

B. A. (Mod.) Computer Science and Language: Course
Handbook 2014–2015

Centre for Computing and Language Studies
Trinity College Dublin

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Chapter 1

Overview

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 degree program has computational linguistics as its core, with computer science, linguistics, and language study as constituent disciplines. As an inherently interdisciplinary program, combining arts and sciences, it is diverse and stimulating in its subject matter. This makes the degree challenging, but correspondingly rewarding. Graduates are competent for employment or postgraduate study in labs for research and development in speech and language technology. They are also competent for further study or direct employment in the software and consulting industries (notably on an international scale), as well as for further work in their language of choice, and linguistics. Linguistics is the science of human language, whether spoken, written or signed; computational linguistics is the science of language with particular attention given to the processing complexity constraints dictated by the human cognitive architecture. Like most sciences, computational linguistics also has engineering applications.

One of the major objectives of this degree is to graduate creative and critical thinkers and readers who will be able to design and implement software systems which are easy to use and which have user interfaces which can accept different natural languages, including the capacity for speech input and output. Historically, natural language interfaces have been the primary technology produced by researchers in computational linguistics. However there is an ever increasing industry based on natural language engineering — personal translators, speech synthesizers, internet search, and the like. Computer programs need to be able to reason intelligently in order to undertake complex tasks such as natural language translation and automatic recognition of visual scenes. For these reasons special emphasis is placed on artificial intelligence and cognitive science.

In each of the first three years, there will be two software modules, a mathematics module (30ECTS) and the equivalent of two modules in the chosen language (15ECTS) as well as in linguistics (syntax, semantics, applied linguistics, phonetics, speech science) (15ECTS). Students must also spend a year in a country where their degree language is a major native language. Virtually all students on the degree spend the third year of the course attending another European University, where they take modules in Computer Science and Linguistics. While abroad, students are expected to do a project on the linguistic properties of their language (see §3.3.3 and §5.1), explicitly bringing together at least the linguistic theory and language fluency elements of the degree, potentially also computational aspects as well. This project may provide groundwork for the fourth year project (see §5.2), although the fourth year project may also be in a distinct area. In the fourth year there are *core* modules in the three components of the course and also *option* modules which are selected from the range offered in any one year. In addition each student undertakes a substantial final year project. Interdisciplinary projects are strongly encouraged.

The modules in French, German and Irish aim to give students sufficient competence in their language of focus to be able to operate in that language in their future careers. For CSL students

whose languages are French or German, they will spend their Junior Sophister year abroad, where they will study at a university in a country of their chosen language. For students of all of the three languages offered, there is focus on aural and oral communicative abilities as well as grammatical competence. Fluency in written language is particularly important. Students should be keenly aware that they must maintain unfailing accuracy in points of grammar. It should be stressed that this requires a real commitment to the study of the language, at a level well beyond the honours leaving certificate requirement. Students should make sure to spend an amount of quality time and effort in advancing language skills commensurate with the proportion of the degree represented by the language component (similarly for the other parts of the degree). The end result, however, is a truly interdisciplinary qualification that is remarkable in its own right, and which is furthermore highly valued by prospective employers.

We aim to be in a position to offer paid summer internships after each year of study to those students who achieve at least an upper second-class rating for the year. Several students have availed of this option.

Final year projects in the area of computational linguistics by students of this degree have achieved national recognition in competition with M.Sc. and Ph.D. dissertations in the field (see §5). Starting from the academic year 2012-2013, this course has a single CAO reference number (TR039) and the name, "Computer Science and Language". Prior to that the course had the longer name "Computer Science, Linguistics and a Language". Despite the slight shrinkage of the course title, the course continues to synthesize the full breadth of disciplines that it always has, namely computer science, linguistics and the study of a particular language.

Chapter 2

Information for New Students

2.1 Introduction

Welcome to Trinity College and to this degree programme, known officially for the first time this year 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 may expect to find these names used interchangeably for some time to come. The aim of this booklet 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.

Beside this printed information, the following urls from the participating departments should be also consulted

- main CSL pages: www.scss.tcd.ie/undergraduate/computer-science-language
- Computer Science: www.scss.tcd.ie
- 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 mtemms@tcd.ie, and his College telephone extension number is 1542.

The executive officer is Ms. Kaukab Naqvi (ext. 3425, email Kaukab.Naqvi@scss.tcd.ie).

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. Kaukab Naqvi.

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

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.

ccls@tcd.ie, and its executive office is Ms. Kaukab Naqvi (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 Hoare 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): Dr Gillian Martin Department of Germanic Studies²

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

Senior Sophister Year (Fourth Year): Dr Gessica De Angelis, Centre for Language and Communication Studies

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: Dr Gillian Martin for German³, Dr Hoare for French, Dr Vogel for Computer Science and Dr Gessica De Angelis for Linguistics. The subject area contact person for Irish is for the first semester Prof. Damian McManus and for the second semester Dr Eoin Mac Cárthaigh of the Dept. of Irish and Celtic Languages.

2.5 Your Tutor

You have already heard from Dr Claire Laudet, 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. In the same package that included material about the orientation day was included the name of your academic Tutor. 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.

2.6 The Junior Dean

Please consult the general regulations of the College Handbook. These are available on the web and in the Library. One thing you should be aware of (over and above the specific alerts that you find spelled out in this handbook), is that the role of the Junior Dean is as an interface for students in a way that contrasts somewhat with that of your Tutor. While there is overlap in the fact that both act in your interest and are involved in certain aspects of student life in the College, the Junior Dean and Assistants are responsible for examining issues of student discipline (such as illicit calculators or telephones during examinations, plagiarism, cheating on exams, or any of the other issues that are recorded as serious offenses in the College Handbook). Please ensure that you are familiar with all College regulations so that you do not to meet the Junior Dean in his disciplinary capacity.

²Dr. Joachim Kolb will be taking over this role from early on in the academic year.

³again Dr. Joachim Kolb will be taking over this role from early on in the year

2.7 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. Kaukab Naqvi, to Dr Emms, to Dr Vogel, and to Dr Hoare, so that the person in question may be put on the mailing list for invitations to meetings. In the absence of a ratified nominee, the Course Director will somewhat undemocratically appoint a representative.

2.8 Structure of the Academic Year

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. The three terms are known as Michaelmas (MT, September – December, 12 weeks), Hilary (HT, January – March, 12 weeks) and Trinity (TT, April – June). Teaching happens only in the first two terms, and in each of these terms one of the 12 weeks is designated as a reading week. During this week you may anticipate allocating time for reading and other forms of research towards projects due once the reading week ends. Semester exams may exist in some subject areas.

