



Trinity College Dublin

Coláiste na Tríonóide, Baile Átha Cliath

The University of Dublin

School of Computer Science and Statistics

Computer Science and Language 2020–2021



B. A. (Mod.) Computer Science and Language: Course
Handbook 2020–2021

Centre for Computing and Language Studies
Trinity College Dublin

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Chapter 1

Overview of Computer Science and Language

C.A.O. Course Reference Number: TR039

Since 1985, a four year honors degree course has been offered jointly by what is now the School of Computer Science and Statistics, the Department of French, the Department of Germanic Studies, the School of Irish and Celtic Languages and the School of Linguistic, Speech and Communication Sciences. This is the **Computer Science and Language** program.

Approximately 50% of time is given to the study of *Computer Science*. The *Language* part of the program name importantly refers to two distinct though related areas. The first refers to mastery and study of *a particular language*, which might be French, German or Irish, and approximately 25% of time is given to this. The second is the *science of language in general*, the field known as *linguistics* with its sub-field of *computational linguistics*, and approximately 25% of time is given to this. Though notionally separate, the 3 areas have a lot of areas of overlap. This is most obvious in the computational linguistics area but there are other areas of connection, such as the indispensable use of the notions of recursion and substructure in both computer science and linguistics, or the shared focus on pronunciation and word-order in language-mastery and linguistics.

The CSL program seeks to foster a wide range of attributes and capabilities in its graduates. The computer science part seeks to equip graduates with a full mastery of the techniques involved in creating computing software, understanding how the computer applications seen today truly work and possessed of an ability to participate in the ongoing process of developing new software for new arenas. This cannot be equated with 'simply' learning a programming language but involves honing a set of skills relating to rigorous systematic analysis of problems and systems and methodical development of solutions. The parts of CSL dedicated to a *particular* language (which will variously be French, German or Irish depending on the student) aim to give students a truly high level of competence, one commensurate with the possibility of making this a major part of their future careers. Linguistics, or the scientific study of language, is possibly the part most remote from a student's likely experience prior to university¹. Quite surprising regularities and complex systems have been discovered as people have looked at languages in a scientific fashion, concerning for example the acoustic building blocks of languages, or the kinds of mechanism needed to precisely distinguish actual sentences from random word sequences, and many others. Students will become acquainted with this body of knowledge and by its nature this fosters further talents concerning forensic conceptual analysis and literate expression of ideas, alongside the nuanced understanding of a foreign language and culture and skills in numeracy and algorithmic thinking deriving from the other areas. Computational linguistics is especially concerned

¹For example though you may hear people say of someone that 'they are quite the linguist' meaning 'good at foreign languages' this is *not* the relevant sense of 'linguist' here

with the use of computers in new technologies related to language. There has been a great increase in the relevance of such technologies, as exemplified by machine translation or speech recognizers and an aim is to enable graduates to also contribute to this particular area of computer applications.

The rest of this handbook will explain in detail the structure of the CSL program. In essence, throughout the program the three above-mentioned areas (computer science, a particular language, linguistics) are studied, and in roughly a 50:25:25 proportion. Typically the students spend their third year as an Erasmus exchange student attending courses at another European University. At that university, and by dint of their location, they continue their study of their particular language of focus, and also continue to take modules in the other parts of CSL, namely Computer Science and Linguistics. We have a specific network of exchange agreements with partner institutions which allows for this.

As a matter of study style we like as much as possible to encourage students to exhibit and develop their individual knowledge and skills through projects. This happens in 1st and 2nd year modules, this happens in their year abroad, during which students are expected to do a project on the linguistic properties of their language (see §3.3.3 and §5.1), and in their fourth year a whole module is designated as a Final Year Project. The subject area of this project can come from any of the contributing disciplines, or combine more than one (as for example a computational linguistics project almost certainly will). This, along with the fact that there are optional modules in the final year from across the contributing disciplines means that there is some scope for the balance to depart from the 50:25:25 split in the preceding years.

Graduates have gone to direct employment in a wide variety of careers, for example as software engineers generally, as developers in labs for research and development in speech and language, as technical project managers in multinationals, as people specially capable in a particular language in foreign diplomacy or the European Patent office. Graduates have also gone to further research oriented courses in linguistics and computational linguistics. About this and much else please see also the course web pages teaching.scss.tcd.ie/computer-science-linguistics-and-a-language and www.scss.tcd.ie/undergraduate/computer-science-language

As an inherently interdisciplinary program, CSL could be said to combine 'arts' and 'sciences', though we might prefer to call this pursuing interesting, useful and intriguing skills and knowledge wherever they are to be found. Those involved hope and believe its subject matter is diverse and stimulating. This multidisciplinary brings with it perhaps some challenges absent from a single-subject program, but that makes it correspondingly more rewarding.

Chapter 2

Information for New Students

This part of the Handbook contains information which will be of most relevance to new students. Returning students would do well to have a re-read of this part, as well as the rest of the handbook, as year-on-year there are changes, usually small, but occasionally more significant.

2.1 Introduction

Welcome to Trinity College and to this degree programme, known for the last few years as 'Computer Science and Language' (CSL), and for many years hitherto as 'Computer Science, Linguistics and a Language' (CSLL). The pace of language change being generally slow, you can expect to encounter the older name from time to time. The principal aim of this handbook is to provide you with an introduction to what lies before you and to put at your disposal as much detailed information about the course, including regulations, as it is useful to supply at this stage.

Subsequent sections give further details, with section 3 giving a year-on-year overview and section 4 giving further information about the departments involved and the modules which they provide; though currently enrolled students can drill further into module content details via their TCD portal some of this information may be useful to prospective students who have run into this handbook.

Beside this information contained in this document, you should also read the School Handbook, containing much information which is not specific to the CSL programme, and the following urls from the participating departments should also be consulted:

- CSL teaching pages: teaching.scss.tcd.ie/computer-science-linguistics-and-a-language
- Computer Science teaching pages: teaching.scss.tcd.ie/integrated-computer-science
- Linguistics: : www.tcd.ie/slscs/clcs
- German: www.tcd.ie/Germanic_Studies
- French: www.tcd.ie/French
- Irish: www.tcd.ie/Irish

2.2 The Course Director

The CSL Course Director is Dr Martin Emms. Dr Emms teaches Computational Linguistics and thus works at the interface between the linguistics and language-related elements of the course and the

computer science elements. Dr Emms's office is in the basement of the O'Reilly Institute, LG18. His e-mail address is Martin.Emms@scss.tcd.ie, and his College telephone extension number is 1542.

The executive officer is Ms. Hannah Archbold (ext. 1768)

Feel free to contact the Course Director about any concerns that you might have about the degree.

Additionally, he would like to meet with each of you individually during the first academic term, preferably during the Study Week. You will be contacted nearer the time to arrange this meeting by Ms. Hannah Archbold.

2.2.1 Centre for Computing & Language Studies

There is an administrative interdisciplinary unit which is home to the CSL course, called the Centre for Computing and Language Studies¹. The director of this is Dr Carl Vogel, its email address is ccls@tcd.ie, and its executive office is Ms. Hannah Archbold (tel: 896 3425, fax: 677 2204).

2.3 Your Year Co-ordinator

Each year of the CSL programme has a Year Co-ordinator assigned to it. The Year Co-ordinator for your year, the Junior Freshman Year (First Year), is Dr Rachel Hoare² of the Department of French (Arts Building, Room 4103; e-mail: rmhoare@tcd.ie; College tel. ext.: 1842). The Year Co-ordinators for the other years of the programme are as follows:

Senior Freshman Year (Second Year): Katrin Eberbach, Department of Germanic Studies

Junior Sophister Year (Third Year): Dr Carl Vogel, School of Computer Science and Statistics

Senior Sophister Year (Fourth Year):

(Fourth Year, Semester 1) Prof Ailbhe Ní Chasaide, Centre for Language and Communication Studies. In Semester 2, someone else will take on that role.

If you have any problems of an academic kind you should in the first instance contact your Year Co-ordinator. Do not hesitate to do so.

2.4 The Year and Subject Area Contact Persons

You will notice that the year Co-ordinators are drawn from four of the five departments which contribute to the CSL course. They also "double" as contact persons for the respective subject areas — thus: Katrin Eberbach for German, Dr Hoare for French², Dr Vogel for Computer Science and Prof Ailbhe Ní Chasaide for Linguistics. The subject area contact person for Irish is Dr Eoin Mac Cárthaigh of the Dept. of Irish and Celtic Languages.

2.5 Your Tutor

You should have already heard from the Senior Tutor that you have a designated Tutor within the College whose role is to monitor your general welfare as well as to deal with your concerns and needs in a supportive and confidential way. You should definitely make contact with your Tutor as soon as possible, if you haven't already, and establish a plan for how often you will meet with your Tutor.

¹Not to be confused with the Centre for Language and Communication Studies, which provides the linguistics component of CSL, of which more anon – see §4.2.1.

²She is fulfilling this role in the first term (S1), whilst it someone else will take that role in the second term (S2). Name TBC

2.6 Electing a Class Representative

Each CSL year has a Class Representative who attends meetings of the CSL Management Committee. That is the main body which monitors the programme, tries constantly to improve it, and addresses any difficulties that arise. The Junior Freshman class should elect its representative by the end of October, and the representative's name should be communicated to Ms. Hannah Archbold, so that the person in question may be put on the mailing list for invitations to meetings.

2.7 Trinity's Year Structure and Terminology

Modules are described by year following the traditional College system, where *Junior Freshman* refers to first year; *Senior Freshman*, to second year, *Junior Sophister*, to third year; *Senior Sophister*, to the fourth and final year.

Trinity's prior academic year structure has undergone some changes in response to Covid-19 and its current form appears in www.tcd.ie/calendar/academic-year-structure/academic-year-structure.pdf and was also given in the School Handbook. Its shape is not radically different from that in previous years, albeit that most dates have moved on a number of weeks.

There is a pre-Christmas *Semester 1*, of 12 weeks (first week starting Sep 28, last week starting Dec 14), a mid-point week of which is designated as a *Study Week*. During this week you may anticipate allocating time for reading and other forms of research towards projects due once the reading week ends. There is a post-Christmas *Semester 2*, similarly of 12 weeks (first week starting Feb 1, last week starting April 19), also with a mid-point Study Week.

There will be an examination session staged prior to Semester 2, in the weeks starting Jan 11 and Jan 18, during which modules with teaching in Semester 1 *may* have examinations. Following a little after the end of teaching in Semester 2, in the weeks starting May 10 and May 17, there will be a further examination session, concerning modules with teaching in Semester 2 and possibly also those with teaching in Semester 1. It is a possibility for a module to span Semesters 1 & 2, and have only examinations at the end of Semester 2.

Historically there was a division into three *terms*, Michaelmas (MT), Hilary (HT) and Trinity (TT) and the custom persists of designating the teaching weeks of Semester 1 as being in 'Michaelmas term' and those of Semester 2 as being in 'Hilary term'. It may be necessary to know this to decipher time-table information and communications with staff!

In this year's somewhat altered structure, for first years ('*Junior Freshman*') the first week of Semester 1 is *not* a teaching week, and to permit 11 teaching weeks, Semester 1 will for these students *not* actually contain a mid-point Study Week.

2.8 ECTS and Progression

Each module is assigned an *European Credit Transfer System (ECTS)* rating, such that in total a single year's modules amount to 60 ECTS altogether³. 'Progression' is the Trinity term for meeting the academic requirements to move from one year into the next: to *pass* in other words. Details concerning this appear both in the subsequent sections of this handbook dedicated to each contributing department, and in Chapter 6 *CSL Progress Regulations*, but in *outline* the process is as follows.

Relating to each module there are *initial* examinations (mentioned in the preceding section). Marks achieved on modules are weighted by their ECTS rating and a credit-weighted average of at least 40% must be achieved. Usually the mark on each individual module is also at least 40%, though technically

³Firstly on a linguistic point, note how 'ECTS' seems to be used as an acronym and as a plural count noun. Secondly note that in section ?? the full official exposition of the ECTS notion is given.

there are provisions for a *marginally* lower mark to be tolerated on a *small* number of ECTS⁴. A student meeting these requirements may *progress* to the next year (or graduate). There is an opportunity via so-called *supplemental* examinations (in August) to meet these requirements after an initial failure.

However, regulatory details aside, **do not aim to merely pass the year** — there is too much work involved within and across departments for such a low expectation to yield a successful overall strategy. Aim high. Aim for first class marks. Aim for Schol in your SF year. If you do aim high, putting in an appropriate high standard of effort, you are far more likely to find success than if you try to maintain nothing more than a passing level standard.

2.9 Scholarship and other Prizes

Foundation scholarship is a longstanding College institution. A special set of 'Schol' exams have usually been held just before the 2nd semester in Year 2. Sufficiently excellent performance in these exams leads to being official designated a Scholar, which is very prestigious, and is also rewarded with certain privileges, of particular note being free accommodation and meals on campus.

The 'Schol' exams are not just an early version of the later Summer exams but strive to find if candidates have a non-superficial understanding of concepts from all modules, across both years of their study. Attempting the scholarship examination is highly recommended, as even if you are unsuccessful there is a great dividend in deepened understanding simply through preparing for them.

