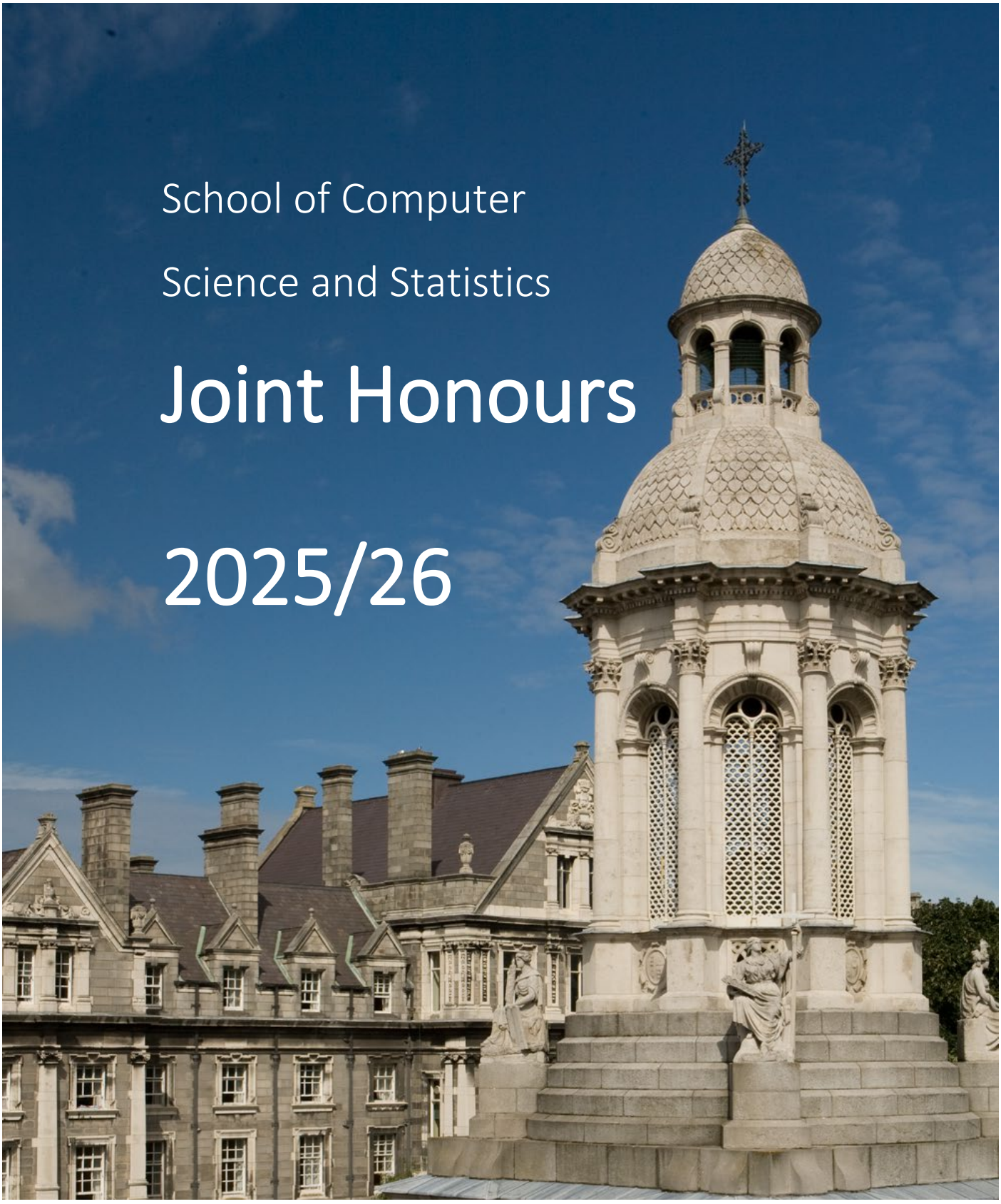
Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin



School of Computer Science and Statistics

Joint Honours

2025/26

Contents

1. General Course Information

1.1 Introduction

This handbook contains information and regulations for Joint Honours Computer Science students. It provides a guide to what is expected of you on this programme. It should be read in conjunction with the SCSS undergraduate handbook, which covers information common to all undergraduates on SCSS programmes, and the handbook for the other subject in your Joint Honours programme. We are confident that you will find the Computer Science Joint Honours programme challenging and demanding and we hope that you will find your studies at Trinity College Dublin both stimulating and rewarding. Our programme has several features which we believe will contribute to your studies being an effective and enjoyable period of personal and academic development. If you are a new student to university, it is strongly recommended that you meet your Tutor as he or she is your advocate in College and can also provide you with support should you have any difficulties. We wish you every success in the coming year.