For a single, printable overview of the academic year, you might want to refer to <http://www.tcd.ie/calendar/academic-year/>

2.9 The Year Abroad

As you know, your degree is organized such that you spend the Junior Sophister year (third year) studying at a university abroad⁴. 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, Edinburgh, 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 Socrates Coordinator for exchanges between other universities abroad and the School of Computer Science and Statistics is Ms. Mary Sharp. Dr Dingliana sees to certain administrative aspects of your year abroad: getting registered at your host institution, receiving your counterparts who visit TCD, arranging pastoral visits, renewing institutional contracts, etc.

Subject to renewal by the European Union, CSL students are eligible for modest Grants through the Socrates 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 nonetheless expected to spend the Junior Sophister year abroad. There is a separate handbook for the Socrates year.

2.10 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 activities are timetabled, and participation is obligatory. However, the content is not examined. 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.

⁴More precisely, students whose language is French or German must do this, whereas for students whose language is Irish it is a possibility

2.10.1 Dublin Computational Linguistics Research Seminar

The Dublin Computational Linguistics Research Seminar (DCLRS) is a joint venture between TCD, University College Dublin (UCD), Dublin City University (DCU) and Dublin Institute of Technology (DIT). When a seminar takes place it is on Friday, at 4p.m. The primary host of the series rotates annually among the four universities, and this year is DIT. It is possible that sometimes an event that is taking place at Trinity will be designated as a DCLRS Seminar.

The content of the seminar varies from week to week and 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. Sometimes the talks are at an advanced level, and sometimes introductory overviews. You will receive electronic announcements of each talk, with a title and abstract. You'll also be notified when talks are especially accessible.

While you are encouraged to attend all the seminars, **there will be required quota set for seminars attended. A record of your attendance will be kept by your filing a dated paper with the name of the speaker and title of the talk, your name and signature, and a one or two paragraph typed summary of the talk and what you learned from it.**

You should file your attendance with Martin Emms or Carl Vogel no later than the Monday following the talk. The quota is dependent on the number of scheduled seminars and the quota will be set around the end of November. There is a quota for participation whether or not TCD is the primary host in a given year.

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.

2.10.2 Christmas Conference

At the end of the first term, we have an event know 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.

2.11 Rising with Your Year

For further details on nature of the examinations and assessments see both the subsequent sections of this handbook dedicated to each contributing department and also see Chapter 6

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.

2.12 Libraries

The main library for computing-related material is the Hamilton Library. The Lecky Library contains computer science and mathematics texts. Students will also require the Berkeley and Ussher libraries. The SCSS Library is available for certain materials, like past student work.

The School of Computer Science and Statistics has a small library of its own. It is located in Room F.57, ORI. The holdings of the library comprise mainly computer journals and periodicals covering

many different areas of computing. Also housed in the library are Ph.D. and M.Sc. theses, 4th year B.A. and B.A.I. project reports and technical reports produced by staff and postgraduate students.

Students are very welcome to come in and browse in the library. However, material may only be borrowed by final year students on programmes run by the Department. It is possible to request a photocopy of an article from a journal. Normal departmental photocopying charges are applied for this service.

Rachel Noctor is the librarian and she may be contacted by email at: rachel.noctor@tcd.ie or by telephoning 608 1877. The library is open as follows: Monday - Friday 09.30 - 13.00, 14.00 - 17.00

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 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.

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 Online Timetable and Module Information

A great deal of information is available via the 'TCD portal':

`my.tcd.ie`

Timetable information should be available by this means, both personal timetables and module-specific timetables: in the subsequent sections of this document you will find the modules which form your course. Using a module code, further module-specific details are also available via the portal under *Courses & Modules*.

Additionally, concerning modules from the computer science component, please see the following for time-table information

<https://www.scss.tcd.ie/undergraduate/timetables.php>

Besides these online sources of information, it is a good idea to locate as soon as possible all the relevant *physical* notice boards in various departments and to keep an eye on them.

2.15 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

- CS1003 Mathematics (S1, S2, 10 ECTS)
- CS1010 Introduction to Programming (S1,S2 10 ECTS)
- CS1021 Introduction to Computing I (S1 5ECTS)
- CS1LL2 Representations and Computation (S1 & S2)

3.1.2 Linguistics

- LI1008 Language, The Individual and Society (general linguistics) (5 ECTS, S1)
- LI1031 Introduction to Syntax (5 ECTS, S2)
- LI1230 Introduction to Phonetics and Phonology (5 ECTS, S2)

3.1.3 Language

- French/German/Irish (15 ECTS)

Irish IR1035 (Ceart agus labhairt na teanga, 10 ECTS, S1, S2), IR1022 (Pobal agus teanga, 5 ECTS, S1)

German GR1000 (German language fluency, 10 ECTS, S1, S2), GR1010 (Landeskunde, 5 ECTS, S1, S2)

French FR1014 (Written language, 10 ECTS, S1, S2), FR1009 (Oral language, 5 ECTS, S1, S2)

3.1.4 Dublin Computational Linguistics Research Seminar

- CSLL00 DCLRS (5 ECTS). See §2.10.1
- CSLL01 DCLRS – a timetabled hour for prep and to abet transport to partner institutions.

3.2 Senior Freshman

3.2.1 Computer Science

- MA2C03 Discrete Mathematics (S1, S2 10 ECTS)
- CS2010 Algorithms and Data Structures (S1, S2, 10 ECTS)
- CS2LL3 Intermediate Programming and Natural Language Processing (S1 & S2, 10 ECTS)

3.2.2 Linguistics

- LI2034 Syntax and Semantics (S1, 5 ECTS)
- LI2036 Computational Morphology and Statistics (S1, 5 ECTS)
- LI2035 Speech Science and Phonetics (S2, 5 ECTS)

3.2.3 Language

- French/German/Irish
Irish IR2035 (Ceart agus labhairt na teanga, 10 ECTS, S1, S2), IR2026 (Gàidhlig, 5 ECTS, S2)
German GR2000 (German Language Fluency, 10 ECTS, S1, S2), GR2012 (German Cultural History, 5 ECTS, S1, S2)
French FR2008 (Oral and Written French, 10 ECTS, S1, S2), FR2022 (Sociolinguistic variation in French, 5 ECTS)

3.2.4 Dublin Computational Linguistics Research Seminar

- CSLL00 DCLRS see §2.10.1
- CSLL01 DCLRS – prep this hour is set aside to abet transport to partner institutions.