Covid-19: *while it seems likely that something akin to traditional Scholarship examinations will take place this year, this is still under discussion in College, particularly concerning the timing.*

Modulo the above Covid-19 caveat, please consult the following for fuller details:

www.tcd.ie/academicregistry/exams/scholarship and

www.tcd.ie/academicregistry/exams/assets/local/schol2018/ComputerScienceandLanguage.pdf

As mentioned in the School Handbook there are also a number of prizes based on excellent performance in the yearly examinations, some by this School and some by other individual participating departments. To find out more about these you might want to look at:

www.tcd.ie/calendar/undergraduate-studies/general-regulations-and-information.pdf

www.tcd.ie/academicregistry/exams/assets/local/gold-medal-criteria.pdf

www.tcd.ie/calendar/undergraduate-studies/prizes-and-other-awards.pdf

2.10 The Year Abroad

As you know, your degree is organized such that you spend the Junior Sophister year (third year) studying at a university abroad⁵. At the start of the 2nd year, you will receive a comprehensive booklet giving you information about what will be expected of you during the 3rd year abroad. Currently, students go to Bielefeld, Bremen, Glasgow, Grenoble, Louvain, Lyon, Nice, Osnabrück, Stuttgart, Saarbrücken, Toulouse, or Tübingen, depending on their language of focus.

One of the people who organize this section of the programme is currently Dr Vogel, your Junior Sophister coordinator. The Erasmus Coordinator for exchanges between other universities abroad and the School of Computer Science and Statistics is Macu Arnedillo Sanchez.

Subject to renewal by the European Union, CSL students are eligible for modest Grants through the Erasmus program for European student mobility. These grants are open only to EU nationals. Non-EU CSL students may make use of positions open at partner universities via the Socrates exchange, paying TCD tuition fees as normal, but are not eligible to receive the grant. Non-EU CSL students are

⁴essentially its not worth anticipating these very marginal tolerances and you should just reckon with having to straightforwardly pass

⁵More precisely, students whose language is French or German must do this, whereas for students whose language is Irish it is a possibility

nonetheless expected to spend the Junior Sophister year abroad. There is a separate handbook for the Erasmus year.

2.11 Non-examined components

Some facets of CSL are designed to provide emphasis on topics that unite the three departments that any one student is a member of. These events all provide added value to the timetabled teaching that is examined, and participation should make it easier for students to see the bigger picture of CSL, how topics relate to each other, and along the way make it easier to do well in examinations.

2.11.1 Dublin Computational Linguistics Research Seminar

The Dublin Computational Linguistics Research Seminar (DCLRS) is a seminar series that follows a very broad construal of the term, “computational linguistics”. Talks on topics such as pure translation theory, syntax, semantics, speech science, phonetics, psychology, psycholinguistics, artificial intelligence, and many other related areas will be presented, with speakers coming from far and wide. Sometimes the talks are at an advanced level, and sometimes introductory overviews. When a seminar takes place it is on Friday, at 4p.m.

You will receive electronic announcements of each talk, with a title and abstract⁶. You’ll also be notified when talks are especially accessible.

We encourage you to attend all the seminars. There is a process by which to confirm a certain level of participation, one designed not to be onerous: you record your attendance by filing⁷ a brief (one or two paragraph) summary of the talk and what you learned from it. The number of confirmed attended/summarised seminars is dependent on the number of scheduled seminars and the quota will be set around the end of November. To the fulfillment of this requirement 5 ECTS is attached in Year 1 and in all years it will be recorded in student *transcripts*.

Students should heed the fact the end of term often coincides with major term projects, essays and other demands on time and attention. Similarly, it might be advisable not to plan on attending your quota of talks during the last term of the year.

2.11.2 Christmas Conference

At the end of the first term, we have an event known as the Christmas Conference. At this event the Senior Sophister students make (relatively informal) progress reports on their work to date on their Final Year Projects. All CSL students in all years attend. Sometimes graduates recent and not so recent also attend to say a few words about what they have gone on to do. Also in the audience are often representatives of local companies, some who may offer summer internships or further recruitment possibilities to CSL undergraduates. After the presentations, we have a reception/party for all of CSL.

2.12 Libraries

The main library for computing-related material is the Hamilton Library. The Lecky Library contains computer science and mathematics texts. The Berkeley and Ussher libraries have extensive holdings relating to Linguistics, to the three languages of the degree, as well as to several further languages. The Early Printed Books library has further holdings which may be of interest, for example pertaining to historical linguistics.

⁶See section ?? for how to ensure that is the case

⁷with Carl Vogel or Martin Emms by the Monday following the talk

2.13 Computing Facilities

There are *College* computing facilities and there are computing facilities provided by the Computer Science department itself. The College computing facilities and the Computer Science facilities are separately administered. The username and password that you are *initially* assigned to allow access to College computers will also be initially valid for the facilities in the department of Computer Science, but password changes on College computers will not carry over to Computer Science machines, nor vice-versa. They are simply separate accounts.

If something goes go wrong with your *College* account, contact helpdesk@tcd.ie. If something goes wrong with your *Computer Science* account, or you otherwise have a problem with one of the department's machines **contact help@cs.tcd.ie** – do *not* be too diffident about doing this as without such email enquires there is no way for the computer administrators to know there is a problem and it will simply persist, both for you and for other students.

You may not share your account with anyone inside or outside college. Nor may you make inappropriate use of college provided web access. It is also considered a serious waste of resources to play computer games on college facilities. Violating regulations can cost you your computing privileges, and in a degree like CSL it is impossible to pass without access to appropriate facilities in order to practice what you learn. If you have time for computer games please take advantage of that only on your home facilities.

IS Services produce a comprehensive booklet on the College computing facilities. All students are advised to purchase a copy of this booklet.

2.14 And finally

Once again welcome to the course. Although well established (since 1985), it is a relatively unconventional sort of course here in Ireland, in the way it combines elements from different disciplines and involves other Dublin institutions. We trust that you will find the combination suitably challenging and stimulating. The Junior Freshman year is designed to give you a foundation in each of the disciplines in the combination you have chosen, so that as the course progresses you will be able to make use of the skills you acquire in each to focus on the areas of study that most interest you. As you proceed through the degree it will become increasingly clear how the parts fit together. You will need to be physically fit, for your classes will take place in different parts of the campus, and you will have to be mentally agile too, for you will notice that different departments have different styles and traditions. Quite positively, you will gain a breadth of competencies and experience which goes far beyond that delivered by more conventional mono-disciplinary courses.

Have a good year! Enjoy the entire degree!

Chapter 3

Yearly Structure

A listing of the modules taken in each year is given below. Further details on the content of individual modules are given in 4.

3.1 Junior Freshman

3.1.1 Computer Science

- CSU11001 Mathematics I, CSU12002 Mathematics II (S1, S2, 10 ECTS)
- CSU11010 Introduction to Programming (S1,S2 10 ECTS)
- CSU11021 Introduction to Computing I (S1 5 ECTS)

3.1.2 Linguistics

- LIU11001 Language, The Individual and Society (general linguistics) (5 ECTS, S1)
- LIU11002 Introduction to Syntax (5 ECTS, S2)
- LIU11003 Introduction to Phonetics and Phonology (5 ECTS, S2)

3.1.3 Language

- French/German/Irish (15 ECTS)

Irish IRU1144Y (Ceart agus labhairt na teanga, 10 ECTS, S1, S2), IRU11411 (Pobal agus teanga, 5 ECTS, S1)

German GRU1100Y (German language fluency, 10 ECTS, S1, S2), GRU11011 (Landeskunde, 5 ECTS, S1)

French FRU11001 & FRU11002 (Written language, 10 ECTS, S1, S2), FRU11022 (French and francophone cultures, 5 ECTS, S1)

3.1.4 Dublin Computational Linguistics Research Seminar

- CSU11L01 DCLRS (5 ECTS). See §2.11.1

3.2 Senior Freshman

3.2.1 Computer Science

- MAU22C00 Discrete Mathematics (S1, S2 10 ECTS)
- CSU22011/CSU22012 Algorithms and Data Structures (S1, S2, 10 ECTS)
- CSU22061 Intermediate Programming, CSU22062 Natural Language Processing (S1 & S2, 10 ECTS)

3.2.2 Linguistics

- LIU22001 Syntax and Semantics (S1, 5 ECTS)
- LIU22002 Computational Morphology and Statistics (S1, 5 ECTS)
- LIU22003 Speech Science and Phonetics (S2, 5 ECTS)

3.2.3 Language

- French/German/Irish
Irish IRU2244Y (Ceart agus labhairt na teanga, 10 ECTS, S1, S2), IRU22432 (Gàidhlig, 5 ECTS, S2)
German GRU2200Y (German Language Fluency, 10 ECTS, S1, S2), GRU22051 (German Cultural History, 5 ECTS, S1)
French FRU22001 & FRU22002 (Oral and Written French, 10 ECTS, S1, S2), FRU22072 (French Language for Computer Science, 5 ECTS, S2)

3.2.4 Dublin Computational Linguistics Research Seminar

- CSU22L02 DCLRS¹ see §2.11.1

3.3 Junior Sophister

For CSL students whose language is German or French, it is a requirement to spend no less than two months in another country with the primary language of choice, and unless there are extremely exceptional circumstances, they will spend the entire Junior Sophister year abroad at another European University. At these partner universities modules will continue to be taken in Computer Science and Linguistics. CSL students whose language is Irish must spend two months in the Gaeltacht and may spend their Junior Sophister year in TCD or in a Scottish university.

All CSL students must in this JS year fulfil a project requirement (see §3.3.3).

In exceptional circumstances – for example a need to repeat the Junior Sophister year – students do a JS year at Trinity, taking the modules described in the rest of this section.

3.3.1 Computer Science

There are mandatory credit minima across the 3 components, accompanied by a certain amount of optionality in modules chosen to meet these minima. The credit minima are CS ≥ 25 , Linguistics ≥ 15

¹Though appearing variously as CSU11L01/2202/3303/4404 this is one module attended by all

and the chosen language ≥ 15 , with the effect that in one of the components its minimum is exceeded by 5 credits by the choice of an option.

In CS 25 – 30 ECTS-worth of modules of modules will be taken. 15 ECTS are in the following mandatory modules:

- CSU34011 Symbolic Programming (S1, 5 ECTS)
- CSU33061 Artificial Intelligence I (S2, 5 ECTS)
- CSU33012 Software Engineering (S1, 5 ECTS)

10 – 15 ECTS will be chosen from a range of optional CS modules, including

- STU22004 Applied Probability 1 (S1, 5 ECTS)
- CSU33071 Compiler Design I(S1, 5 ECTS)
- CSU33013 Software Engineering Group Project (S2, 5ECTS)
- CSU34016 Introduction to Functional Programming (S1, 5ECTS),
- CSU33081 Computational Mathematics (S2, 5ECTS)
- CSU34041 Information Management II (5 ECTS)

3.3.2 Linguistics and a Language

In linguistics 15 – 20 ECTS will be chosen from the following 4 theoretical and applied linguistics modules:

- LI2307 Aspects of Written Language (S1, 5 ECTS)
- LI2303 Language Learning (S1,5 ECTS)
- LI2301 Aspects of vocabulary (S2, 5 ECTS)
- LI2304 Sociolinguistics (S2, 5 ECTS)

In the chosen language 15 – 20 ECTS of modules will be taken, some mandatory and some optional. The details vary from language to language and from year to year. In 20-21 across the languages the modules offered are as indicated below.

French 15-20 ECTS from

- FRU34031 Enlightenment Fiction (5 ECTS)
- FRU34061 How is literature Possible (5 ECTS)
- FRU34122 Sex, Sovereignty and Sacrifice (5 ECTS)
- FRU34022 Giants,Kings,Love and Diplomacy (5 ECTS)

German: the following 15 ECTS

- GRU33001 Language (5 ECTS)
- GRU44021 Deutschland in Europa (5 ECTS)
- GRU33002 Language (5 ECTS)

Irish the following mandatory 10 ECTS module

- IRU3340Y Teanga(Gaeilge & Gadhlig) (10 ECTS)

then up to 10 ECTS in options from

- IRU34701 Litríocht an Bhéaloidis I (5 ECTS)
- IRU34771 Prós na Linne I (Drámaíocht) (5 ECTS)
- IRU34731 Litríocht an Domhain (5 ECTS)
- IRU34871 Ficsean na Linne (An Cadhnach) (5 ECTS)
- IRU34NUA An Ghaeilge i gCló 1542-1871 (5 ECTS)
- IRU34832 Cúirt an mheón-oíche (5 ECTS)
- IRU34662 Filíocht na Fiannaíochta (5 ECTS)
- IRU34682 Dán Díreach II (5 ECTS)

3.3.3 Project

Students develop a formal linguistic analysis of interesting phenomena within a given language – preferably within the language they study for the degree – from the perspective of one of the linguistic components of the degree (e.g. phonetics, syntax, semantics, etc.). The exact topic is negotiated individually, and it can be jointly evaluated by the host and home institutions. For example, students might undertake an analytic study which could be developed further in the fourth year in the context of final year option modules or the final year project. Alternatively, they might avail of the opportunity to participate at some level in an ongoing research project in the host university, and focus their third year project as a report on that research. In any case, the project should combine a domain of linguistics with analysis of their language. See §5 for further details on past projects.

3.3.4 Dublin Computational Linguistics Research Seminar

- CSU33LL3 DCLRS ² see §2.11.1

Students abroad are encouraged to engage in host institutions' seminar series as well.

3.4 Senior Sophister

In Senior Sophister, there are mandatory courses across all components, as before, and additionally, elective ones. One or two 'option' courses are chosen from the year's currently available suite of options, amounting to 10 ECTS-worth³. Also a Final Year Project is undertaken (worth 10 ECTS).