Notes:

Information provided in this handbook is believed to be accurate at the time of preparation. Please note that, in the event of any conflict or inconsistency between the General Regulations published in the University Calendar and information contained in course handbooks, the provisions of the General Regulations will prevail. The University Calendar is available at http://www.tcd.ie/calendar/.

This handbook is available from the School of Computer Science and Statistics website. The handbook is subject to change.

This Programme Handbook should be read in conjunction with the School of Computer Science and Statistics Undergraduate Student Handbook, which you can find on our website (teaching.scss.tcd.ie).

1.2 Contact Details

Staff Name	Role/Title	Contact 1
Goetz Botterweck	Director of Undergraduate of Teaching and Learning	scss-dutl@tcd.ie
Nina Bresnihan	Course Director	nina.bresnihan@tcd.ie
Luiza Tortora	Executive Officer	Teaching-Unit@rt.scss.tcd.ie

1.3 Key Locations

The Joint Honours office is based in the Arts Building, Room 3135. Their opening hours can be found at the link below.

https://www.tcd.ie/tjh/contact/

The School of Computer Science and Statistics is based in the O'Reilly Institute (ORI). More information can be found at the link below:

https://www.tcd.ie/scss/contact/

1.4 Key Dates

A link to the academic year structure can be found below:

Academic Year Structure

1.5 Timetable

Your timetable is available through **My TCD,** this should be checked regularly in case of any changes.

1.6 Study Abroad/Erasmus

There are two types of opportunities to study abroad.

1.6.1 Erasmus/EU Exchanges

Erasmus+ is the EU's programme to support education, training, youth and sport in Europe. Studying abroad, for one semester or a full year, is a central part of Erasmus+.

While on Erasmus students can study at one of Trinity's 180 European partner universities across 20 countries. Where you can study abroad on Erasmus, however, is dependent on the subject-specific exchanges which are set up between the School and partner universities.

Whether you are embarking on an Erasmus/EU Exchange or a Non-EU Exchange it is important that you fully consider the impact that studying abroad will have on your studies.

More information on the Erasmus / EU exchanges can also be found on Trinity Global's website.

1.6.2 Non-EU Exchanges

Non-EU exchanges (also referred to as International Exchanges), or International exchanges, are with universities outside Europe, so if you're interested in studying in the USA, Canada, China, Hong Kong, Singapore or other such destinations this is the exchange programme for you.

The School holds an information session on Non-EU Exchanges every September. This session will take place after the International Exchange and Erasmus Information session which is held by the Study Abroad office. Students will need to attend both sessions.

If you are selected for participation in the Study Abroad programme, you will have to consider your module choices very carefully to ensure that they are roughly the same as you would study at Trinity, that they are at an appropriate level and that you satisfy any prerequisites that may be in force for those modules.

Prior to making your Study Abroad application you must gain approval for your university and module choices from the School of Computer Science and Statistics. This will require you to

submit the SCSS Study Abroad Module Form with your selected universities and corresponding modules to the Academic Coordinator for review.

Students interested in a non-EU exchange should read through the information available on the Trinity Global website. Here you will find a list of all Trinity's International Partner Universities as well as details on how to apply.

2. SCHOLARSHIPS AND PRIZES

2.1 Foundation Scholarships

Students in their Senior Freshman year are eligible to take the Foundation Scholarship examinations. In exceptional circumstances students may defer them to the following year.