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 mainly pursue a programme here, detailed further below, though it is also a possibility to spend their Junior Sophister year. This has been undertaken in the past with Scottish universities and the Irish department will endeavour to facilitate that.

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

Students who need to repeat the Junior Sophister year do so at home at Trinity in the modules described in the rest of this section.

3.3.1 Computer Science

- ST2004 Applied Probability 1 (S1, 5ECTS)
- CS3011 Symbolic Programming (S1, 5ECTS)
- CS3012 Software Engineering (S1, 5ECTS)
- CS3061 Artificial Intelligence I (S2, 5ECTS)
- CS3071 Compiler Design I(S1, 5ECTS)

- CS3013 Software Engineering Group Project (S2, 5ECTS), or
CS3017 Introduction to the Semantics of Programming Languages (S2, 5ECTS), or
CS3081 Computational Mathematics (S2, 5ECTS)

3.3.2 Linguistics and a Language

Students take classes in language fluency, in the linguistic study of their chosen language, and in theoretical and applied linguistics:

- LI2307 Aspects of Written Language (5 ECTS)
- LI2303 Language Learning (5 ECTS)
- LI2301 Aspects of vocabulary (5 ECTS)

3.3.3 Project

Students develop a formal linguistic analysis of interesting phenomena 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

- CSLL00 DCLRS see §2.10.1
- CSLL01 DCLRS – prep this hour is set aside to abet transport to partner institutions.

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-worth¹. Also a Final Year Project is undertaken (worth 10 ECTS).

3.4.1 Computer Science

- CS4LL1 Information Management (5 ECTS, S1)
- CS4LL4 Artificial Intelligence II (10 ECTS, S1, S2)

3.4.2 Linguistics

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

¹So two modules worth 5 ECTS each, or one worth 10

3.4.3 Language

- French/German/Irish

Irish IR4021 (Ranganna teagaisc, 10 ECTS, S1, S2), IR4013 (Gàidhlig, 5 ECTS, S1, S2)

German GR4001 (German Language 4, 10 ECTS, S1, S2), GR4010 (German Translation, 5 ECTS, S1, S2)

French FR4032 (Written Language, 10 ECTS, S1, S2), FR4042 (Oral skills for CSL, 5 ECTS)

Senior Sophister students select 10 ECTS worth of option modules² from the year's currently available suite of options. They vary from year to year. The 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. You can find on the CSL website a list of recent projects.

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 the 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 an indicative of options that have been offered recently:

- CS4LL5 Advanced Computational Linguistics (S1, 5 ECTS)
- CS4001 Fuzzy Logic (S1, 5 ECTS)
- CS4004 Formal Verification Techniques (S1, 5 ECTS)
- CS4012 Topics in Functional Programming (S1, 5 ECTS)
- CS4021 Advanced Computer Architecture (S1, 5 ECTS)
- CS4031 Mobile Communications (S1, 5 ECTS)
- CS4032 Distributed Systems (S1, 5 ECTS)
- CS4052 Computer Graphics (S1, 5 ECTS)
- CS4053 Computer Vision (S1, 5 ECTS)
- CS4071 Compiler Design II (S1, 5 ECTS)
- LI4034 Second language acquisition (S1, 10 ECTS)
- IR3470 Litríocht Bhéaloidis (S1, 5 ECTS)
- IR3477 Prós na Linne (S1, 5 ECTS)
- IR3478 Gearrscéalta Mháirtín Uí Chadhain (S1, 5 ECTS)
- IR4385 An Filíocht Chomhaimseartha (S1, 5 ECTS)
- IR4386 Scéalaíocht na Sean-Ré (S1, 5 ECTS)
- IR4362 Ainmneacha agus Sloinnte na nGael (S2, 5 ECTS)
- IR3483 Cúirt an mheón-oíche (S2, 5 ECTS)
- IR3466 Filíocht na Fiannaíochta (S2, 5 ECTS)
- IR3468 Dán Díreach (S2, 5 ECTS)

²So two modules worth 5 ECTS each, or one worth 10

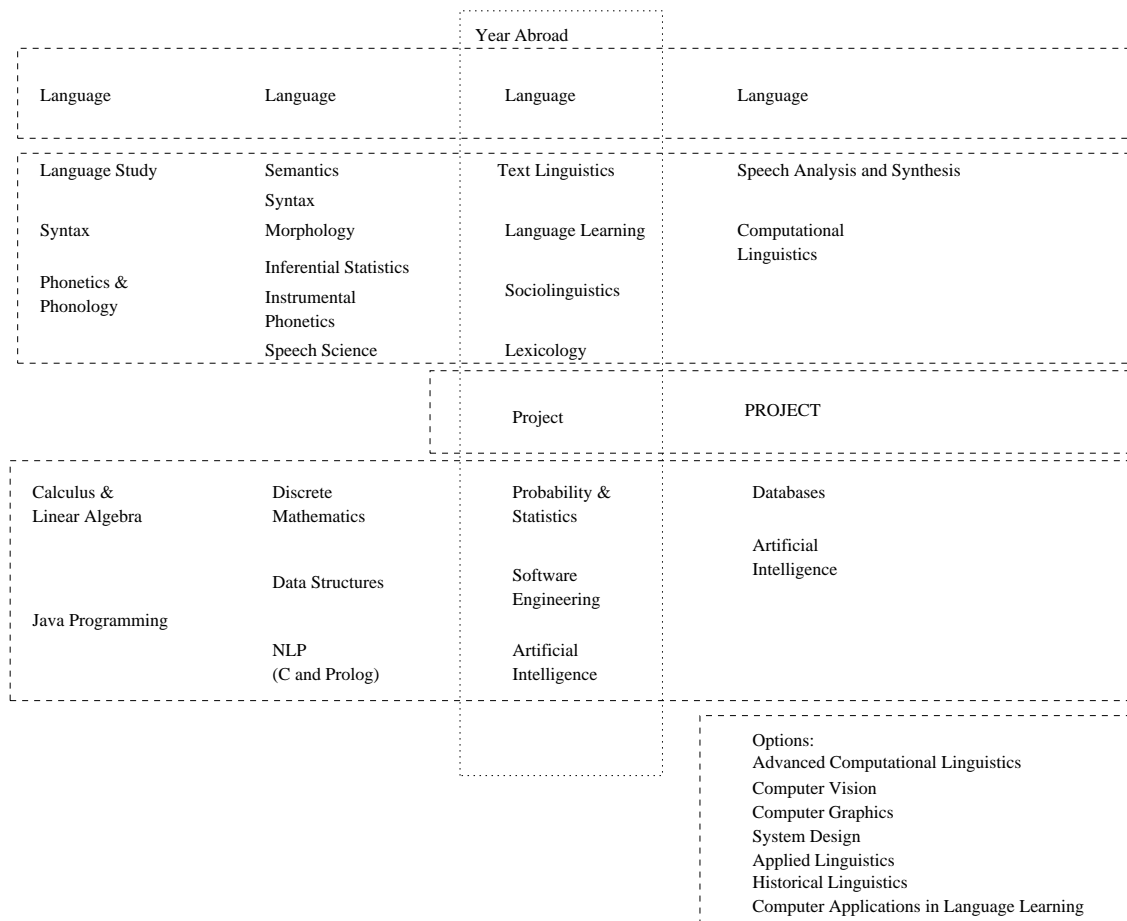
- Kulturwissenschaft (10 ECTS)
- Experimentelle Prosa (10 ECTS)
- Kunst nach Auschwitz (10 ECTS)