3.4.1 Computer Science

- CSU34041 Information Management (5 ECTS, S1)
- CSU44061 Machine Learning (5 ECTS, S1)
- CSU44060 Knowledge Representation and Automata (5 ECTS, S2)

3.4.2 Linguistics

- LI4031 Speech Analysis and Synthesis (S1, 5 ECTS)
- LI4032 Computational Linguistics (S2, 5 ECTS)

²Though appearing variously as CSU11L01/2202/3303/4404 this is one module attended by all

³So two modules worth 5 ECTS each, or one worth 10

3.4.3 Language

- French/German/Irish
 - Irish** IRU4440Y (Ranganna teagaisc, 10 ECTS, S1, S2), IRU44411 (Gàidhlig, 5 ECTS, S1, S2)
 - German** GRU4400Y (German Language 4, 10 ECTS, S1, S2), GRU44012 (German Translation, 5 ECTS, S2)
 - French** FRU44051 & FRU44052 (Oral and Essay skills for CSL, 10 ECTS, S1, S2), FRU44062 (Translation skills for CSL, 5 ECTS S2)

Senior Sophister students select 10 ECTS worth of option modules⁴ from the year's currently available suite of options. They vary from year to year. A representative range is provided below. Students should anticipate narrowing down their selection of option modules by the week preceding Trinity Week in their Junior Sophister year.

3.4.4 Option Modules and Final Year Project

In addition to the above, Senior Sophister students take options (amounting in total to 10 ECTS) and undertake a Final Year Project (worth 10 ECTS).

The Final Year Project can may be in any area of computer science, linguistics or language study which interests the student and for which the student can locate a supportive supervisor, and will involve year-long research and delivery of a substantial written report. One way to get feel for what this might entail would look at the list of recent projects the CSL website.

The option modules can be selected from the options offered within the CS department, or from those offered in the other streams of the degree course, subject to these amounting to 10 ECTS in total (and the agreement of the course director). These options are subject to some change year on year. The following list is indicative of options that have been offered recently:

- CSU44062 Advanced Computational Linguistics (S1, 5 ECTS)
- CSU44001 Fuzzy Logic (S1, 5 ECTS)
- CSU44004 Formal Verification Techniques (S1, 5 ECTS)
- CSU44012 Topics in Functional Programming (S1, 5 ECTS)
- CSU44021 Advanced Computer Architecture (S1, 5 ECTS)
- CSU44031 Mobile Communications (S1, 5 ECTS)
- CSU44052 Computer Graphics (S1, 5 ECTS)
- CSU44053 Computer Vision (S1, 5 ECTS)
- LI4034 Second language acquisition (S1, 10 ECTS)
- FR4043 Language and society in the French-speaking world (S1, S2 10 ECTS)
- Roghanna éagsúla sa Ghaeilge. (Liosta le fáil ó oifig Roinn na Gaeilge.)

3.4.5 Dublin Computational Linguistics Research Seminar

- CSU44LL4 DCLRS ⁵ see §2.11.1

⁴So two modules worth 5 ECTS each, or one worth 10

⁵Though appearing variously as CSU11L01/2202/3303/4404 this is one module attended by all

Chapter 4

Contributing Departments

4.1 School of Computer Science and Statistics

4.1.1 Background to the Computer Science Department

In Trinity College the first computer, an IBM 1620, was installed in 1962 in the Engineering School. In Ireland, Computer Science departments in the Universities were inspired by either Engineering Schools or by Science Departments, rather than Mathematics as was common in Western Europe.¹ This has several advantages. The design and construction of systems consists of many activities which are common to all Engineering disciplines and the discipline of Computer Science benefits greatly from this environment. Modules are naturally oriented towards the basic principles underlying design and construction of software and hardware systems. Extensive course work and individual and team projects are readily incorporated. One of the most important benefits is that links with industry are natural and strongly encouraged and hence the training of graduates is oriented towards what they will be doing in industry but this must be moderated by the fact that rapid changes will occur over the forty years of a graduate's career. It is vitally important that a student be taught enough basic principles underlying the subject so that he or she will be in a good position to quickly learn new ideas and concepts during his or her working years. A proper balance must be maintained between theory and practice.

4.1.2 Contact Information and Administrative Staff

The School of Computer Science and Statistics is part of the Faculty of Engineering, Mathematics and Science, and Prof. Carol O'Sullivan is the Head of School..

The CS Subject Area coordinator for CSL students is

- Dr Carl Vogel
e-mail vogel@tcd.ie
ORI Room LG.16 Telephone Extension 1538 (353 1 896 1538 or 353 1 896 1765)

The Administration Officer is

- Ms. Hannah Archbold (Teaching Support Unit)
The Teaching Support Unit can be contacted by emailing teaching-unit@scss.tcd.ie. Detailed enquiries regarding modules, assignments, feedback and supervision should be directed in the first instance to the administrative staff in the Teaching Support Unit who will then, where appropriate, inform the director and coordinator.

¹The department was set up by Professor J.G. Byrne who retired in 2003.

Within the School of Computer Science and Statistics, Dr Ken Dawson-Howe is the overall course-director of the *Integrated Computer Science degree programme* and coordinator for years 1-3, whilst Dr Owen Conlan is its coordinator for other years. Dr Jonathan Dukes is the departmental Director of Undergraduate Teaching and Learning. All three are available to advise on matters going beyond the confines of a single CS module.

The details of the Department's main Reception are given below; on certain occasions it may be necessary to submit work here, and Reception may be able to answer queries about the likely office schedule of individual staff members.

Reception location beside Room G.8 in the O'Reilly Institute.

Opening hours during lecture terms are 9:15 am to 11:00 am, 11:30 am to 1:00 pm and 2:00 pm to 4:30 pm.

Tel (01) 896 1765

Fax (01) 677 2204

Email enquiries@scss.tcd.ie

Web <http://www.scss.tcd.ie/>

Address School of Computer Science and Statistics, O'Reilly Institute,
Trinity College Dublin, Dublin 2. Ireland.

It is worth noting that several notice boards are situated in the vicinity of this reception area.

4.1.3 Research Interests

The School of Computer Science and Statistics is one of the largest research departments in College in terms of finances emerging from research grants and commercialized spin-offs. The Department has earned an international reputation for research excellence and works closely with industry and other research establishments across the world. Students benefit enormously from the Department's depth of knowledge in many leading-edge technologies.

The primary research areas are: Applied Information Systems, Artificial Intelligence, Computer Architecture, Computer Vision, Computational Linguistics, Distributed Systems, Formal Methods, Human Computer Interaction, Image Synthesis, Knowledge & Data Engineering, Multi-Media Systems, Networks and Telecommunications. These groups cross-cut five administrative disciplines in SCSS: Computer Systems, Intelligent Systems, Statistics, Information Systems, Software Systems.

The Computational Linguistics Group at Trinity produced the first Irish language spelling checker to be licensed by Microsoft for inclusion in its products. Supporting this license is a current activity of Carlow Answers, plc., founded by a CSL graduate who pursued further postgraduate study in the area of computational linguistics.

4.1.4 SCSS Computer Facilities

The Department has its own computer facilities, far surpassing the facilities and services supplied by ISS. These facilities are in several locations and have in some cases undergone recent relocation: you will need to attend to information at Orientation Week and on-line for all details. One of the SCSS labs that you make use of is LG12 located in the basement of the O'Reilly Institute (not far from where your Course Director is buried).

Please note that system support is also available. If you are using College labs, then, if there is a problem with the machine that you are using or with your account, you should contact helpdesk@tcd.ie. Note

that if the issue is a forgotten password, or if you are for some other reason locked out of your account, then you will have to go to ISS in person. If the problem is with Department of Computer Science facilities, then problems should be reported to help@cs.tcd.ie. The SCSS and College-wide services are quite distinct. In both cases, however, you should keep track of the reference number for your query that gets generated automatically in response to your message. **Please make sure that you explore available online help pages and manuals (e.g. using the Unix command “man”, or support pages provided on the internal web sites) before sending a request for help with software issues. Broken or inoperable machines should be reported immediately. Do not share your password with anyone who is not part of the system support team.**

4.1.5 Extra-curricular academic support

The Undergraduate Programming Centre This is an initiative offering further assistance towards conquering difficulties encountered in trying to master programming. It is not a place where you have your programs written for you, but it offers a variety of mechanisms to help you get over difficulties you might be having. It is FREE of charge and the web-site giving all details is

<http://www.scss.tcd.ie/misc/psc/>

The Maths Help Room The Maths Help Room offers free assistance to students who are having difficulty with Mathematics, Statistics or related courses. It runs every week of term and at certain times out of term. The Maths helproom is a drop in centre, where you can bring in a maths or stats question and get some help. It is run by the School of Mathematics and further information is available at

<http://www.maths.tcd.ie/~mathshelp>

4.1.6 Computer Science Component

The computing component of the CSL course is basically² of the modules made up of the software (and maths) streams of the honors B.A. in Computer Science, together with some modules relating to *computational linguistics*. The computing component lacks some of the more hardware-related elements of the CS degree, their place being taken by other components of the CSL degree, namely linguistics and a particular language.

The following sections give some of the details of the modules contributing to the computing component. As many of these will be modules shared with *ICS* students, the handbook and web-pages for that degree programme should also be consulted

scss.tcd.ie/undergraduate/computer-science/assets/docs/ICSHandbook.pdf

teaching.scss.tcd.ie/integrated-computer-science

4.1.6.1 Junior Freshman CSL Syllabus

The syllabi are intended to give an overview of the course. More detailed information is available via online sources such as my.tcd.ie (for registered students only) or teaching.scss.tcd.ie/computer-science-linguistics-and-a-language/cs11-year-1 or teaching.scss.tcd.ie/integrated-computer-science/ics-year-1

CSU11001 & CSU12002 Mathematics ECTS: 10, S1, S2, 3 hrs per week.

²It is also worth noting that some modules contributed from outside of the CS department have a decidedly computational character, such as *Computational Morphology*

Mathematics is of interest to computer scientists due to the fact that it is both practical and theoretical in nature. Not only does it have a myriad of applications (e.g. in wireless communications, computer graphics, machine learning techniques in computational linguistics), it is also of intrinsic interest to theoretical computer scientists. This module aims to develop the students skills and abilities in the mathematical methods necessary for solving practical problems. One of the key objectives for this module is to introduce students to the learning styles needed for university level mathematics.

Amongst topics covered in S1 will be Linear algebra, Integration, The Newton-Raphson method and Taylor Series, while the the focus of S2 is so-called 'discrete' mathematics and mathematical logic, including set operations, discrete maths functions in Number Theory and Logic calculation that are used in computer science.

In both parts students will be encouraged to adapt their learning style to become more independent, self-motivated and reflective learners, with the skills needed for success at University level.

Lecturers: Merial Huggard and Hugh Gibbons.

CSU11010 Introduction to Programming ECTS: 10, S1, S2 4 hrs

This module provides an introductory course in computer programming. This course takes a practical approach to teaching the fundamental concepts of computer programming with a strong emphasis on tutorial and laboratory work and is an important vehicle for developing students analytical and problem-solving skills. It aims to give students an understanding of how computers can be employed to solve real-world problems. Specifically, this course introduces students to the object-oriented approach to program design and teaches them how to write programs in an object-oriented language (in this case Java).

Continuous assessment is composed of weekly laboratory and tutorial sessions and more substantial programming assignments. CSU11010 is assessed based on written examination and continuous assessment. A mark of 40% in both the written examination and the continuous assessment components must be attained.

Lecturers: Arthur-Hughes and Kenneth Dawson-Howe

CSU11021 Introduction to Computing ECTS: 5, S1, 2 hrs

Aims This module provides students with an introduction to the basic structure, properties and operation of microprocessor systems. By developing and executing simple assembly language programs, the module aims to give students an understanding of how programs execute on a microprocessor system.

The module also encourages students to consider the relationship between high-level programming language constructs and their execution as sequences of instructions.

Students will also be given opportunities to develop their problem solving, programming and written communication skills by designing solutions to programming problems, implementing those solutions, first in the form of high-level programming constructs and then as assembly language programs, which must be documented and tested.

Assessment is by a combination of written examination and continuous assessment.

Lecture: Jonathan Dukes

4.1.6.2 Senior Freshman CSL Syllabus

CSL students take CSU22061/CSU22062 (10 ECTS), concerning programming and Natural Language Processing, a mathematics module MAU22C00 (10 ECTS) and consecutive modules on the fundamentals of algorithms and data-structures, CSU22011/CSU22012 (10 ECTS).

The contents of these modules is briefly outlined below. Further details for CSU22061/CSU22062 can found

teaching.scss.tcd.ie/computer-science-linguistics-and-a-language/cs11-year-2

and for the other modules:

teaching.scss.tcd.ie/integrated-computer-science/ics-year-2

and for all currently registered students via my.tcd.ie

MAU22C00 Discrete Mathematic 10 ECTS, S1, S2, 3hrs per week

Specific topics addressed in the first semester include: The Principle of Mathematical Induction, Sets, Relations and Functions, Introduction to Abstract Algebra, Introduction to Formal Languages and Context-Free Grammars, Introduction to Graph Theory.

In the second semester, this module provides students with an introduction to a variety of topics, arising out of both Calculus, Geometry and Discrete Mathematics, that are of relevance in fields such as acoustics, image processing, computer graphics and cryptology. Specific topics addressed in this module include: Ordinary Differential Equations, Trigonometric Identities, Complex Exponentials and Periodic Sequences, Vectors and Quaternions, Introduction to Number Theory and Cryptography.