A Foundation or Non-Foundation scholarship is tenured for five years, during which time the Scholar is entitled to free Trinity accommodation, their evening meal free of charge at Commons, a waiver of their tuition fees or student contribution (non-EU students' fees are reduced by the value of EU fees) and a small annual stipend. Scholars are also entitled to use the post-nominal letters "sch." after their name. This scholarship is a very prestigious and substantial award given to approximately 60 students each year.

Information regarding the structure and duration of papers can be found at https://www.tcd.ie/academicregistry/exams/scholarship/ and, for JH Students, from the Trinity Joint Honours Office at https://www.tcd.ie/tjh/foundation-scholarship/.

2.2 Prizes, Medals and Other Scholarships

In addition to prizes mentioned in the SCSS Undergraduate handbook, the Kenneth Mulkearns Memorial Medal is specific to the Joint Honours Computer Science programme. This was founded by Irish Life Assurance plc in 1992 in memory of Kenneth Mulkearns and comprises a silver medal

awarded annually to the top Trinity Joint Honours student in Computer Science and Business, majoring in Computer Science

2.3 Gold Medal

Gold medals are awarded by the Board to candidates of the first class who have shown exceptional merit at the annual degree examination in honours or professional courses.

See the criteria for specific degree programmes by following the website for further details: https://www.tcd.ie/academicregistry/exams/assets/local/tep-gold-medals-criteria.pdf

3. ACADEMIC INTEGRITY

3.1 Academic Integrity and Referencing Guide

It is clearly understood that all members of the academic community use and build on the work and ideas of others. However, it is essential that we do so with integrity, in an open and explicit manner, and with due acknowledgement. Any action or attempted action that undermines academic integrity and may result in an unfair academic advantage or disadvantage for any member of the academic community or wider society may be considered as academic misconduct. Examples of academic misconduct can be found in the Curriculum Glossary.

Academic misconduct in the context of group work: Students should normally submit assessments and/or examinations done in co-operation with other students only when the co-operation is done with the full knowledge and permission of the lecturer concerned. Without this permission, submitting assessments and/or examinations which are the product of collaboration with other students may be considered to be academic misconduct. When work is submitted as the result of a group project, it is the responsibility of all students in the group to

ensure, so far as is possible, that no work submitted by the group is plagiarised, or that any other academic misconduct has taken place.

Further information on academic misconduct procedures and how to avoid academic misconduct can be found at the links below:

Statement of Principles on Integrity

Academic Integrity Policy

Library Guides - Academic Integrity

Coversheet Declaration

3.2 The Use and Referencing of Generative AI

Aligned with the College Statement on Artificial Intelligence and Generative AI in Teaching, Learning, Assessment & Research (2024), the use of GenAI is permitted unless otherwise stated. Where the output of GenAI is used to inform a student's document or work output, this usage should be acknowledged and appropriately cited, as per Library guidelines on acknowledging and referencing GenAI. From an academic integrity perspective, if a student generates content from a GenAI tool and submits it as his/her/their own work, it is considered plagiarism, which is defined as academic misconduct in accordance with College Academic Integrity Policy.

4. Teaching and Learning

4.1 Regulations

The **College Calendar**, published annually at the beginning of each academic year, at https://www.tcd.ie/calendar/undergraduate-studies/, contains additional **General Regulations** that apply to all degree programmes in the University. The regulations governing TJH students taking Computer Science are, as for all TJH students, also found in the College Calendar. For modules delivered by the School of Computer Science and Statistics, additional rules apply as laid out in the **SCSS UG Handbook**. E.g, the SCSS UG handbook details regulations about attendance, late submission and non-submission of coursework, plagiarism, and absence from examinations. Read the relevant sections now and whenever you are in any doubt about the rules. **You are expected to be aware of the various regulations; ignorance is not a valid reason for failure to comply**. Don't depend on what classmates tell you – read the rules for yourself. If any discrepancy exists between the regulations in the SCSS UG handbook, this document and the College Calendar, **the College Calendar takes precedence**.

4.2 Programme Overview

The Joint Honours Computer Science programme provides students with a solid foundation in Computer Science. The core programme ensures that graduates have the knowledge, skills, and experience to design and develop computer software, individually and as part of a team. Those majoring in Computer Science cover more advanced topics and have an opportunity to choose subjects that interest them.