3.4.5 Dublin Computational Linguistics Research Seminar

- CSLL00 DCLRS see §2.10.1
- CSLL01 DCLRS – prep this hour is set aside to abet transport to partner institutions.

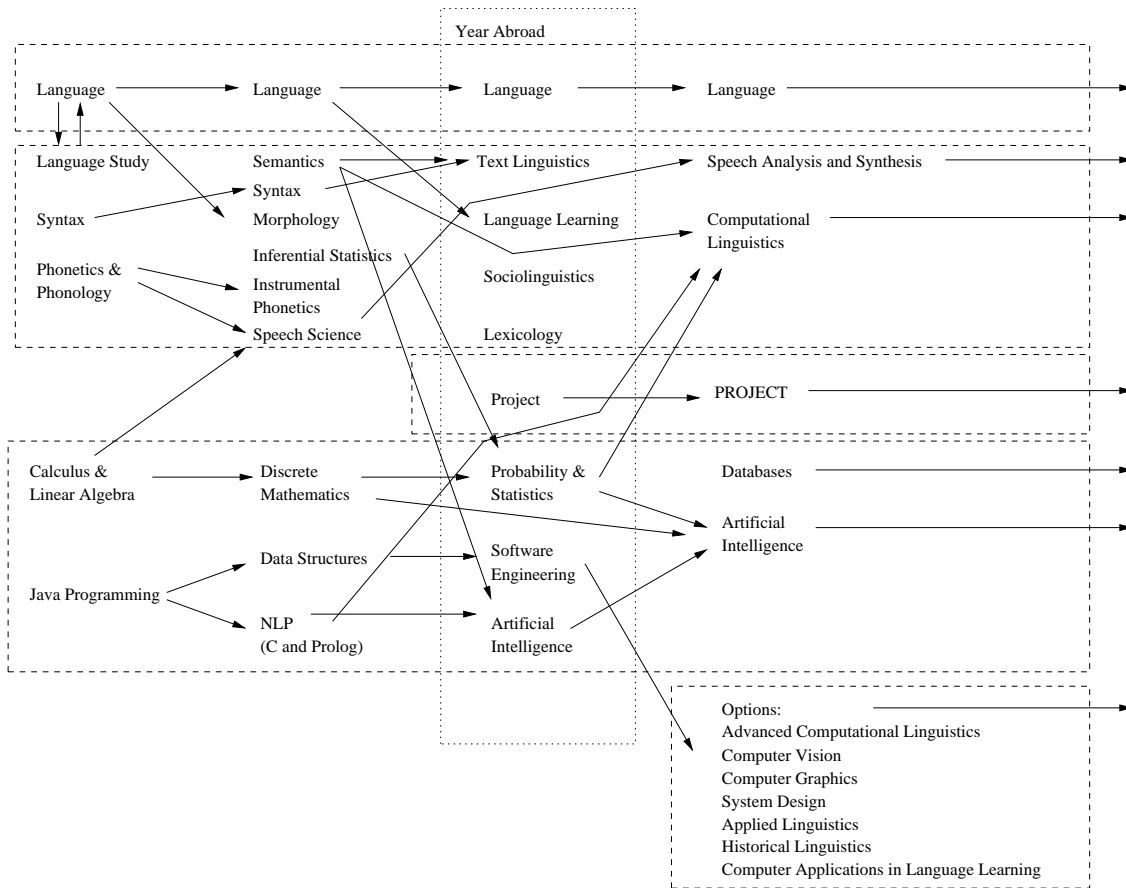
3.5 Pictorial Overview

3.5.1 Basic Yearly Structure



Note that the boxes are **not** drawn to scale.

3.5.2 Partial Indication of Module Dependencies



Note that the boxes are **not** drawn to scale.

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.

The School of Computer Science and Statistics is part of the Faculty of Engineering, Mathematics and Science, and Dr Jeremy Jones is the Head of School. Within the School of Computer Science and Statistics, Dr Andrew Butterfield is the Director of Undergraduate Teaching and is thus a somewhat course-independent adviser available to you. The Dean of the Faculty is elected every three years and the position is currently held by Professor Clive Williams.

4.1.2 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

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

Carlow Answers, plc., founded by a CSL graduate who pursued further postgraduate study in the area of computational linguistics.

4.1.3 SCSS Computer Facilities

The Department has its own computer facilities, far surpassing the facilities and services supplied by ISS. The primary SCSS labs that you make use of are located in the basement of the O'Reilly Institute (not far from where your Course Director is buried). The rooms are LG08, LG10 and LG12.

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 (in the PC huts or the PC labs scheduled for your computer science modules), 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.**

4.1.4 Computer Science Component

The Co-ordinator for Computer Science 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 main notice board is located in the reception area outside the SCSS Office (G.08, O'Reilly Institute).

The computing component of the CSL course is made up of the maths and software streams of the honors B.A. in Computer Science; it lacks most of the hardware elements of that degree; instead, the B.A. in CSL has linguistics and language components.

4.1.4.1 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 <http://www.scss.tcd.ie/undergraduate/computer-science-language/jf>

CS1003 Mathematics ECTS: 10, S1, S2, 3 hrs per week.

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.