Assessment is by written examination and continuous assessment.

Lecturer: David Wilkins

CSU22011/CSU22012 Algorithms and Data Structures 10 ECTS, S1, S2, 4 hrs per week (inc. 1 hr lab)

The aim of the module is threefold (1) To teach effective programming and problem solving, using a core toolset of classical algorithms and data structures. (2) To introduce the methods for evaluating the performance and requirements of programs written by the students. (3) To promote effective software engineering by using well-established techniques for code modularity, structuring, debugging and readability, such as Design by Contract, and unit testing.

Topics covered include: analysis of source code to derive running time and space requirements; array and linked list implementations of stacks and queues; doubly linked lists; union-find; binary trees, binary search trees, balanced search trees, B-trees; hash tables; undirected, directed and weighted graph implementations using adjacency lists; recursion vs iteration; tree traversals; greedy algorithms; divide and conquer; graph algorithms; searching and sorting algorithms; Java generics; iterators; JUnit testing; Design by Contract

Assessment is based on a mixture of continuous assessment and a final exam.

Lecturers: Vasileios Koutavas and Ivana Dusparic

CSU22061 Intermediate Programming, CSU22062 Natural Language Processing 10 ECTS, S1, S2, 3 hours per week, 2 lectures, 1 lab session

The first semester aims to engender a mastery of the fundamentals of programming in C++, both building on, and differentiating from, prior experience with Java. In the second semester it likewise seeks to provide a solid grounding in the major concepts and algorithms used in Natural Language Processing, exploring many of these through implementations in C++. In the first semester, concepts and techniques will often be illustrated via examples pertinent to NLP; the concepts and techniques themselves have general applicability in other areas of software engineering.

Topic covered include

- Fundamentals of C++ (built-in types and coercion, pointers, arrays, reference parameters, STL containers string and vector, structs, classes, inheritance (illustrated by Qt library for GUIs), dynamic memory allocation and recursive data structures)
- Regular languages (finite state automata and transducers, properties and limitations of finite state methods - centre-embedding, C++ implementation of finite state automata)

- Context Free languages (applications to natural language and potential limitations crossed dependencies, bottom-up and top-down stack-based parsers, including backtracking. chart-based parsers. Properties of these parsers and their implementation in C++, long-distance dependencies and slash-grammars)
- Feature structures (untyped and typed features structures, C++ implementation via the LilFes library)
- Brief intro to Probabilistic Methods in NLP, topic varying year to year, examples being the use of Hidden Markov models in speech recognition, or statistical machine translation

Assessment is based on an exam and on continuous assessment, mainly involving programming

CSU22L02 DCLRS ECTS: 5. S1 and S2. See³ §2.11.1

4.1.6.3 Junior Sophister CSL Syllabus

It is normal for students to spend this year studying abroad under the Erasmus/Socrates program. For students who remain in Dublin they continue to pursue a mixture of computer science, linguistics and a particular language.

In CS 25 – 30 ECTS-worth of modules of modules will be taken. 15 ECTS are in the following mandatory modules:

- CSU34011 Symbolic Programming (S1, 5 ECTS)
- CSU33061 Artificial Intelligence I (S2, 5 ECTS)
- CSU33012 Software Engineering (S1, 5 ECTS)

10 – 15 ECTS then be chosen from a range of optional CS modules, including

- STU22004 Applied Probability 1 (S1, 5 ECTS)
- CSU33071 Compiler Design I(S1, 5 ECTS)
- CSU33013 Software Engineering Group Project (S2, 5ECTS)
- CSU34016 Introduction to Functional Programming (S1, 5ECTS),
- CSU33081 Computational Mathematics (S2, 5ECTS)
- CSU34041 Information Management II (5 ECTS)

For module descriptions for the above modules, please see the appropriate links here:

www.scss.tcd.ie/undergraduate/computer-science/js/ and
teaching.scss.tcd.ie/integrated-computer-science/ics-year-3/
 and for all currently registered students via my.tcd.ie

³Though appearing variously as CSU11L01/2202/3303/4404 this is one module attended by all

4.1.6.4 Senior Sophister CSL Syllabus

Final year students in the CSL degree take the modules CSU34041, CSU44061, CSU44060, they undertake a project (worth 10 ECTS), and choose option modules (worth 10 ECTS). The project can be chosen from projects offered within the CS department and also from projects offered within the other streams of the degree course, namely linguistics and the three languages. See §5 for further details on past projects. Likewise the optional modules can be selected from the options offered within the CS department, or from those offered in the other streams of the degree course⁴. Either two 5 ECTS options can be chosen or one 10 ECTS option.

CSU34041 Information Management ECTS 5, S1, 3 hrs per week

This course is focused on the modelling of information and database system technology. More specifically, it focuses on state-of-the-art database technology, from both the user and systems perspectives. From a system engineering perspective, the course examines the concepts and algorithms for: transaction processing, concurrency control, metadata representation, semantic representation and active databases, recovery, database security policies, integration of databases on the web and emerging database technologies. From an information designers perspective, the course examines the theoretical model underpinning relational databases, functional dependency theory and normalisation (for information modelling), functional dependency modelling, object relational modelling, implementation of databases and database applications. Thus the course is intended to enable the students to design information models and implement these models in state of the art databases (relational and native web databases), as well as be able to analyse and evaluate approaches to information organisation, storage, transaction support and management.

Assessment is based on an exam and coursework.

CSU44061 Machine Learning ECTS: 5, S1, 2 hours per week, plus a number of labs.

The module aims to give a working understanding of many of the main machine-learning techniques and their application to solve real-world problems. Techniques covered include: Machine Learning Basics (Datasets, Frameworks, Evaluation, Cross-validation and confidence intervals Overfitting/underfitting), Linear Regression, Logistic Regression, Support Vector Machines, Kernel Methods, k-Means Clustering and Mixture Models for Unsupervised Learning, Neural Networks, Deep Learning Algorithms, Use of gradient descent, and extensions for improved scalability (stochastic gradient descent etc), Probabilistic interpretations of ML algorithms, Maximum Likelihood and MAP estimators.

CSU44060 Knowledge Representation and Automata ECTS: 5, S2, 3 hours per week, plus one hour of lab per week.

This module aim to give an in-depth introduction to some topics in AI. Topic covered include: use of description logics to express simple ontological constraints, application of finite-state methods to basic natural language processing tasks, evaluation of the effectiveness of different approaches to reasoning about change in simple domains, understanding the computational possibilities opened up by automata-theoretic approaches to reasoning

Assessment is based on both an exam and continuous assessment elements.

Lecturers: Tim Fernando

CSU44LL4 DCLRS ECTS: 5. S1 and S2. See⁵ §2.11.1

⁴with the agreement of the course director

⁵Though appearing variously as CSU11L01/2202/3303/4404 this is one module attended by all

Option Modules The option modules can be selected from the options offered within the CS department, or from those offered in the other streams of the degree course, subject to them amounting to *10 ECTS* in total (and the agreement of the course director). These options are subject to some change year on year. The following list is indicative of options offered by the CS department that have been taken recently:

- CSU44062 Advanced Computational Linguistics: Machine Learning techniques in Machine Translation, Speech Recog, Topic Modelling. (S1, 5 ECTS)
- CSU44001 Fuzzy Logic (S1, 5 ECTS)
- CSU44004 Formal Verification Techniques (S1, 5 ECTS)
- CSU44012 Topics in Functional Programming (S1, 5 ECTS)
- CSU44021 Advanced Computer Architecture (S1, 5 ECTS)
- CSU44031 Mobile Communications (S1, 5 ECTS)
- CSU44052 Computer Graphics (S1, 5 ECTS)
- CSU44053 Computer Vision (S1, 5 ECTS)

Further details on the CS modules should be available via

teaching.scss.tcd.ie/integrated-computer-science/ics-year-4/

and for all currently registered students via my.tcd.ie

CSU44062 Advanced Computational Linguistics (S1, 5 ECTS) The aim of this module is to give a grounding in so-called *unsupervised machine learning* techniques which are vital to many language-processing technologies including *Machine Translation*, *Speech Recognition* and *Topic Modelling*. Whilst studied in these contexts, the techniques themselves are also used much more widely in data mining and machine vision for example.

Amongst the topics studied will be: probabilistic essentials such as the chain rule and relative frequencies as maximum likelihood estimators; the (source|target) \times target formulation of Statistical MT and idea of learning 'hidden' alignment variables between sentence pairs using the Expectation Maximisation (EM) algorithm; exponential vs feasible implementations of EM training for SMT; the Hidden Markov Model (O|S) \times S formulation of Statistical Speech Recognition; brute-force EM for learning HMM parameters and the efficient Baum-Welch algorithm to avoid exponential cost; Topic Modelling as a technique to infer latent 'topic' variables for documents. ; techniques to learn parameters of these models. In each case, alongside the explanation of the algorithms, there will be practical work, either developing instances of them, or deploying existing implementations and running them on data sets to concretely see their properties.

Lecturer: Martin Emms

CSL Final Year Project Note the final year project for CSL is worth 10 ECTS. For the BA CS, it is worth 20 ECTS. The project can be chosen from projects offered within the CS department and also from projects offered within the other streams of the degree course, namely linguistics and the three languages. See §5.2 for further details on what a project involves, how its topic is chosen, and some information of projects that have been undertaken in past year.

4.1.7 Additional Information

It is easiest to find additional written information via links from degree, departmental, faculty and college web links.

- teaching.scss.tcd.ie/computer-science-linguistics-and-a-language
- http://www.cs.tcd.ie/research_groups/clg/
- <http://www.tcd.ie/research/faculty/>
- <http://www.tcd.ie/>

4.2 The Centre for Language & Communication Studies

4.2.1 General

The Centre for Language and Communication Studies (CLCS) is part of the School of Linguistic, Speech and Communication Sciences and is located in the Arts Building on level 4.

Since its foundation in 1979, the Centre has been conducting research and teaching in theoretical linguistics, applied linguistics, phonetics and speech science (the latter supported by the Phonetics and Speech Laboratory, see below).

The Centre has a full-time academic staff of 10, with an Executive Officer, and a technician. In addition there are a number of research associates working on the Centre's research projects. The following is some basic information:

Head of CLCS: Position currently being filled

Departmental office: Room 4091, Arts Building

Office hours:

Monday-Thursday 10:00am-9:00pm

Friday 10:00am-5:00pm

Office hours will always be posted on the CLCS office door.

Executive Officer: Natalia Cwik

Telephone: 896 1560

Notices for CSL students are posted on a noticeboard outside the Centre office, Room 4091.

4.2.2 Research

The Centre conducts research in theoretical linguistics, in applied linguistics, in phonetics and in speech and language processing. The research interests of individual staff members are listed at the end of this section. In addition to staff research, there are Ph.D. and M.Litt. students working in each of these areas, and each year the Centre admits up to 70 M.Phil. students, who conduct research for their dissertations in the areas mentioned.

The teaching in speech science is linked to the ongoing research at the Phonetics and Speech lab, where an interdisciplinary research group (<10 researchers) is working on numerous projects, most notably the AB AIR initiative on speech technology for Irish (speech synthesis, speech recognition, and applications for language learning and disability/access (see www.abair.ie). CSL students are encouraged to participate in aspects of this research, e.g., through projects, internships etc.

4.2.3 Teaching

The Centre's CSL modules are listed below. In addition the Centre provides modules in linguistics for undergraduates in a wide range of degrees including the various modern languages programmes and clinical speech and language studies. At the graduate level, CLCS runs four Masters degrees: M.Phil. in Linguistics, in Applied Linguistics, in Speech and Language Processing and in English Language Teaching. As mentioned above, there is also a wide range of doctoral research conducted at the Centre.

4.2.4 Modules

CSL modules within the Centre normally last one term at a rhythm of two hours per week, although Lab-based modules typically involve an additional hour of lab work. They are assessed by a combination of written examination and continual assessment, which may be a written essay, project work, or practical exercises, depending on the module topic.

Continuous Assessment

(a) All continuous assessment assignments **MUST** be submitted **by 3pm on the due date** and signed in at the CLCS Office.

(b) Students must submit an identical electronic copy to TurnItIn or Blackboard, as indicated by the lecturer, by the same deadline.

(c) Deadlines can only be changed by direct consultation with the staff member concerned, **IN ADVANCE** of the submission date. It is the student's responsibility to ensure that agreement regarding any extension of a deadline has been reached with the relevant staff member. In the event of late submission of an assignment without such agreement, a penalty will apply. Marks will be reduced in accordance with the extent of the delay. 5 marks will be deducted if the assignment is up to one week late and 10 marks will be deducted if the assignment is between one and two weeks late. **Assignments will not normally be accepted more than 14 days after the submission date; any request for a submission after this time must be made in consultation with the students College Tutor and can only be allowed on the basis of illness (medical certificate required) or similar personal circumstances.**

NB: It is not possible to pass a CLCS module without submitting all of the assigned coursework.

Below is a year by year listing of the modules with indicative descriptions of their aims and contents.

Please note that in addition to the module descriptions appearing here, further more detailed information is likely to be accessible via departmental web-pages and (for currently registered students) via my.tcd.ie.