4.3 Programme Structure and Workload

Trinity Joint Honours courses follow the structure depicted at https://www.tcd.ie/tjh/prospective-students/tjh-pathways/. Students may exit with a Joint Honours award, with a Major in Computer Science and Minor in the other subject, or with a Major in the other subject and Minor in Computer Science. The only possible Single Honours

exit from combinations with Computer Science is Single Honours in Geography. Those entering Joint Honours Computer Science do not have the option to exit with Single Honours in Computer Science. Furthermore, it is not possible to exit from Computer Science and Business with Single Honours in Business; nor is it possible to exit with Single Honours in Economics or Linguistics. Available pathways are subject to change and may be dependent on capacity.

In each academic year full-time undergraduate students at Trinity College must complete 60 ECTS credits. For Joint Honours students these credits are spread across Computer Science, the other subject and, optionally, Trinity Electives or Open Modules in second year.

Overview

In Junior Fresh, students take 30 mandatory credits in Computer Science and 30 credits in their second subject. Students take a module in statistics (STU11002 Statistical Analysis I) unless their other subject includes an equivalent study of statistics in Year 1, in which case they will take CSU11022 (Introduction to Computing II) instead.

a) In Year 2, students may take: 40 credits in Computer Science and 20 credits in their second subject.
b) 20 credits in Computer Science and 40 credits in their second subject.
c) 20 credits in Computer Science, 20 credits in their second subject and 20 credits of Open Modules and Trinity Electives

Note that your choice in Year 2 does not limit your pathways from Year 3. Even if you take 20 ECTS in CS in Year 2 you can proceed to Major in Computer Science.

In Year 3, students choose to study for:

a) Major degree in Computer Science with a Minor in the second subject
b) Joint Honours degree in Computer Science with the second subject
c) Minor degree in Computer Science with a Major in the second subject

Students studying for a Joint Honours award will take:

- 30 credits in both Computer Science and the second subject in Year 3
- 20 credits in both Computer Science and the second subject in Year 4

- 20 credit capstone project in either Computer Science or the second subject in Year 4 (or a multi-disciplinary capstone project in both subjects)

Students studying for a Major in Computer Science may either:

- study both Computer Science and their second, Minor subject over Years 3 and 4. (This is known as **Option A**.) In this case, students will take:
    - 40 credits in Computer Science and 20 credits in the Minor subject in Year 3
    - 20 credits in Computer Science and 20 credits in the Minor subject in Year 4
    - 20 credit Computer Science capstone project in Year 4
- complete the Minor subject in Year 3 and study only the Major subject in Year 4. (This is known as **Option B**.) In this case, students will take:
    - 30 credits in Computer Science and 30 credits in the Minor subject in Year 3
    - 40 credits in Computer Science in Year 4
    - 20 credit Computer Science capstone project in Year 4

Students studying for a Minor in Computer Science may either:

- continue to study Computer Science in Year 3 and Year 4, taking 20 credits in Computer Science in each year (**Option A**).
- complete their study of Computer Science by taking 30 credits in Year 3 and studying only their Major subject in Year 4 (**Option B**).

Computer Science modules in each year are shown below. Brief descriptions of the programme modules are provided on the relevant year page of the course website https://teaching.scss.tcd.ie/joint-honours-computer-science/. Full details, including learning outcomes, pre-requisites, book recommendations and evaluation and assessment criteria are available through module links on those pages, or at http://my.tcd.ie. During the Trinity term of each year students will be invited to register their preferences for the following year of their course, including Trinity Electives and Open Modules. Students will be advised of how to do this, and of where they will find relevant module information several weeks before they are invited to register. Timetabling may restrict the availability of modules to individual students.