CS1010 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. CS1010 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

CS1021 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

CS1LL2 Representations and Computation S1, S2 2 hours tutorial

This is a problem solving, tutorial supplement to CS1010/CS1021

Lecturer: Francesca Bonin

4.1.4.2 Senior Freshman CSL Syllabus

Students take CS2LL3 (10 ECTS) and four other modules which are shared with BA (mod) CS, namely MA2C03 (10 ECTS), CS2011 (5 ECTS) and CS2012 (5 ECTS). The contents of these modules is briefly outlined below. Further details for CS2LL3 can found

<http://www.scss.tcd.ie/undergraduate/computer-science-language/jf>

and for the BA (mod) CS modules:

<http://www.scss.tcd.ie/undergraduate/computer-science/sf/>

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

MA2C03 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

CS2010 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 Hugh Gibbons

CS2LL3 Intermediate Programming and Natural Language Processing 10 ECTS, S1, S2, 4 hours per week, 2 lectures, 1 tutorial, 1 lab session

In the first semester this module 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 LiFes 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

4.1.4.3 Junior Sophister CSL Syllabus

It is normal for students to spend this year studying abroad under the Socrates/Erasmus program. For students who remain in Dublin they continue to pursue a mixture of computer science, linguistics and a particular language. The subjects modules listed below are indicative of computer-science part of the syllabus (subject to timetabling constraints there is some scope for variation on this)

- ST2004 Applied Probability (S1, 5 ECTS)
- CS3011 Symbolic Programming (S1, 5 ECTS)
- CS3012 Software Engineering (S1, 5 ECTS)

- CS3061 Artificial Intelligence I (S2, 5ECTS)
- CS3071 Compiler Design I (S1, 5ECTS)
- CS3013 Software Engineering Group Project (S2, 5ECTS), or
CS3017 Introduction to the Semantics of Programming Languages (S2, 5ECTS), or
CS3081 Computational Mathematics (S2, 5ECTS)

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

<http://www.scss.tcd.ie/undergraduate/computer-science/js/>

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

4.1.4.4 Senior Sophister CSL Syllabus

Final year students in the CSL degree take the modules CS4LL1, CS4LL4, 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 chosen modules can be selected from the options offered within the CS department, or from those offered in the other streams of the degree course². Either two 5 ECTS options can be chosen or one 10 ECTS option.

CS4LL1 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.

CS4LL4 Artificial Intelligence ECTS: 10, S1, S2, 3 hours per week, plus one hour of lab per week.

This modules aim to give an in-depth introduction to AI and Machine Learning methods for NLP. Topic covered include: (S1) Knowledge Representation, Description Logics, Reasoning about change, Automata-theoretic methods (S2) Text categorisation, user-interface agents and issues, imensionality reduction, probabilistic classification (Naive Bayes classifiers: multivariate Bernoulli, multinomial and continuous models), symbolic methods (decision trees, decision rules), instance-based methods (k-NN, case-based reasoning), other supervised methods (neural nets, SVM), unsupervised learning.

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

Lecturers: Tim Fernando and Saturnino Luz

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 the 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 an indicative of options that have been taken recently:

- CS4LL5 Advanced Computational Linguistics: Machine Learning techniques in Machine Translation, Speech Recog, Topic Modelling. (S1, 5 ECTS)

²with the agreement of the course director

- CS4001 Fuzzy Logic (S1, 5 ECTS)
- CS4004 Formal Verification Techniques (S1, 5 ECTS)
- CS4012 Topics in Functional Programming (S1, 5 ECTS)
- CS4021 Advanced Computer Architecture (S1, 5 ECTS)
- CS4031 Mobile Communications (S1, 5 ECTS)
- CS4032 Distributed Systems (S1, 5 ECTS)
- CS4052 Computer Graphics (S1, 5 ECTS)
- CS4053 Computer Vision (S1, 5 ECTS)
- CS4071 Compiler Design II (S1, 5 ECTS)

Further details on the CS modules should be available via

<http://www.scss.tcd.ie/undergraduate/computer-science/ss/>

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

4CSLL5 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) × 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) × 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.

4.1.5 Programming Support Centre

The Programming Support Centre describes itself thusly, "The Programming Support Centre is available to all computer science and engineering students taking programming courses. FREE of charge. The centre operates as a drop-in service where you can get help with any problems you might have with programming in your courses." This is not a place where you have your programs written for you, but where you can go to seek advice.

More details are available on the web:

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

4.1.6 Additional Information

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

- <http://www.scss.tcd.ie/undergraduate/computer-science-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. The Centre is responsible for research and teaching in theoretical linguistics, applied linguistics, phonetics and speech science. It contains a phonetics laboratory and also administers language teaching and self-access facilities, including language laboratories, computer rooms, and video viewing facilities.

The Centre has a full-time academic staff of twelve, 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: Dr Elaine Uí Dhonnchadha

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: Ms. Sarah Dillon

Telephone: 896 1560

Facsimile: 896 2941

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 around 30 M.Phil. students, who conduct research for their dissertations in applied linguistics, and speech and language technology.

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. 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 4.30pm on the due date** and signed in at the CLCS Office. **Students are required to keep an electronic copy of ALL work submitted for assessment.**

(b) For all assignments, students *may* be required to upload an electronic version of the assignment to **TurnItIn**, a plagiarism detection system. Students will be advised by individual lecturers where this applies. **In all instances, students must also submit hardcopy versions and sign them in at the CLCS Office.**

(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

LI1008 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: Denise O'Leary, Dr. Breffni O'Rourke, Dr. Gessica De Angelis, Dr. Lorna Carson, Gudny Thorvaldsdottir, Pat Matthews and Dr. Kathleen Mc Tiernan.

It assessed by course work in the form of an essay and by a summer examination.

LI1031 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).

Assessment involves a class test and summer examination.

LI1230 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.

Junior Freshman Assessment The annual examination in JF linguistics is one three-hour paper, having three sections, one section for each of the modules. The mark for each module is taken as an aggregate of marks from its two assessment components: (i) the exam mark and (ii) any coursework/assignment mark(s) for that module.

4.2.4.2 Senior Freshman year

LI2034 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.

Assessment involves essay-based course work and a summer examination.

LI2036 Computational Morphology and Statistics 5 ECTS, S1, 2 hrs per week

One aim of this module is to 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 introduce 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

Assessment is based both on practically oriented coursework and on a summer examination.

LI2035 Speech Science and Phonetics 5 ECTS, S2, 3 hrs

This module introduces instrumental phonetics, studying instrumental investigative techniques and their employment (where possible/relevant) to provide a more in-depth look at the mechanisms of speech production and their exploitation in languages. This leads onto an introduction to the theoretical and technical foundations of speech science, focussing particularly on the acoustic nature of the speech signal, covering 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.

Assessment is based on coursework and an examination

Senior Freshman Assessment The annual linguistics examination consists of three two-hour papers, one paper for each of the three SF modules. Each paper has two sections. One paper, covers **Formal Syntax** and **Formal Semantics**; in another paper, one section covers **Instrumental Phonetics** and the other is for **Introduction to Speech Science**; and finally, there is a paper which covers **Computational Morphology** and **Statistics**.

