can also mean you have a day free from lectures
- plan ahead to minimise/maximise this (some semester 2 courses can be taken in either level 3 or 4)
- we recommend you take 40 credits in each semester of level 4
- **do not overload semester 2 of level 4, given the importance of the individual project (40 credits)**

If a course is offered at levels H and M, choose level H

- **advisory guideline:** choose at most two courses at level M (with at most one in semester 2 of level 3)

# Optional Courses

## At the start of an optional semester

- Attend as many courses as you wish during the first two weeks of lectures
- You can change courses on MyCampus, up until Friday of the second week of the semester
- If you want to change after this, get your adviser of studies to do so
- No changes are possible after Friday of the third week of the semester!
- If in any doubt about course choice, discuss with your adviser of studies

# Optional Courses – Security Courses

If you did not take a security course in semester 2 of Level 3, then you must take at least one of the following courses:

- Cyber Security Fundamentals CSF(H) (semester 2)
- Cyber System Forensics (M) (semester 2)
- Human–Centred Security HCS(M) (semester 2)
- Secured Software Engineering SSE(M) (semester 2)
- Cryptography and Secure development CSD(M) (semester 2)

# Individual Projects

It is a requirement for the award of an Honours degree that a student obtain a pass (D3 or above) in individual project

# Questions about...

- **enrolment?** the [SoCS Helpdesk](#) or your adviser of studies
- **academic queries?** contact your adviser of studies, [Year Head](#),  
[Honours Head](#) or [Senior Adviser](#)