4.2.4.1 Junior Freshman Year

LIU11001 Language, The Individual and Society 5 ECTS, S1, 2 hours per week

The aim is to introduce the student to issues relating to individual language acquisition and use, to social dimensions of language, to language and thought, and to the changing fortunes of specific languages. Corresponding to the breadth of scope, this module is delivered by an unusually large series of lecturers:

Prof. Gessica De Angelis, Prof. Pat Matthews, Prof. Breffni O'Rourke, Prof. Sarah Sheridan

It is assessed by one 3,000-word essay assignment.

LIU11002 Introduction to Syntax (5 ECTS, S2)

The aim of this course is to introduce the student to basic techniques of syntactic analysis (the generative approach to language; the basics of phrase structure grammar; lexical information about heads; recursion and clauses; dependency relations in syntax; movement rules).

Prof. Elaine Uí Dhonnchadha

Assessment involves a class test (25%) and summer examination (75%).

LIU11003 Introduction to Phonetics and Phonology 5 ECTS, S2, 2 hrs

This module gives an introduction to articulatory phonetics and of phonemic analysis. Topic covered include: The organs of speech production, an articulatory classification of consonants and vowels, the International Phonetic Alphabet, the procedures of phonemic analysis, phonemic and phonetic transcription.

Dr. Irena Yanushevskaya

Assessment is based on (i) a selection of the exercises, carried out as homework on a regular basis: the items selected are marked and contribute 50% towards the overall mark for the module, and (ii) a short written project contributes the other 50%.

4.2.4.2 Senior Freshman year

LIU22001 Syntax and Semantics 5 ECTS, S1, 2 hrs

This module advances understanding in theoretical linguistics in the areas of syntax and semantics. Concerning syntax it aims to give students a grounding in syntactic theory and some experience of the syntactic analysis of English, covering topics such as: Constituent structure; heads and complements; X-bar phrase structure; grammatical functions; syntactic rules. Concerning semantics it aims to introduce students to the application of logical (or truth-conditional) semantics to natural language, covering topics such as: Denotation, truth and meaning; first and second order logic; quantifiers in English; extending logics for time, mood and aspect; intensionality; presupposition and context.

Prof. Elaine Uí Dhonnachadha, Prof. Carl Vogel.

Assessment two assignments of 2,000 words each.

LIU22002 Computational Morphology and Statistics 5 ECTS, S1, 2 hrs per week

One aim of this module is serve as an introduction to the theory of finite-state methods for NLP and their use in analysing and generating natural language morphologies, including: Practical experience of using the Xerox Finite-State Tools to analyse and generate the morphology of English and other languages.

A further aim of this module is to introduces students to the main statistical concepts and procedures required for the collection and analysis of quantitative data in linguistics and language study. Through a hands-on, practical introduction to data analysis in SPSS students are facilitated in learning for example how to: describe data meaningfully using appropriate statistics, carry out statistical tests in order to explore relationships among groups and differences between groups (e.g. chi-square; correlation; t-tests) and to understand when to use each test and how to interpret data output and results.

Prof. Gessica De Angelis, Prof. Elaine Uí Dhonnachadha

Assessment is based on practically oriented coursework.

Computational Morphology Assignment (50%): Mini-project in which students implement a system to model a fragment of the linguistic morphology of a language of their choice and produce a written

project report. Statistics Assignment (50%): Students are required to answer a series of questions on the use of SPSS for linguistic analysis or on the statistical concepts introduced during lectures.

LIU22003 Speech Science and Phonetics 5 ECTS, S2, 3 hrs including 1 lab hour

Experimental Phonetics: Building on the first-year module, *Introduction to Phonetics and Phonology*, this module provides a more in-depth look at how the human speech producing capacity is variously exploited in languages. Introduction to Speech Science: In addition to basic acoustic theory, the course covers psychoacoustics, the functions of the peripheral auditory system and an introduction to the acoustic theory of speech production. The course also deals with fundamental processing techniques for analysing speech, including short-term spectral analysis, such as spectrograms and spectral sections.

Prof Ailbhe Ní Chasaide, Prof. Christer Gobl

Assessment is based on one 3,000-word assignment of an experimental nature

4.2.4.3 Junior Sophister Year

Students spend their Junior Sophister year abroad as part of a Erasmus exchange, and continue to study the linguistic and computational linguistic subject areas that featured in the first two years. For students of French and German, this will happen through the medium of their studied language.

When the JS is taken in Dublin, 15 – 20 ECTS-worth of Linguistics are taken, from the following options:

LIU33002 Aspects of Written Language (S1, 5 ECTS)

This module examines the phenomenon of written language from a range of perspectives. It begins by exploring the beginnings and historical development of writing, in the process considering the ways in which different writing systems (e.g., logographic scripts, syllabaries, and alphabets) represent different aspects of language. Further points of discussion are the debate around the social and individual consequences of literacy; the orthography of English; the mental processes involved in reading; written texts as coherent communicative acts; differences between the language of speech and the language of writing; and the relationship between written language and communication technologies.

Prof Sarah Sherridan

Assessment: Students are assessed by a mid-term presentation (50%) and a 2,500-word assignment (50%)

LIU33001 Language Learning (S1, 5 ECTS)

This module introduces students to key issues in foreign language learning in formal contexts. Topics covered include theories of language learning, research findings in relation to successful and unsuccessful learners, the role of the mother tongue.

Prof Gessica De Angelis

Assessment: Write three 1000-word essays in response to three weekly topics, including references to the assigned readings as well as the classroom lecture. Compile the essays and submit them together at the end of the term (on the assigned date).

LIU33004 Sociolinguistics (S2, 5 ECTS)

Sociolinguistics is the systematic study of language as a social phenomenon. The way that an individual speaks is determined by many factors, such as:

- (a) where they are from
- (b) how old they are
- (c) who they are speaking with at a particular time

- (d) who they generally speak with
- (e) what they think about how others speak

This class is a hands-on exploration of how social factors influence the way that language is used. We investigate variation that occurs in language and how languages change. Some of the topics we cover include regional variation, language attitudes, multilingualism, social networks, and language contact.

Prof Valentina Colasanti

Assessment: Students will be assessed on the basis of one 3,000 word argumentative essay (100%). Details on the essay guidelines will be provided by Teaching week 5.

LIU33003 Aspects of vocabulary (S2, 5 ECTS)

This module will attempt to demonstrate that almost everything in language is related in some way or other to words and that, conversely, the lexical dimension of language needs to be conceived of as rather more than just a list of lexical items. The topics to be explored in this connection will include: the nature of the lexicon, lexis and syntax, lexis and morphology, lexical partnerships, lexis and meaning, lexis and phonology, lexis and orthography, lexical variation, lexical change, and lexical acquisition.

Prof. Elaine Uí Dhonnchadha

Assessment: Students are required to submit a term essay of 4,000 words.

4.2.4.4 Senior Sophister Year

LI4031 Speech Analysis and Synthesis 5 ECTS, S1, 2 hrs per week

Building on the SF module, *Speech Science and Phonetics*, this module aims to teach students how the speech production process can be described, modelled and synthesised, and covers such topics as basic digital signal processing; speech analysis techniques including DFT, LPC, inverse filtering and voice source model matching; voice quality description and modelling; speech synthesis systems.

Prof. Christer Gobl

Assessment is based on one 3,000-word assignment.

LI4032 Computational Linguistics 5 ECTS, S2, 3 hrs per week

The aim of this module is to introduce students to current computational models of syntax and semantics. Once completing this students will, amongst other things be able to construct informed arguments in defence of particular constituent structure analyses, to determine the formal expressivity of infinite abstract languages and natural languages, relate formal expressivity to facts of human cognition and engineering artefacts in computational linguistics, and design, implement and evaluate computational grammars for natural language in response to test-suites representative of linguistic phenomena of interest in the literature.

Prof. Carl Vogel

Assessment involves a series of computational grammar development tasks and exercises with formal language theory, towards characterizing natural language syntax.

Option and Project

As noted in 4.1.6.4, CSL students undertake a final year project (worth 10 ECTS), and choose one or more Senior Sophister options (amounting to 10 ECTS in total). Both project and options may be in linguistics or have a substantial linguistics element.

A Linguistics option module will be

LI4034 Second Language Acquisition (S1, S2, 10 ECTS)

Our objective will be to gain as much insight as possible into the differential methodological dimensions of second language acquisition research and to arrive at a broad understanding of the kinds of findings that have emerged from this area. We will be meeting learning outcomes by focusing on selected topics in SLA and by developing individual research projects on topics of relevance to ongoing discussion in the field. Each week, there will be a one hour lecture followed by one hour of self-directed learning.

Prof. Gessica De Angelis

Assessment will be by project (over both semesters 50%) and exam (50%).

LI4036 Fourth Year Project (S1, S2, 10 ECTS)

The Final Year Project can be undertaken in linguistics, in which case the the module code is LI4036.

Sample titles of recent projects in Linguistics include:

- Building a New Synthetic Voice for Kerry Irish, by Eoin O'Reilly
- Liaison Marker: software to assist L2 French speakers improve their oral abilities by identifying liaisons within text, by Connor Evans
- A Linguistic, Historical and Phonological Account of the Yola: the Dialect of Forth and Bargy, by Luke Alexander Byrne
- Text-to-Speech Synthesis using Deep Neural Networks, by Liam Lonergan

4.2.5 CLCS Staff and Research Areas

Professor in Linguistics: J.I. Saeed, BA, M.A., Dip.Ling., Ph.D (London), FTCD. **Research:** grammatical theory; semantics and pragmatics; Afroasiatic linguistics. **Room:** Arts Building 4092. **Telephone:** ext. 1505. **E-mail:** jsaeed@tcd.ie

Professor in Phonetics: A. Ní Chasaide, Maîtrise és Lettres (Bordeaux), MA, PhD (Bangor, North Wales), FTCD. **Research:** experimental phonetics, acoustic and articulatory analyses of coarticulation, with particular focus on Irish, voice quality. **Room:** Arts Building 3038/4074a. **Telephone:** ext.1249/1348. **E-mail:** anichsid@tcd.ie

Associate Professor: Dr C. Gobl, MSc. **Research:** voice source analysis and modelling; voice quality; speech perception; speech synthesis; speech analysis/coding systems. **Room:** Arts Building 4038/4074a. **Telephone:** ext. 2592/1348. **E-mail:** cegobl@tcd.ie

Associate Professor in Computational Linguistics: C. Vogel, BA, MSc, MA, Ph.D. (Edinburgh), FTCD. **Research:** formal syntax and semantics, Head-driven Phrase Structure Grammar, robust language processing, language evolution, forensic linguistics. **Room:** O'Reilly Institute LG16. **Telephone:** ext. 1765 **E-mail:** vogel@tcd.ie

Associate Professor in Applied Linguistics and Manager of Language Learning Technologies: Dr B. O'Rourke, BA, MPhil., PhD. **Research:** cognitive and socio-cultural approaches to second language acquisition; metalinguistic knowledge in language learning; computers in language learning; autonomy in language learning; written language and literacy; psycholinguistics and language media. **Room:** Arts Building 3041 **Telephone:** ext. 3162 **E-mail:** breffni.orourke@tcd.ie

Assistant Professor: Dr. G. De Angelis. **Research:** Second/Third Language Acquisition, Cross-linguistic Influence and Multilingualism. **Room:** Room 4064, Arts Building. **Telephone:** 896 1106 **E-mail:** gessica.deangelis@tcd.ie

Assistant Professor in Computational Linguistics: Dr E. Uí Dhonnchadha **Research:** natural language processing; corpus linguistics. **Room:** Arts Building 3159 **Telephone:** ext. 2615 **E-mail:** uidhonne@tcd.ie

Assistant Professor in Deaf Studies: Patrick Matthews. **Research:** linguistics of ISL, Deaf education, Deaf community and culture, Teaching Methodologies, Assessment Methods, orthography for Irish Sign Language. **Email:** matthep@tcd.ie

Ussher Assistant Professor in Irish Speech and Language Technology: Neasa Ní Chiaráin, B.Sc. (D.C.U.), M.Sc. (N.U.I.), PH.D. **Research:** speech and language technology for Irish; Irish language synthetic voices; computer-assisted language learning. **E-mail:** Neasa.NiChiarain@tcd.ie

Assistant Professor in Linguistics: Valentina Colasanti, BA (Rome), MA (Rome), MPhil (Cantab), PhD (Cantab). **Research:** syntax; syntax-pragmatics interface; historical linguistics; Romance linguistics. Room: Room 3029, Arts Building. Telephone: (ext.) 4035. **E-mail:** valentina.colasanti@tcd.ie

Assistant Professor in Applied Linguistics (TESOL): Bronagh atibui, B.A., M.Phil., Ph.D. (TCD). **Research:** second language acquisition, language pedagogy, curriculum development and assessment, English for academic purposes, child language acquisition, language and migration, multilingualism and intercultural education. Room 3139, Arts Building. Telephone: ext. 1495. **Email:** bronaghc@tcd.ie www.tcd.ie

Research Fellow: Irena Yanushevskaya, Specialist in Germanic Philology (St Petersburg), PhD (St Petersburg), PhD (TCD). **Research:** voice source analysis, voice quality in signalling and perception of affect, voice source parameters and their interaction in signalling linguistic prosody. Location: Phonetics and Speech Laboratory, Room 4074A, Arts Building. Telephone: ext. 1348. **E-mail:** yanushei@tcd.ie

Assistant Professor in Deaf Studies: Dr. Sarah Sheridan, PhD (TCD). **Research:** Psychology of the language learner (e.g., anxiety, motivation); learner and teacher wellbeing; interpreting studies; Irish Sign Language. Room 118 Leinster Street South building. Telephone: (ext.) 4372 **E-mail:** Sherids1@tcd.ie

4.3 Roinn na Gaeilge is na dTeangacha Ceilteacha

4.3.1 Ginearálta

Roinn de chuid Scoil na dTeangacha, na Litríochtaí is na gCultúr i nDámh na nEalaíon, na nDaonnachtaí is na nEolaíochtaí Sóisialta is ea Roinn na Gaeilge is na dTeangacha Ceilteacha. Tá an Roinn suite in Áras na nEalaíon, mar a bhfuil oifig Cheann na Roinne i Seomra 4061 agus oifig an Rúnaí i Seomra 4055. Tá ceathrar ar fhoireann acadúil lánaimseartha na Roinne, mar aon le léachtóirí páirtaimseartha, teagascóirí páirtaimseartha agus rúnaí.