4.2.4.3 Junior Sophister Year

Students spend their Junior Sophister year abroad as part of a SOCRATES 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 the following modules are taken

- LI2307 Aspects of Written Language (5 ECTS)
- LI2303 Language Learning (5 ECTS)
- LI2301 Aspects of vocabulary (5 ECTS)

4.2.4.4 Senior Sophister Year

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

Building on the SF module, 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.

Assessment is based on small project involving the analysis and resynthesis of different voice qualities, as well as on an examination.

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. One completing this module 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.

Assessment involves a series of computational grammar development tasks and exercises with formal language theory, as well as an examination.

Option and Project As noted in 4.1.4.4, 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 option module will be

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

If undertaken in linguistics, the final year project module name is

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

Senior Sophister Assessment The linguistics element of the Moderatorship examination is two two-hour papers, one for each of the modules.

The mark for each module is an aggregation of the marks arising from the examination as well as coursework and assignments.

4.2.5 CLCS Staff and Research Areas

Director of CLCS and Senior Lecturer in Linguistics and Phonetics: J. L. Kallen, B.A. (W. Wash. U.), M.A. (U. Wash; TCD), Ph.D. (TCD), FTCD. **Research:** The English language in Ireland, sociolinguistics, phonological theory, morphology, first language acquisition, semantics **Room:** Arts Building 3139. **Telephone:** ext 1495. **E-mail:** jkallen@tcd.ie

Head of School and Associate 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

Associate 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

Senior Lecturer in Speech Science: 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

Senior Lecturer 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

Lecturer 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

Lecturer in Applied Linguistics: Dr H. Rose. **Research:** Second Language Acquisition and Second Language Education. **Room:** Room 124. 7-9 South Leinster Street . **Telephone:** 896 4370 **E-mail:** heath.rose@tcd.ie

Lecturer in Applied Linguistics: 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

Lecturer in Psycholinguistics: Ms. D. O'Leary. **Research:** second-language learning/acquisition; first-language acquisition; bilingualism. **Room:** Arts Building 4037 **Telephone:** ext. 3582 **E-mail:** olearyde@tcd.ie

Lecturer 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

Language Modules Coordinator: Dr L. Carson **Research:** second language learning; multilingualism/migration. **Room:** Arts Building 3039 **Telephone:** ext. 4035 **E-mail:** carsonle@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 4056 agus oifig an Rúnaí i Seomra 4055. Tá cúigear 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 Luath-Ghaeilge (TR001)
- LeathMhodhnóireacht sa Nua-Ghaeilge (TR001)
- Modhnóireacht sa Luath- is sa Nua-Ghaeilge (TR022)
- An cúrsa 'Litríocht agus Teanga na Gaeilge' agus cúrsa bunGhaeilge do mhic léinn eachtrannacha.
- Na modúil Gaeilge sa Mhodhnóireacht i Léann na nÉireann (TR027)

Mar chuid den chúrsa modhnóireachta sa Nua-Ghaeilge, múintear Gaeilge na hAlban ó thosach agus tugtar léachtaí ar litríocht na Gàidhlig; 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 Diplóma 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.

Is san Atrium atá a sheomra ag an gCumann Gaelach atá á riar ag na mic léinn ar mhaithe leo sin ar suim leo an Ghaeilge.

Is é Aonghus Dwane Oifigeach Gaeilge an Choláiste: fón 3652, ríomhphost gaeloifig@tcd.ie, idirlíon www.tcd.ie/gaeloifig

4.3.2.1 Canúint

Ní mór do mhic léinn a chur in iúl don Cheann Roinne cé acu ceann de na trí mhórchanúint Ghaeilge ar mian leo ceachtanna a fháil inti sa teanglann sa chéad dá bhliain.

4.3.2.2 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.

4.3.2.3 Foclóirí agus Graiméar

Moltar go láidir do mhic léinn na leabhair seo a bheith acu mar áis foghlama i gcaitheamh chúrsa na céime go léir:

- T. de Bhaldraithe: *English-Irish Dictionary*
- N. Ó Dónaill: *Foclóir Gaeilge-Béarla*
- *Graiméar Gaeilge na mBráithre Críostaí*

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 (IR1022): Pobal agus teanga

- **Léachtóir:** Máire Ní Bháin.
- **Fad:** 1 leathbhliain, uair an chloig sa tseachtain.
- **Aidhm:** Léargas a thabhairt ar stair sheachtrach na Gaeilge le cúpla céad bliain anuas.
- **Saothar:** Scrúdú ag deireadh na bliana.
- **Téacs:** Leabhrán clóscríofa de chuid na Roinne.
- **ECTS:** 5

IR1035 Ceart agus labhairt na teanga

A. Rang Teagaisc.

- **Léachtóir:** Audrey Mahood
- **Fad:** 2 leathbhliain, uair an chloig sa tseachtain.
- **Aidhm:** Ceart na Gaeilge scríofa a mhúineadh.
- **Saothar:** Ceacht a scríobh gach seachtain; scrúdú ag deireadh na bliana.
- **Téacs:** Le fógairt

B. Seisiún teanglainne.

- **Stiúrthóir:** Máire Ní Bháin.
- **Fad:** 2 leathbhliain, uair an chloig sa tseachtain.
- **Aidhm:** Foghraíocht Ghaeilge na mac léinn a fheabhsú.
- **Saothar:** Scrúdú cainte ag deireadh na bliana.

ECTS: 10

4.3.3.2 Cúrsa an Dara Bliain

Léacht (IR2026): Gàidhlig.

- **Léachtóir:** An Dr 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

IR2035 Ceart agus labhairt na teanga

A. Rang teagaisc

- **Léachtóir:** Máire Ní Bháin.
- **Fad:** 2 leathbhliain, uair an chloig sa tseachtain.
- **Aidhm:** Slacht breise a chur ar Ghaeilge scríofa na mac léinn.
- **Saothar:** Ceachtanna minice; scrúdú ag deireadh na bliana.

B. Cleachtadh teanglainne

- **Stiúrthóir:** Máire Ní Bháin.
- **Fad:** 2 leathbhliain, uair an chloig sa tseachtain.
- **Aidhm:** Slacht breise a chur ar Ghaeilge labhartha na mac léinn.
- **Saothar:** Scrúdú cainte ag deireadh na bliana.