4.3.1 Year 1 – Junior Fresh

In year 1 (Junior Fresh) all JH CS students take the following mandatory Computer Science modules, in addition to what is required for their other subject:

Year 1 JH Computer Science and BUSINESS: UBJH-CSBU-1F	
Michaelmas Term	**Hilary Term**
Mathematics I CSU11001 (5 credits)	Programming Project CSU11013 (5 credits)
Introduction to Computing I CSU11021 (5 credits)	Introduction to Computing II CSU11022 (5 credits)
Introduction to Programming I CSU11011 (5 credits)	Introduction to Programming II CSU11012 (5 credits)

Year 1 JH Computer Science and ECONOMICS: UBJH-ECCS-1F	
Michaelmas Term	**Hilary Term**
Mathematics I CSU11001 (5 credits)	Programming Project CSU11013 (5 credits)
Introduction to Computing I CSU11021 (5 credits)	Introduction to Computing II CSU11022 (5 credits)
Introduction to Programming I CSU11011 (5 credits)	Introduction to Programming II CSU11012 (5 credits)

Year 1 JH Computer Science and GEOGRAPHY: UBJH-CSGG-1F	
Michaelmas Term	**Hilary Term**
Mathematics I CSU11001 (5 credits)	Programming Project CSU11013 (5 credits)
Introduction to Computing I CSU11021 (5 credits)	Introduction to Programming II CSU11012 (5 credits)
Introduction to Programming I CSU11011 (5 credits)	Statistical Analysis I STU11002 (5 credits)

Year 1 JH Computer Science and LINGUISTICS: UBJH-CSLI-1F	
Michaelmas Term	**Hilary Term**
Mathematics I CSU11001 (5 credits)	Programming Project CSU11013 (5 credits)
Introduction to Computing I CSU11021 (5 credits)	Introduction to Programming II CSU11012 (5 credits)
Introduction to Programming I CSU11011 (5 credits)	Statistical Analysis I STU11002 (5 credits)

4.3.2 Year 2 – Senior Fresh

In Year 2, students may take:

a) 40 credits in Computer Science and 20 credits in their second subject
b) 20 credits in Computer Science and 40 credits in their second subject or
c) 20 credits in Computer Science, 20 credits in their second subject and 20 credits of Open Modules and Trinity Electives[1]

All modules are subject to change. Students must ensure that they have a balance of 30 ECTS credits for each semester.

Year 2	
Michaelmas Term	**Hilary Term**
20 credits	
Algorithms and Data Structures I CSU22011 (5 credits)	Mathematics II CSU12002 (5 credits)
Information Management I CSU22041 (5 credits)	Software Engineering Project I CSU22013 (5 credits)
+ 20 credits (total 40 credits in Computer Science)	
Applied Statistics and Probability I STU22004 (5 credits)	Algorithms and Data Structures II CSU22012 (5 credits)
SCSS ELECTIVE MODULE (5 credits)	SCSS ELECTIVE MODULE (5 credits)
Open Modules	
SCSS Elective Modules:	
Systems Programming CSU22014 (5 credits) prerequisite: CSU11022	Concurrent Systems and Operating Systems CSU23016 (5 credits) prerequisite: CSU22014 or CSU22061
Intermediate Programming CSU22061 (5 credits)	Natural Language Processing CSU22062 (5 credits) prerequisite: CSU22061

[1] Consult www.tcd.ie/trinity-electives/electives/ and programme specific open modules list at www.tcd.ie/tjh/open-modules/

4.3.3 Year 3 – Junior Sophister

In third year, students will take 20, 30 or 40 ECTS in Computer Science depending on the desired exit option. See Overview above. All modules are subject to change. Students must ensure that they have a balance of 30 ECTS credits for each semester.

Year 3 Major or Joint Honors in Computer Science	
Michaelmas Term	**Hilary Term**
30 credits (Major and Joint Honors in Computer Science)	
Software Engineering CSU33012 (5 credits)	Software Engineering Project II CSU33013 (5 credits)
Computer Networks CSU33031 (5 credits)	Information Management II CSU34041 (5 credits)
SCSS ELECTIVE MODULE (5 credits)	SCSS ELECTIVE MODULE (5 credits)
+ 10 credits (Major in Computer Science only and continuing Minor subject in Year 4)	
SCSS ELECTIVE MODULE (5 credits)	SCSS ELECTIVE MODULE (5 credits)
SCSS Elective Modules:	
Symbolic Programming CSU34011 (5 credits)	Artificial Intelligence I CSU33061 (5 credits)
Introduction to Functional Programming CSU34016 (5 credits)	Advanced Computer Networks CSU33032 (5 credits)
Computational Mathematics CSU33081 (5 credits) prerequisites: CSU11001 or CSU12002 or MAU22C00 or MAU11601	Compiler Design I CSU33071 (5 credits)