4.3.1.1 Teagasc

Seachas an cúrsa Gaeilge le haghaidh na céime in Eolaíocht Ríomhaire agus Teanga (ERT/ TR039), soláthraíonn an Roinn na cúrsaí fochéime seo a leanas:

- LeathMhodhnóireacht sa Nua-Ghaeilge (TR001)
- An Nua-Ghaeilge mar ábhar sa chéim is Léann na hEorpa (TR024)
- Modhnóireacht sa Luath- is sa Nua-Ghaeilge (TR022)
- An cúrsa 'Litríocht agus Teanga na Gaeilge' agus cúrsa bunGhaeilge do mhic léinn eachtrannacha.

Mar chuid den chúrsa modhnóireachta sa Nua-Ghaeilge, múintear Gaeilge na hAlban ó thosach; mar chuid den chúrsa modhnóireachta sa Luath-Ghaeilge, múintear an Mheán-Bhreatnais is an Nua-Bhreatnais ó thosach agus tugtar léachtaí ar litríocht na Breatnaise.

Soláthraíonn an Roinn cúrsaí iarchéime teagaisc le haghaidh Dioplóma sa tSean-Ghaeilge agus le haghaidh Máistreachta (M.Phil.) sa Luath-Ghaeilge.

4.3.1.2 Taighde

Is iad na gnéithe de léann na Gaeilge is mó is spéis le baill na Roinne faoi láthair ná: teangeolaíocht chomparáideach na dteangacha ceilteacha, stair na Gaeilge, seandlíthe na hÉireann, an Nua-Ghaeilge Chlasaiceach, gnéithe de litríocht na Gaeilge, béaloideas na hÉireann, teanga agus litríocht Ghaeilge na hAlban. Tá mic léinn Éireannacha agus eachtrannacha ag déanamh taighde faoi stiúir bhaill na Roinne faoi choinne na gcéimeanna M.Litt. agus Ph.D.

4.3.2 Eolas Eile

Tabharfar liosta iomlán den fhoireann teagaisc, dá seomraí, dá n-uimhreacha teileafóin, dá seoltaí ríomhphoist agus dá n-ábhair taighde inár ndiaidh anseo.

Soláthraíonn an Lárionad Staidéar Teanga is Cumarsáide (Oifig: Áras na nEalaíon 4091) deiseanna féinteagaisc Gaeilge.

Tá Cartlann Bhéaloidis i Seomra Henry Flood (Áras na nEalaíon 4058) mar a bhfuil cóip de phríomhbhailiúchán Choimisiún Béaloidis Éireann ar mhicreascannáin.

Moltar do mhic léinn páirt a ghlacadh i saol bríomhar phobal Gaeilge an Choláiste agus dul go rialta chuig Seomra na Gaeilge.

Is í Áine Ní Shúilleabháin Oifigeach Gaeilge an Choláiste: fón 3652, ríomhphost gaeloifig@tcd.ie, idirlíon www.tcd.ie/gaeloifig

4.3.2.1 Deontais Ghaeltachta

Bronntar uimhir áirithe deontas Gaeltachta i ngach bliain acadúil. Chun cur isteach orthu ní mór do mhic léinn iarratas a dhéanamh ar fhoirm faoi leith i ndeireadh an chéad téarma, agus teacht chuig agallamh nó chuig cruinniú a fhógraítear. Aon duine a roghnaítear dá bharr sin, beidh sé/sí i dteideal ar dheontas ach na coinníollacha cuí a chomhlíonadh.

4.3.3 Na Cúrsaí Gaeilge

Tugtar an t-eolas seo le léargas ginearálta a thabhairt ar na cúrsaí. Féadann léachtóirí mionathruithe a dhéanamh, ach ní dhéanfar é sin gan fógra a thabhairt do na mic léinn roimh ré.

4.3.3.1 Cúrsa na Chéad Bhliana

Léacht:

- **Léachtóir:** Pádraig de Paor.
- **Fad:** 1 leathbhliain, uair an chloig sa tseachtain.
- **Aidhm:** Léargas a thabhairt ar stair sheachtrach na Gaeilge.
- **Saothar:** Scrúdú ranga ag deireadh an téarma.
- **Téacs:** Leabhrán clóscríofa de chuid na Roinne.
- **ECTS:** 5

IRU1144Y Ceart agus labhairt na teanga

- **Léachtóir:** Mícheál Hoyne
- **Fad:** 2 leathbhliain, dhá uair an chloig sa tseachtain.

- **Aidhm:** Ceart na Gaeilge scríofa agus labhartha a mhúineadh.
- **Saothar:** Ceacht a scríobh gach seachtain; scrúdú scríofa agus béaltrial ag deireadh na bliana.
- **Téacs:** Le fógairt
- **ECTS:** 10

4.3.3.2 Cúrsa an Dara Bliain

Léacht (IRU22432): Gàidhlig.

- **Léachtóir:** Eoin Mac Cárthaigh.
- **Fad:** 1 leathbhliain, 3 uair an chloig sa tseachtain.
- **Aidhm:** Bunchumas sa Ghàidhlig a mhúineadh.
- **Saothar:** Ceachtanna a scríobh go rialta; scrúdú ag deireadh na bliana.
- **Téacs:** B. Robertson and I. Taylor, *Complete Gaelic*
- **ECTS:** 5

IRU2244Y Ceart agus labhairt na teanga

- **Léachtóir:** Eimear Connick.
- **Fad:** 2 leathbhliain, dhá uair an chloig sa tseachtain..
- **Aidhm:** Slacht breise a chur ar Ghaeilge scríofa agus labhartha na mac léinn.
- **Saothar:** Ceachtanna minice; scrúdú scríofa agus béaltrial ag deireadh na bliana.
- **ECTS:** 10

4.3.3.3 An Trú Bliain - thar lear

Cuirfear sonraí an chúrsa ansiúd ar fáil do na mic léinn faoi dheireadh an dara bliain. Sa chás nach, déanfaidh mic léinn dhá chúrsa: (i) Teanga (Gaeilge agus Gàidhlig), 2 leathbhliain, 10 ECTS; agus (ii) cúrsa roghnach, 1 leathbhliain, 5 ECTS.

4.3.3.4 Cúrsa an Cheathrú Bliain

Léacht (IRU44411): Gàidhlig.

- **Léachtóir:** Eoin Mac Cárthaigh.
- **Fad:** 1 leathbhliain, uair an chloig sa tseachtain.
- **Aidhm:** Slacht breise a chur ar Ghàidhlig na mac léinn.
- **Saothar:** Ceachtanna minice; scrúdú ranga ag deireadh an téarma.
- **Téacs:** Seachadadh clóscríofa.
- **ECTS:** 5

Ranganna teagaisc (IRU4440Y): Ceapadóireacht.

- **Léachtóir:** Eoin Mac Cárthaigh.
- **Fad:** 2 leathbhliain, 2 uair an chloig sa tseachtain.
- **Aidhm:** Slacht breise a chur ar Ghaeilge scríofa agus labhartha na mac léinn.

- **Saothar:** Ceachtanna minice; scrúdú scríofa agus béaltriall ag deireadh na bliana.
- **ECTS:** 10

Maraon leis na modúil éigeantacha thuas, tá cead ag mic léinn staidéar a dhéanamh ar cheann de na modúil roghnacha seo a leanas:-

- Roghanna éagsúla. (Liosta le fáil ó oifig Roinn na Gaeilge.)

4.3.4 Teagmháil

- **Ceann na Roinne:** Eoin Mac Cárthaigh, seomra 4061, emaccart@tcd.ie, 01-8963516
- **Riarthóir na Roinne:** Caoimhe ní Bhraonáin, seomra 4055, nibhraoc@tcd.ie, 01-8961450.

4.4 The Department of Germanic Studies

4.4.1 General Information

The Department of Germanic Studies, along with the other departments of modern languages, is part of the School of Languages, Literatures and Cultural Studies within the Faculty of Arts and Humanities. Currently, the Department is involved in five different degree programmes including the German variant of Computer Science and Language (CSLG), Joint Honors German (JH), European Studies (ES), Middle Eastern and European Languages and Cultures (MEELC), Law and German (LG) and Business Studies and German (BSL).

The Department is located on Level 5 of the Arts Building.

Full details about the Department can be downloaded from the Departmental website at www.tcd.ie/Germanic_Studies.

Head of Department: Professor Mary Cosgrove

Secretary: Ms. Natalie Wynn

Office: Room 5065, Arts Building

Office Hours: TBC, please check notice on door

Telephone: (353 1) 896 1373

Fax: (353 1) 896 3762

Email: germanic@tcd.ie

Co-ordinator for the German variant of Computer Science and Language (CSLG): Katrin Eberbach

Office: 5080, Arts Building

Office hours: by appointment

Telephone: (353 1) 896 3469/ 0868217282

Email: eberback@tcd.ie

Information for CSLG students is displayed on the departmental noticeboards, which are organised by year-group, in the corridor beside room 5065.

On the departmental website you will find further important information on how to make the most of your language learning, how to study effectively, and how to write an essay. You should download these documents and refer to them regularly.

Developing Study Skills To keep on top of your work you will need to develop good study skills. As part of your undergraduate study, we will be helping you to develop important soft or *transferable skills* such as planning, time management and multi-tasking so that you can manage your learning more effectively. These skills are life-skills and are as critical for study as they are for the world of work. When you are planning your study time, try to remember that for every hour of class, you should be doing at least two to three hours of private study.

4.4.2 Teaching

CSLG students share a number of core language modules with students from the other programmes offered by the Department of Germanic Studies. Modules are typically split into a number of groups, and CSLG students should take particular care, when reading the departmental noticeboards, to find out which modules and groups are intended for them.

4.4.3 Research

Members of the Department are all actively involved in research, and full profiles are given on the department's website:

http://www.tcd.ie/Germanic_Studies/staff/.

Most colleagues are involved primarily in literary research, but the Department also has interests in areas of linguistics and intercultural studies.

4.4.4 Your Representatives in the Department

Besides the CSL Management Committee, CSL student representatives are also entitled to attend the Germanic Studies Departmental Committee, which is a forum for conveying information between students and staff (and vice versa). The Departmental Committee meets at least once in each semester and addresses student concerns about any aspect of the course which may arise, as well as disseminating information about scholarships, schemes for travelling abroad and other issues. One representative from each year of each course may attend. If the official CSL representative for any given year is not a student of German, a specifically CSLG student may be elected to serve on this Committee.

4.4.5 Modules

In the following sections there is a year by year listing of the modules. Further more detailed information may be accessible via departmental web-pages and (for currently registered students) via my.tcd.ie.

4.4.5.1 Junior Freshman

There are two modules:

- GRU1100Y German language (2 hrs. tutorial and 1 hr. lecture per week all year), 10 ECTS
- GRU11011 German Area Studies (2 lectures per week, MT only), 5 ECTS

For further information about the content of these modules and their assessment details please refer to my.tcd.ie. Note that since modules are weighted according to their credit value, the German component taken as a whole makes up 25% of the total CSL annual mark.

4.4.5.2 Senior Freshman Year

There are two modules:

- GRU2200Y German Language 2 (2hrs. per week), 10 ECTS
- GRU22051 German Cultural History (2 lectures per week, MT only), 5 ECTS

For further information about the content of these and their assessment details please refer to my.tcd.ie. Note that since modules are weighted according to their credit value, the German component taken as a whole makes up 25% of the total CSL annual mark.

SCHOLARSHIP: Students take a 90-minute written examination paper in language fluency. This will normally consist of an essay to be written in German on a topic of contemporary interest. There is also a 15-minute oral, on any aspect of the course.

4.4.5.3 Junior Sophister Year

Students spend their JS year abroad under an approved Erasmus programme. The German universities with which contacts are currently available are Bielefeld, Bremen, Karlsruhe, Osnabrück, Potsdam, Trier, Saarbrücken, Tübingen, Stuttgart and Vienna. A separate handbook dealing with the Erasmus year appears in early January to help students choose which university to attend. The year co-ordinator is Dr Carl Vogel, Computer Science and Statistics.

4.4.5.4 Senior Sophister Year

There are two compulsory modules:

- GRU4400Y German Language 4 (2 hours per week all year & 1 hour per week grammar tutorial all year), 10 ECTS
- GRU44012 Translation (2 hrs per week, HT only), 5 ECTS

Optional Modules: There may also be possibilities to pursue additional optional modules. As these are subject to change from year to year, please see the departmental noticeboard.

For further information about the content of final year modules and their assessment details please refer to my.tcd.ie. As in other years, modules are weighted according to their credit value. The compulsory German modules therefore make up 25% of the final year mark, and this percentage will be larger should further optional modules be taken.