ECTS: 10

4.3.3.3 An Tríú Bliain - thar lear

Caithfidh na mic léinn an bhliain seo in Albain. Cuirfear sonraí an chúrsa ansiúd ar fáil do na mic léinn faoi dheireadh an dara bliain. Sa chás nach mbíonn áit ar fáil in Albain, déanfaidh mic léinn dhá chúrsa: (i) IR3448 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 (IR4013): Gàidhlig.

- **Léachtóir:** An Dr Eoin Mac Cárthaigh.
- **Fad:** 2 leathbhliain, uair an chloig sa tseachtain.
- **Aidhm:** Slacht breise a chur ar Ghàidhlig na mac léinn.
- **Saothar:** Ceachtanna minice; scrúdú ag deireadh na bliana.
- **Téacs:** Seachadadh clóscríofa.
- **ECTS:** 5

Ranganna teagaisc (IR4021): Ceapadóireacht.

- **Léachtóir:** Máire Ní Bháin.
- **Fad:** 2 leathbhliain, 2 uair an chloig sa tseachtain.
- **Aidhm:** Slacht breise a chur ar Ghaeilge scríofa na mac léinn.
- **Saothar:** Ceachtanna minice; scrúdú 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:-

- IR3470 Litrocht Bhéaloidis (S1, 5 ECTS)
- IR3477 Prós na Linne (S1, 5 ECTS)
- IR3478 Gearrscéalta Mháirtín Uí Chadhain (S1, 5 ECTS)
- IR4385 An Fhilíocht Chomhaimseartha (S1, 5 ECTS)
- IR4386 Scéalaíocht na Sean-Ré (S1, 5 ECTS)
- IR4362 Ainmneacha agus Sloinnte na nGael (S2, 5 ECTS)
- IR3483 Cúirt an mheón-oíche (S2, 5 ECTS)
- IR3466 Filíocht na Fiannaíochta (S2, 5 ECTS)
- IR3468 Dán Díreach (S2, 5 ECTS)

4.3.4 Foireann Acadúil Roinn na Gaeilge

- **Ceann na Roinne:** An tOllamh Damian McManus, PhD, FTCD, MRIA. **Taighde:** Teanga agus litríocht na Gaeilge Clasaicí. **Seomra** 4062. **Fón:** síneadh 1105. **Ríomhphost:** pmc-manus@tcd.ie
- **Léachtóir:** Máire Ní Bháin, MA (Dubl, NUI). **Taighde:** An Béaloideas; Téacsanna Meán-Ghaeilge. **Seomra** 4060. **Fón:** síneadh 1207.
- **Léachtóir:** An Dr C. Jürgen Uhlich, DR.PHIL (Bonn) **Taighde:** Teangeolaíocht Indeorpach agus Cheilteach. **Seomra** 4059. **Fón:** síneadh 2600. **Ríomhphost:** uhlichc@tcd.ie.
- **Léachtóir:** An Dr Eoin Mac Cárthaigh, PhD. **Taighde:** Filíocht na Gaeilge Clasaicí. **Seomra** 4063. **Fón:** síneadh 3516. **Ríomhphost:** emaccart@tcd.ie.
- **Léachtóir:** An Dr Pádraig de Paor, PhD. **Taighde:** Nualitríocht na Gaeilge. **Seomra** 4059. **Fón:** síneadh 1549. **Ríomhphost:** depaorp@tcd.ie.

4.3.4.1 Léachtóirí Páirtaimseartha

- Audrey Mac Uid, B.A. (Dubl). **Seomra** 4059. **Fón:** síneadh 1450 .
- Aoi-léachtóirí. **Seomra** 4059. **Fón:** síneadh 1450.

4.3.4.2 Teagascóirí

- Beirt aoitheagascóirí

4.3.4.3 Rúnaí na Roinne

- Caoimhe ní Bhraonáin. **Seomra** 4055. **Fón:** síneadh 1450. **Ríomhphost:** nibhraoc@tcd.ie

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), the Two Subject Moderatorship (TSM), European Studies (ES), 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: Dr Catriona Leahy

Secretary: Ms. Natalie Wynn

Office: Room 5065, Arts Building

Office Hours: Monday to Friday 11.00–12.00; Monday & Thursday 14.30-15.30

Telephone: (353 1) 896 1373

Fax: (353 1) 896 3762

Co-ordinator for the German variant of Computer Science and Language (CSLG): Dr Gillian Martin³

³Dr. Joachim Kolb will be taking over this role from early on in the academic year.

Office: 5071, Arts Building

Telephone: (353 1) 896 2329

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.

Peer Tutoring The department operates a peer tutoring system for JF students. More senior students advise and help Junior Freshmen to get grips with coursework and private study.

GradLink The School of Languages, Literatures and Cultural Studies runs the GradLink programme, which enables SS students to contact and chat with graduates of the department, who are working in Ireland and abroad and can share their experiences of looking for that first job and pursuing a particular career path. The launch of GradLink 2013-14 will be held in October. Details will be e-mailed to all SS students. At this event you can meet and chat to graduates of the department.

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 in the Departmental General Handbook and on the department's website:

http://www.tcd.ie/Germanic_Studies/index.htm

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 with indicative descriptions of their aims and contents.

The descriptions of modules given here are intended as general overviews, and details may be changed by the lecturers concerned, subject to consultation with the students. Modules are offered subject to the availability of staff. Please note that in addition to the module descriptions appearing here, further more detailed information may be accessible via departmental web-pages and (for currently registered students) via my.tcd.ie.

German is normally the language of instruction in the Department. All students should own at least one dictionary and a grammar of German. In the first years, the recommended dictionary is *Langenscheidts Großwörterbuch Deutsch als Fremdsprache* (a dictionary all in German, but designed for learners of German), and/or a large German-English and English-German dictionary such as *The Collins German Dictionary*. The recommended grammar for students in all years is *Hammer's German Grammar and Usage*, rev. ed. by Martin Durrell, publ. Arnold. In the first year, however, students will work with a simpler grammar book with exercises, Martin Durrell et al., *Essential German Grammar*, (London: Arnold 2002).

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.

Study Weeks: Week 7 of MT and Week 7 of HT.

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. A list of submission dates and times is included in this handbook. The mailbox is emptied at 12 noon on submission dates. JS & SS students must sign in all assessed work in the Departmental Office at the specified times and on the specified sheet. The Departmental Executive Officers will countersign the sheet. The Department takes no responsibility for work that is handed in or left in the office without signing and counter-signing.

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, after that 0 will be awarded.

A full list of assessment deadlines is posted on the noticeboard and can also be downloaded from the departmental website.