Year 3 Minor in Computer Science	
Michaelmas Term	**Hilary Term**
20 credits	
Software Engineering CSU33012 (5 credits)	Software Engineering Project II CSU33013 (5 credits)
Computer Networks CSU33031 (5 credits)	Information Management II CSU34041 (5 credits)
+ 10 credits (if completing Minor in Computer Science in Year 3)	
SCSS ELECTIVE MODULE (5 credits)	SCSS ELECTIVE MODULE (5 credits)
SCSS Elective Modules:	
Symbolic Programming CSU34011 (5 credits)	Artificial Intelligence I CSU33061 (5 credits)
Introduction to Functional Programming CSU34016 (5 credits)	Advanced Computer Networks CSU33032 (5 credits)
Computational Mathematics CSU33081 (5 credits) prerequisites: CSU11001 or CSU12002 or MAU22C00 or MAU11601	Compiler Design I CSU33071 (5 credits)

4.3.4 Year 4 – Senior Sophister

In year 4, all students must complete a capstone project (known as a "Final Year Project" in SCSS) worth 20 ECTS. For those wishing to exit with a Major in Computer Science the capstone must be in Computer Science. For the remaining 40 ECTS the balance between subjects depends on the path taken in previous years, and the desired exit option. See Overview section above.

For information about the Computer Science Final Year Project (CSU44099), visit https://projects.scss.tcd.ie/.

Students majoring in Computer Science who have already completed their minor subject (Option B) can choose from the complete set of fourth year Computer Science modules (first table below). Students taking modules in their other subject are limited, due to timetabling constraints, to the narrower set of CS modules listed in the second and third tables.

All modules are subject to change and some combinations may not be possible due to timetabling constraints. Students must ensure that they have a balance of 30 ECTS credits for each semester.

Year 4 Major Option B (where Minor subject was completed in Year 3)	
Michaelmas Term	**Hilary Term**
20 credits	
Final Year Project CSU44099 (20 credits)	
+ 40 credits	
ELECTIVE MODULES (40 credits)	
SCSS Elective Modules:	
Human Factors CSU44051 (5 credits)	Group Design Project CSU44098 (10 credits)
Fuzzy Logic & Control Systems CSU44001 (5 credits)	Entrepreneurship & High-Tech Venture Creation CSU44081 (5 credits)
Formal Verification CSU44004 (5 credits)	Knowledge Representation and Automata CSU44060 (5 credits)
Topics in Functional Programming CSU44012 (5 credits)	

prerequisite: CSU34016	
Internet Applications CSU44000 (5 credits)	
Computer Graphics CSU44052 (5 credits)	
Computer Vision CSU44053 (5 credits)	
Machine Learning CSU44061 (5 credits)	
Advanced Computational Linguistics CSU44062 (5 credits)	
Strategic Information Systems STU45006 (10 credits)	

Year 4 Major (Option A) or Joint Honors in Computer Science	
Michaelmas Term	**Hilary Term**
20 credits	
ELECTIVE MODULES (20 credits)	
+ 20 credits (Major in Computer Science or Joint Honors in Computer Science taking Capstone in Computer Science)	
Final Year Project CSU44099 (20 credits)	
SCSS Elective Modules:	
Human Factors CSU44051 (5 credits)	Entrepreneurship & High-Tech Venture Creation CSU44081 (5 credits)
Fuzzy Logic & Control Systems CSU44001 (5 credits)	Group Design Project CSU44098 (10 credits)
Internet Applications CSU44000 (5 credits)	Knowledge Representation and Automata CSU44060 (5 credits)
Computer Graphics CSU44052 (5 credits)	
Advanced Computational Linguistics CSU44062 (5 credits)	
Strategic Information Systems STU45006 (10 credits)	