Attendance at all the modules described here is compulsory. It is the general practice of the Department to expect students to submit one piece of written language work per week in the Freshman years. As a minimum, in all years students are required to submit at least two-thirds of all the work set on any module, and to attend two-thirds of all classes held. Experience shows that because language learning is a skill, students who do not complete set course work regularly tend to perform poorly at their examinations.

4.4.6 Assignments

Procedures for submitting work and penalties for late submission: JF and SF students must deposit **assessed work** (e.g., essays, projects) in the locked mailbox beside the departmental office

(Room 5065) by the specified time. The mailbox is emptied at 12 noon on submission dates. You must also submit assessed coursework via Turnitin (available through the Blackboard page for each module).

When submitting an assignment, you must complete and attach an Assignment Cover Sheet, which contains a statement on understanding the Colleges plagiarism policy. The cover sheet can be downloaded from https://www.tcd.ie/Germanic_Studies/local-access/information.php or obtained from the mailbox outside 5065. It is essential that you familiarise yourself with the COLLEGE REGULATIONS ON PLAGIARISM and COMPLETE THE PLAGIARISM TUTORIAL Ready Steady Write before you sign and submit the declaration. See <https://libguides.tcd.ie/plagiarism>

In case of accident or loss, all students should keep hard and disk copies of all assessed work. You are also required to submit any assessed work as an e-mail attachment (Word) so that it can be run through anti-plagiarism software.

Assignment extension forms are available from an envelope attached to the Departmental Office window. If you are granted an extension, a form must be completed and signed by the appropriate lecturer and then attached to your work. There are **penalties for late submission** of work without an extension. Up to one week's lateness incurs a penalty of 10% marks, up to two week's lateness 20% marks and after that 0 will be awarded.

The Department sets aside time after the publication of the annual examination results when you can discuss your scripts with members of staff. Please keep an eye on the notice board for dates.

Marking Scheme for assessed work and examinations The Department of Germanic Studies uses the full marking scale between 0% and 100%. This scale is subdivided into 6 classes, which can be glossed as follows:

I	70% +	distinction – work of exceptional quality
II.1	60%-69%	very good – merit
II.2	50%-59%	average – good
III	40%-49%	passable – adequate
F1	30%-39%	redeemable fail
F2	0%-29%	not a serious attempt

In the case of Objective tests you should note the following. Objective tests are correct answer tests / items which have unequivocal answers. These may be useful in the assessment of discrete linguistic skills and/or knowledge. Objective items can be designed to focus on specific knowledge and skills and can be set at any required level of difficulty.

Objective test types:

- Gap/cloze tests of various kinds
- Comprehension exercises (True/False; Multiple choice; questions requiring students to locate specific information in the source text)
- Matching questions + answers/beginnings + ends of sentences; Sentence completion

The main strength of objective tests is the fact that they can be marked with complete reliability, thus eliminating the possibility of marker subjectivity or bias. The assessment of objective tests may also present a problem because of possible confusion arising from (a) marks as symbolic representations of attainment and (b) marks as raw scores, without reference to standard/scale.

In the Department of Germanic Studies the top mark for objective tests is normally 80. This is an indication of a very high I class mark. Exceptional performances may, however, be awarded a mark in excess of 80.

Guide criteria for awarding marks and classes Full details of criteria for awarding marks and classes are provided on the departmental website

https://www.tcd.ie/Germanic_Studies/assets/studentinformation/Criteria%20for%20awarding%20marks%20FINAL.pdf

The Department of Germanic Studies is committed to supporting students so that they can work toward achieving their full potential and developing the Trinity Graduate Attributes: to think independently, to communicate effectively, to act responsibly and to grow continuously.

Studying at university requires you to approach your studies and assessment with a different mindset to that which may have been instilled at second level. We don't teach toward exams: yes, you will be expected to write examinations and take orals alongside producing other types of formative and summative assessments, but you should approach assessment not with the mindset of how many marks do I get if I do this or that, rather in a more holistic way, i.e., as an opportunity to demonstrate what you have learned and to think independently and critically.

How you manage your communication with your peers and with staff may also differ from second level. Bearing all this in mind, we have put together some key points in terms of how you should approach your studies and communication with staff.

4.4.7 Expectations

What we expect from you

Responsibility to inform yourself about your modules on an ongoing basis.

Using the available information, you must take responsibility to inform yourself about each module which you are taking, its content, and assessment. This involves checking Blackboard, the information in my.tcd.ie, your relevant Course Handbook, the Handbook of the School of Languages, Literatures and Cultural Studies, and the departmental website. You should also check the noticeboards in the Department on a regular basis.

Responsibility to respond to emails from members of staff, academic and administrative, within 2-3 days unless otherwise specified (e.g., in the case of an urgent circular requiring a response within a specified timeframe). This also applies if you are on a student exchange abroad. We also expect students to use their @tcd.ie mail address when communicating with the Department.

It is inappropriate to email multiple members of staff with the same query.

Courtesy and respect in communication with academic and administrative staff: Staff should be addressed by their appropriate title unless otherwise directed. When sending emails, please be particularly aware of the address used and the tone of your message. It is unprofessional to begin emails with 'Hi' or 'Hey'. It is also basic courtesy to acknowledge receipt of a response from a staff member.

Respect for the integrity of the teaching and assessment process: Structures and procedures are in place to ensure the integrity of the assessment process. For example, assessed work, particularly at degree level, is usually marked by two internal examiners and subject to review by the external examiner, who is an independent expert. Students seeking feedback on their performance should be aware that work is assessed according to published criteria (see https://www.tcd.ie/Germanic_Studies/assets/studentinformation/Criteria%20for%20awarding%20marks%20FINAL.pdf).

Responsibility to inform yourself about College procedures in relation to appealing the decision of a Court of Examiners or seeking a remark/recheck: Unhappiness with your mark and/or the belief that effort has not been rewarded do not constitute grounds for appeal. Nor are marks negotiable. In fact, a Court of Appeal cannot change a mark: it can only change the consequences of a mark. You will find clear information on the grounds for an appeal at <https://www.tcd.ie/teaching-learning/ug-regulations/Appeals.php>. Please note also that provisional marks (i.e., marks that have not yet been ratified by a Court of Examiners) cannot be appealed.

A mature and reflective mindset when providing feedback on the curriculum. It is on this basis that we encourage constructive dialogue between staff and students on the structure and delivery of the

curriculum. When providing feedback, students should be mindful of the fact that each staff member gives much thought to the design, content and delivery of modules and the approach to assessment, based on their expertise and experience and what is achievable within the parameters of the Colleges academic year structure.

What you can expect from us

Clear and full information. We endeavour to provide you with clear and full information about all courses in which the Department is involved, about exams, and about other matters relating to the academic life of the Department. The main sources of information that you should consult are:

- **The College Calendar**, which is the official and binding statement of all regulations governing College life, and which is published annually with the approval of the College Board. Copies can be accessed at <http://www.tcd.ie/calendar/>.
- Your **CourseHandbook and the School Handbook**
- **Blackboard**
- my.tcd.ie
- The **Departmental Committee** (see below).
- The **Departmental Website**: http://www.tcd.ie/Germanic_Studies/
- The **Noticeboards**, organised by year-group, in the corridor next to the Departmental Office. Students should consult them regularly.

Openness and Transparency with regard to the design, delivery and assessment of the curriculum.

Feedback on formative and summative assessment. Feedback can be in written and/or oral form. Students will have the opportunity to discuss their work with academic staff. Specific times are put aside after Semester 1 and 2 when students can obtain feedback on their performance and view their scripts. Students should note that marks obtained in relation to Semester 1 assessment are provisional (i.e., they have not been considered by the Court of Examiners and, where appropriate, by the External Examiner). Feedback meetings are normally attended by two members of the academic staff.

Appropriate access to members of staff. Members of staff have notices on their doors which indicate when they are available to see students. This information is also available from the local access section of the departmental website http://www.tcd.ie/Germanic_Studies/.

Responses to emails will only be provided during normal working hours (i.e., 9.00-5.30 Monday to Friday). During term time we will endeavour to respond to your mail within 2-3 working days. For urgent queries, please liaise with your College tutor. Staff may have an out of office reply when travelling on College business. In such cases, you should expect a delayed response. You should not expect a response from a member of staff who is on annual leave.

Courtesy and respect in our communication with you: Any email, face-to-face or telephone communication with you will be conducted with respect and courtesy.

Opportunities to put forward your point of view. We welcome constructive criticism and will act swiftly if we become aware of legitimate problems. You have opportunities to voice such criticism through module feedback, on an individual basis and through your representative at the **Departmental Committee**. This does not include the assumption that the content of curricula or marks can be negotiated.

Communication only with you and your College tutor: The Departments relationship is with you. This means that we do not communicate with your parents, guardians or third parties about you. We follow College procedures and liaise, where appropriate, with your College tutor.

What we can all expect: Trinity College is committed to supporting the right of all members of the College community to work and study in an environment which is free from all forms of harassment, including sexual harassment and bullying (College Policy Statement).

The department subscribes to and implements the Complaints Policy of the School of Languages, Literatures and Cultural Studies.

4.5 Department of French

4.5.1 General

The Department is one of the seven disciplines that constitute the School of Languages, Literatures and Cultural Studies. The Department of French has a full-time academic staff of ten, supported by a number of part-time teachers, one full-time and two job-share executive officers. It is located on Level 4 of the Arts Building.

Head of Department: Professor Michael Cronin

Executive Officers: Ms. Mary Kelly - Room no 4109, Ms. Sinead Doran - Room no 4109, Ms. Tracy Corbett - Room no 4089

Office Hours (4109): Monday to Friday 9.30 – 11.30; 14.30 - 15.30.

Telephone: (353 1) 896 1553 and 896 1333

Fax: (353 1) 671 7118

Dr Rachel Hoare, the departmental CSL co-ordinator can be contacted at: 896 1842 (and rmhoare@tcd.ie). Information for CSL students is displayed on the departmental noticeboards, which are organised by year-group, in the corridor beside room 4111. Dr Rachel Hoare will normally be your first point of contact.

4.5.2 Teaching

The Department is involved in five other degree programmes besides CSL. These are Two Subject Moderatorship (TSM), European Studies (ES), Law and French (LawF) Business Studies and a Language (BSL), and Middle Eastern and European Languages and Cultures (MEELC). CSL students share a number of core language modules with students from these other programmes. As a result of the large number of programmes run by the department, modules are typically split into a number of groups, and CSL students should take particular care, when reading the departmental noticeboards, to find out which modules and groups are intended for them.

4.5.3 Research

Members of the Department are all actively involved in research in literature, linguistics and French civilization.

4.5.4 Books

Book purchase is the personal responsibility of students. Books purchased in the Junior Freshman year will be relied upon during the first year, and throughout the degree programme.

All books prescribed are available from International Books, 18 South Frederick Street. It is also possible to order books over the Internet from <http://www.bol.fr> or <http://www.fnac.fr> or <http://www.amazon.fr>

The following books are required:

- Oxford-Hachette French Dictionary
- Hawkins, Roger and Towell, Richard, *French Grammar and Usage* (London: Arnold, 2001).
- Hawkins, Roger and Towell, Richard, *Practising French Grammar: A Workbook* (London: Arnold, 1997).

Also recommended:

- Cholet, I. and Robert, J.M., *Précis de conjugaison*, CLE International, Paris, 2005.
- Humberstone, Paul, *Mot à mot* (London: Hodder & Stoughton, 1996)
- Jacqueline Moorton, *English Grammar for Students of French* (London: Arnold, 2002).

JF students must also download the following dossier from the departmental website:

- Language II: Composition & Comprehension (classes with lecturer)

4.5.5 JF CSLF Language Programme

Students attend five hours of language teaching weekly, two lectures and three classes. All five hours form an integrated course, which aims to develop a wide variety of language skills, written and oral, receptive and active. All students are required to attend weekly language classes, and submit weekly written assignments.

FRU11001 & FRU11002 French Language 1 10 ECTS; S1, S2; 3 hours

Aim; To provide a foundation of basic grammatical concepts and terminology relating to the French language; and to develop grammatical precision in written and oral expression.

Content: The content of the module is French grammar, written composition, and oral production. This will involve short but accurate narrative and descriptive texts in French on contemporary topics and topics covered in class, the demonstration of an ability to understand French through a variety of different media, including radio and news broadcasts, lectures and discussions, the preparation and delivery of short oral presentations on topics relating to contemporary France and francophone cultures, engagement in conversations on these topics and an awareness of different registers. The format of the module is one grammar lecture, one tutorial (grammar and composition), and one oral class.

Assessment: Assessment is based on a mixture of continuous assessments and examinations.

Written exam (34%): A two hour exam testing grammar and composition, comprised of:
 exercises in grammatical analysis;
 cloze test;
 exercises on specific points of grammar;
 a short composition.

Oral exam (33%) A 15-minute oral examination, which will include a five-minute expos on a topic arising from the course leading to a more general conversation. A list of Oral topics will be posted up to one week prior to the examination. Students choose one.

Continuous Assessment (33%) An overall average for the year is calculated on the basis of 8 pieces of submitted written work.

FRU11022 French and Francophone Cultures ECTS 5; S2; 1 hour;

Aim: This module aims to introduce students to a number of aspects of French and Francophone cultures, and to important historical periods that influenced the creation of modern France. Each of these topics will be introduced in the lecture, and further examined in tutorials through reading comprehension activities.