Year 4 Minor in Computer Science	
Michaelmas Term	**Hilary Term**
0 credits (if Minor in Computer Science was completed in Year 3)	
20 credits (if continuing Minor in Computer Science in Year 4)	
COMPUTER SCIENCE ELECTIVES (20 credits)	
Elective Modules:	
Human Factors CSU44051 (5 credits)	Entrepreneurship & High-Tech Venture Creation CSU44081 (5 credits)
Fuzzy Logic & Control Systems CSU44001 (5 credits)	Group Design Project CSU44098 (10 credits)
Internet Applications CSU44000 (5 credits)	Knowledge Representation and Automata CSU44060 (5 credits)
Computer Graphics CSU44052 (5 credits)	
Advanced Computational Linguistics CSU44062 (5 credits)	
Strategic Information Systems STU45006 (10 credits)	

Please note that **not all electives may run in a given year**, depending on demand and availability of appropriate staff to teach the electives.

In 2025/26 the following timetabling constraints apply. **This may change for future years**.

- CSU44052 Computer Graphics cannot be taken with STU45006 Strategic Information Systems.
- CSU44051 Human Factors cannot be taken with CSU44001 Fuzzy Logic.

Students may change options by informing the Teaching Unit up to the end of the second week of Michaelmas Term***. Late changes will not be accepted.***

4.4 Capstone Project

The capstone project — though defined differently by different subjects — is the common element across all degree exit routes and is weighted at 20 ECTS. It requires a significant level of independent research by the student. It should be an integrative exercise that allows students to showcase skills and knowledge which they have developed across a range of subject areas and across their four years of study. It should result in the production of a significant piece of original work by the student. It should provide them with the opportunity to demonstrate their attainment of the graduate attributes.

For more information, please see the links below:

Capstone website

Policy on Good Research Practice

4.5 Marking Scale

Grades for individual subjects and overall grades in years 1-4:

Years 1-4	
Grade	**Mark**
I	70%-100%
II.I	60%-69%
II.2	50%-59%
III	40%-49%

4.6 Attendance Requirements and Absences

You are required to attend all lecture, laboratory, tutorial or other sessions associated with your programme of study and to participate fully in the academic work of your class.

You must notify the lecturer concerned or your Tutor as early as possible if you are unable to attend. IF you are absent for medical reasons, you should notify your Tutor and you may be

required to provide a medical certificate. This is particularly important if you will miss required assessment components (e.g. in-class tests or demonstrations of your work).

Students whose attendance has not been satisfactory in either semester may be reported to the Senior Lecturer's Office as "non-satisfactory" for both semesters in a year may be refused permission to take semester two assessments or examinations and may be required to repeat the year in full.

Unless otherwise specified for a programme or an individual module, a student's attendance and participation will be deemed to be "non-satisfactory" if they miss more than one third of their course of study in a semester.

4.7 Absence from Examinations

Students who in any term have been unable, through illness or other unavoidable cause, to attend the prescribed lectures satisfactorily, as determined by the relevant school, department or programme, may be granted credit for the term by the Senior Lecturer and must perform such supplementary exercises as the Senior Lecturer may require. Such requests will only be considered in extraordinary circumstances and should be made by the student's tutor to the Senior Lecturer (via student cases) and only after consulting the general and more detailed school or course regulations regarding absence from lectures or examinations through illness.

4.8 Court of Examiners

Joint Honours students' Computer Science module marks are considered at a Court of Examiners in the School of Computer Science and Statistics. Agreed marks are then passed to the Trinity Joint Honours Court of Examiners where the CS marks are considered alongside the marks in the other subject, where overall decisions about progression (to the following year), degree award and TJH prizes are made.

4.9 External Examiner

Professor Omer Rana of the University of Cardiff is the current External Examiner for Joint Honours Computer Science. A new External Examiner will be appointed for 2025/26.

4.10 Student Feedback and Evaluation

The School will conduct student surveys of modules on a regular basis (at least once every three years) typically around the middle of the semester, and will provide feedback on the results of these surveys as soon as practical. It will also facilitate student fora with the class representatives towards the end of each semester.