Content: The content of the module is French and Francophone cultures. The format of the module is one lecture and one tutorial (reading comprehension). This involves

- Becoming knowledgeable in key aspects of French and Francophone cultures.
- Recalling key aspects of France, its recent history, its institutions, its political life, and its lifestyles.
- Understanding French through a variety of different media, including radio and news broadcasts, lectures and discussions.
- Engaging in reading comprehension activities across a variety of texts in French.

Assessment: Aural exam, in-class assessment (reading comprehension)

4.5.5.1 Continual assessment:

As you can see from the Language 2 Composition and Comprehension dossier, you are required to submit a piece of written work (usually a short composition) every week. (This is separate from any grammar exercises your class tutor may ask you to submit). This means that 5 pieces of written work are submitted in MT, and 8 pieces of work are submitted in HT.

Weeks 1-3 of MT are to be regarded as 'practice sessions' where standardised marking procedures are in place as follows: after ten 'careless' errors (henceforth known as SAGAs!) a student's work will be returned to him / her to be rewritten and resubmitted; SAGAs are errors in the four areas of:

- Spelling
- Accent
- Gender and
- Adjective agreement.

From Week 4 onwards, the assessment programme proper begins; submitted work, even if full of SAGAs will be marked accordingly.

Term averages will be calculated as follows:

- MT Weeks 1-3: 3 pieces of work submitted – none count. These are the 'practice sessions'.
- MT Weeks 4-12: 8 pieces of work submitted – the best five count
- HT Weeks 1-12: 11 pieces of work submitted – the best eight count

Please note there are no 'practice sessions' in HT.

An overall average for the year is then calculated which counts for 10% of the overall mark in the Annual Examinations. If, for example, in MT, students only submit 5 pieces of work between weeks 4 and 12, then all of these will count. If only 3 out of the 5 required are submitted, the total will still be divided by 5. It is in students' interest then to submit as many of the weekly assessments each term as possible.

Late submission: Unless there is a medical reason for late submission, the following penalties will apply:

- 5% will be deducted from work which is submitted up to a week after the deadline set by the class tutor.
- Work submitted over a week late will not be accepted.

Supplemental This continual assessment mark will only count for the Supplemental Examinations if it benefits the student; i.e if the inclusion of the assessment mark produces a higher overall mark it will be included; if it produces a lower mark overall it will be discounted, and the language examination (two written papers, oral and aural) alone will count.

4.5.5.2 Self-Access Component

Centre for Language and Communication Studies

The Centre for Language and Communication Studies (CLCS), in addition to its role as an academic department occupied with teaching and research in general and theoretical linguistics, is responsible for the provision of language-learning facilities for the College as a whole. These include the language laboratories and computer laboratory, which students of French should use, particularly for Self-Access work. All students should spend a minimum of one hour a week working on aspects of grammar which have been covered in the week's lecture.

The general office is in room 4091, which is where you should go to borrow books for your Self-Access grammar sessions. You should then take the material into the laboratory and computer room (4074). The office and laboratory are open from 9 to 5 daily (including lunch-time).

The Centre includes a variety of self-tuition materials (books, audio tapes, videos, CD-ROMs) and a number of feature films in French, which you can use on a self-help basis in rooms 4073, where there are also language resources on computer

We encourage you to use these resources as often as possible.

4.5.6 SF CSLF Language Programme

FRU22001 & FRU22002 Oral and Written French ECTS 10; 3 hours; Semester 1 and Semester 2

Aim: Mastery of Oral and Written Language Skills. There is a weekly grammar lecture, a weekly class devoted to reading and writing skills, and a weekly class devoted to aural comprehension and oral expression.

Content: On successful completion of a students will be able to:

- Communicate clearly and effectively, both orally and in writing, in English and French in academic, professional and social settings
- Organise and present ideas in English and French, in writing and orally, within the framework of a structured and reasoned critical argument
- Translate a range of journalistic texts to and from French, with accuracy, consistency and appropriateness of register and expression
- Demonstrate a good comprehension of French by writing in French a résumé of a journalistic text
- Demonstrate a high level of proficiency in the French language in both written and spoken contexts

- Analyse critically and independently, in English and French, a variety of texts written in French in a variety of registers

Assessment:

Assessment 1: 1 × 1.5-hour Translation exam in MT assessment week (25%)

Assessment 2: 1 × 1.5-hour Composition exam in HT assessment week (25%)

Assessment 3: 1 × Oral examination in HT revision week (20%)

Assessment 4: 6 × continuous assessment assignments, 3 in MT and 3 in HT (20%)

Assessment 5: 8 × grammar quizzes, 4 in MT and 4 in HT (10%)

FRU22072 French Language for Computer Science ECTS 5; 2 hour; S2

Aim: The overall aim of this module is to prepare SF Computer Science and Language (French)(CSL) students for an effective Erasmus exchange by equipping them with language skills focused on their specialised and technical needs. The weekly format of the module is two tutorials.

Content: This will include

- Development of ability to understand relevant mathematical, linguistic and computer science texts in French.
- Development ability to read and extract salient information from long texts in the target language.
- Demonstration of ability to take notes from source materials and from activities.
- Understand the purpose of the résumé, the rapport and the synthèse de documents.

Assessment: The assessment will be in part based on continuous assessment activities in French in relation to the texts studied, and in part in the production in French of a short but accurate report using a standard scientific layout: theoretical framework, objective, method, results, and conclusion.

4.5.7 JS CSLF

Students spend their JS year abroad under an approved Erasmus programme. The French-speaking universities with which contacts are currently available are Grenoble, Lyon, Paris, Rennes, Toulouse, Nice and Louvain.

4.5.8 SS CSLF Language Programme

FRU44051 & FRU44052 Oral and Essay skills for CSL 10 ECTS;

Aim: To develop aural comprehension and oral expression in French to a high level of proficiency. To bring students to a high level of proficiency in written French, focusing on accurate linguistic expression and developing an argument and a coherent structure.

Content: On successful completion of this module, students will be able to: express themselves fluently and correctly in spoken French, on an intellectually challenging topic, coherently and with only brief notes, and also to express themselves fluently and correctly in written French in a structured way, at a level of discourse appropriate to an academic setting and dealing with intellectually challenging topic.

Assessment: there will be a 15 minutes Oral examination, presenting the dissertation and a 2 hour Essay examination

FRU44062 Translations Skills for CSL 5 ECTS; S2

Assessment: Translation into English class test (2 hours)

Optional modules In addition to the above, optional further modules can be taken. The options offered can vary from year to year. A recently offered option was

- FR4043 Language and society in the French-speaking world: status, diversity and function. 10 ECTS;

Chapter 5

CSL Projects

5.1 Third Year Projects

One feature of the CSL degree that is distinct from the other computer science degrees offered by Trinity is that it requires a 3rd year project in an area of individual interest to the student, combining focus on the language the student is engaged in with linguistic theory. This is in addition to a final year project. Third year projects are agreed individually and are essentially papers about some aspect of linguistic theory learned during the first years of the degree applied to a specific language, preferable the language being studied. Projects may also may draw on ongoing research or linguistic coursework in the host institution. Papers are about 30 pages long, plus bibliography. It is advised to use a style guide like the *Publication Manual of the American Psychological Association*.

5.2 Fourth Year Projects

Final year projects are more substantial exercises and may be in any area of computer science, linguistics or language study which interests the student and for which the student can locate a supportive supervisor. You can find on the CSL website a list of recent projects in various aspects of computational linguistics. You will notice that some projects involve more linguistics than computing, and that others involve nearly all computing. The list is not complete in that it does not include the projects from earlier years of the degree. Topics on offer for projects in computer science and statistics are also available on the web.

- Past projects:
<http://www.cs.tcd.ie/courses/cs11/projects4.html>
- Current projects in computational linguistics, computer science and statistics:
<https://www.scss.tcd.ie/StudentProjects/index.php>
- Examples of recent projects in CLCS are given above in Section 4.2.4.4

5.3 Research Ethics

Any research project that involves human participation conducted through this course (for example, a questionnaire or survey, or system user-evaluation, etc.) must have independent review by a *Research Ethics Committee* before its commencement.

Individual applications are considered on their own merits. A basic principle is that prospective participants should be fully informed about the research and its implications for them as participants, with time to reflect on the possibility for participation prior to being asked to sign an informed consent form. Informing prospective participants fully includes declaring potential conflicts of interest that the researcher may have in conducting the research, detailing how participants may withdraw data associated with their participation from further analysis within the study, explaining the preservation of their anonymity within the study, warning them about potential consequences of discovery during the study of issues that would necessarily have precedence over assurances of anonymity, and so on.

The online system, with further information and guidelines, can be found here: <http://www.scss.tcd.ie/undergraduate/ethics/>

It takes time to prepare an application for research ethics approval, to have the application considered, and to respond to feedback on the application where issues are raised. You should plan in your work for the time it takes to obtain research ethics approval.

Retrospective approval will not be granted.

Please also note, research conducted in the School of Computer Science and Statistics should be undertaken with cognisance of the TCD Guidelines for Good Research Practice; see <http://www.tcd.ie/about/policies/assets/pdf/TCDGoodResearchPractice.pdf>.

Chapter 6

CSL Progress Regulations

Passing a module A given module may have several different kinds of assessment component, with there often being a coursework component and an examination component. The size of these components and their role in determining the passing of a module varies from module to module. For this reason it is imperative that you check for these module details via `my.tcd.ie`.

To progress at the initial examinations 'Progression' is the Trinity term for meeting the academic requirements to move from one year into the next and the initial examinations are those scheduled in the 14th weeks of Semesters 1&2. The CSL regulations follow a scheme widely used in college. There are requirements concerning an average mark over modules taken (1 below), and requirements pertaining to the passing of individual modules (2 below).

1. students must achieve **an overall credit-weighted average mark of at least 40 per cent**.
2. additionally each module must be either **passed outright** (that is a mark of at least 40%), or deemed '**passed by compensation**'. This a mechanism that allows a relatively small number of modules to be declared passed, though less than 40% was achieved.

In particular,

- (a) modules totalling up to a **maximum of 10 credits** can be deemed to have been passed by compensation if in those modules a mark of at least 35% is achieved.
- (b) If more than 10 credits worth of modules have not been passed outright, then no modules can be deemed passed by compensation

By its design, this 'passing by compensation' option, with its credit maximum (10), and marks minimum (35), is not likely to be relevant to many students. In particular not reaching 40% in more than a tiny number of modules will imply supplementals, even if via good or even sensational marks in other modules gives a credit-weighted average of more than 40%.

To progress at Supplemental examinations If a student fails to meet the Progression criteria at the initial examinations examinations, then concerning all modules¹ which were not passed (ie. the marks was < 40%) there is a process of *supplemental* assessment/examination.

These take place in August with progression at the supplementals being settled before the commencement of the next teaching period.

¹ It should be noted that *all* failed modules/components will be reassessed; it is not the case that some are reassessed while some are deemed passed by compensation.

Different modules stipulate different arrangements concerning potential re-assessment of its components, and it may involve only an examination, or it may involve supplementary course-work, or a mixture of both. Generally an assessment component on which a pass mark was achieved will not be re-assessed. Should you fail a module at the Summer examination you should check with the lecturer involved as to the nature of the supplemental assessment. Details should also be available through my.tcd.ie

After any such supplemental re-assessment of failed modules has taken place, the same progress criteria are applied as were applied after the initial examinations to determine if all modules are now passed, including by compensation.

Failure to progress If after the initial and supplemental exams, the Progression criteria still have not been fulfilled, the student cannot progress into the the subsequent year: for a module that was not passed there are no provisions for 'carrying' that subject into the next year. The student may then avail of general College regulations (given in the Calendar) concerning repeating a year or 'going off books'.

The College Calendar While the information given above about regulations strives to be as comprehensive and accurate as possible, should the College Calendar states a provision at variance with what is described in this Handbook, it is the provisions stated in the Calendar that take precedence.

Chapter 7

For 19-20 & 20-21 entrants: some forthcoming SS changes

The details given in the preceding pages describe the modules being taken by students *currently* in either their JF,SF,JS or SS years. For those in JF and SF this year, there will be some differences in their SS continuation, though not very substantial. These differences are indicated below.

Relative to what was indicated in section 3.4, there will be some differences concerning (i) what is mandatory and optional and (ii) new arrangements concerning what is currently designated the 'Final Year Project', but will then be designated the 'Capstone Project'.

In CS \geq 10 ECTS-worth of modules will be taken, but no particular modules are designated as mandatory. These modules will be drawn from the combined pool of those CS modules designated as mandatory and optional in section 3.4.

In Linguistics also \geq 10 ECTS-worth of modules will be taken; in this case 2 particular modules will be mandatory:

- LI4031 Speech Analysis and Synthesis (5 ECTS)
- LI4032 Computational Linguistics (5 ECTS)

In the chosen language likewise \geq 10 ECTS-worth of modules will be taken; particular modules are mandatory:

- Ranganna teagaisc, 10 ECTS
- GR4001 (German Language 4, 10 ECTS)
- FR4061 (Oral and Essay skills for CSL, 10 ECTS)

The 'Capstone Project' is a re-naming of the FYP but will be worth 20 ECTS. Its remit concerning possible subject areas will remain the same: a project may be pursued in any of the main strands of the degree, and absolutely may combine strands.

This leaves 10 further ECTS as option modules. In addition to the modules which were indicated in section 3.4 as options, particular language modules will become options

- Gàidhlig, 5 ECTS
- GR4010 (German Translation, 5 ECTS)

FR4059 (Translation skills for CSL, 5 ECTS)

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