The Department sets aside two days 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.

Guide criteria for awarding marks and classes: A full list of assessment deadlines is posted on the noticeboard and can also be downloaded from the departmental website.

The Department sets aside two days 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.

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

4.4.5.1 Junior Freshman

There are two modules

- **LANGUAGE FLUENCY** (10 ECTS)
 - GR1000 German language (3 hrs. class, 1 hr. private study all year), plus Spoken German (1 hr. per week all year)
- **LANDESKUNDE** (5 ECTS)
 - GR1010 German Area Studies (1 hr. per week all year plus 1 hr. weekly optional tutorial)

Further information about these follows.

GR1000 GERMAN LANGUAGE FLUENCY 10 ECTS, S1, S2, 4 hrs per week plus 1-hour grammar lecture in weeks 4,8,11 (MT) and weeks 1,6,9,11,12 (HT)

Aims: This module aims to consolidate existing written, oral and aural German language skills and to encourage the further development of communicative and cultural competence.

Content:

The module develops grammatical structures through systematic revision of basic structures; text comprehension as well as written, oral and aural skills in the L2 with a focus on syntactic analysis; and production of a range of both written and oral/aural text types including descriptive and narrative texts and written expression of opinion (*Leserbrief*). Students improve their speaking skills by talking about different aspects of German life and people.

Learning outcomes:

On successful completion of this module, students should be able:

to understand radio and news broadcasts, lectures and discussions;

to participate in conversations about their lives and interests, university and general topics such as mentioned in newspapers;

to participate in conversations specific to their degree course, such as computer science, business, law or literature;

to write short but accurate narrative and descriptive texts on contemporary topics and topics covered in class;

to build up and expand a solid basic active and passive vocabulary;

to correctly apply the basics of German grammar to both spoken and written German.

Hours per week

4 hours per week all year including 1 hour spoken German per week all year, 1 hour grammar lecture in weeks 4,8,11 (MT) and 1,6,9,11,12 (HT)

Course Materials

JF Language Reader (provided by the Department)

Durrell, M. et al., 2002, *Essential German Grammar*. London: Arnold.

Recommended Dictionaries:

Grosswörterbuch Deutsch als Fremdsprache (Langenscheidt) and a good bilingual dictionary, e.g. Collins or Oxford Duden.

(http://www.tcd.ie/Germanic_Studies/jfgermanlanguagewebsite/exercises.htm)

Assessment/Examinations:

Students take an assessment test at the beginning of Michaelmas term.

- 1 3-hour end-of-year written examination (comprising comprehension, composition and grammar) [60 marks]
- 10-minute end-of-year oral examination. Students are expected to read and answer questions on a short text and/or advertisement and to converse with the examiners about themselves, their course, plans and so on. The material used in the oral examination also draws on the JF Spoken German classes. [10 marks]
- 1-hour end-of-year aural examination (comprising dictation and tape-work) [10 marks]
- In-class Test, Wk. 1 HT [20 marks]

All students must do weekly on-line tests and complete weekly homework.

GR1010 LANDESKUNDE (Area studies) 5 ECTS, S1, S2, 1 hr weekly

Aims: To introduce students to the study of contemporary German-speaking society through the medium of German.

Content: This module is an introduction to the history, politics, society and economy of the German-speaking countries in the period 1945 to the present. Taught in German, with English summaries, it also trains listening comprehension, and as such helps to prepare students for studying in a German-speaking country and for future study in TCD. Listening skills developed in this module contribute to the performance level in the JF Aural examination (See GR1000).

Learning outcomes: Students who successfully complete this module should be able to

- describe the recent history and the political, economic, social and cultural features of the three German-speaking countries;
- discuss in detail major events and trends in these countries since the Second World War;
- deploy this knowledge and understanding in clear written English.
- follow lectures, presentations and commentaries in German on contemporary themes;
- read introductory and intermediate level written material in German on contemporary themes.

Hours per week: 1 hour per week plus 1 hour optional tutorial

Recommended Reading:

Module outline, handouts and bibliography supplied during the lectures.

Assessment/Examination 2-hour end of year written examination (100 marks)

The paper has three questions, weighted equally, consisting of 2 essay questions and one question requiring short explanations of terms.

SUMMARY OF JF ASSESSMENT **Annual examinations** are held in Trinity Term (April-May). Supplemental examinations are held in August/September.

1. Language Fluency (10 ECTS):

- 3-hour written language exam (60)
- 60-minute aural (10)
- 10-minute oral (10)
- In-class test (20)

2. Landeskunde (Area Studies): (5 ECTS)

2-hour written exam (100)

Fails and Compensations: To rise with their year students must receive a mark of at least 40% overall in GR1000 and a pass in the GR1000 written Language Fluency paper. GR1000 is a non-compensatable module. Students who are permitted to sit supplementals, are required to retake all failed assessment components within a module.

4.4.5.2 Senior Freshman Year

There are two modules:

- GERMAN LANGUAGE FLUENCY (10 ECTS)
 - GR2000 SF German Language (2hrs. per week), Spoken German (1 hr. per week)
- GERMAN CULTURAL HISTORY (5 ECTS)
 - GR2012 (1 lecture per week, plus a 1-hour weekly optional tutorial)

Further information about these follows

GR2000 GERMAN LANGUAGE FLUENCY 10 ECTS, S1, S2, 3 hrs per week

Aims: This module is designed to enhance existing written, oral and aural German language skills through systematic introduction of complex grammatical structures and to encourage the further development of communicative and cultural competence, particularly with respect to the German university system / studying in Germany as well as the necessary specialist registers (Fachsprachen).

Content:

Students will be introduced to the terminology of the German university system and to the Fachsprache (specialist register) of relevant study fields. This will be accomplished through the guided discussion of appropriate text examples along with vocabulary, grammar, comprehension and translation exercises.

Learning outcomes:

On successful completion of this module, students should be able:

- to understand and apply more complex features of German grammar, including participial phrases and passive voice, in spoken and written contexts;
- to understand and use appropriately the specialist vocabulary (Universität) and the lexical and syntactic features of a particular field of study (Fachsprache);
- to read and understand articles from academic publications and to translate extracts into correct and idiomatic English;
- to identify the syntactic and structural differences between oral and written Fachsprache;
- to give oral presentations in German on a topic from their field of study.

Hours per week:

2 hours per week, plus 1 hour spoken German plus 1 hour grammar tutorial for all students who achieve less than 60% in the written component of the annual JF German examinations.

Assessment:

- 3-hour end-of-year written paper containing comprehension and grammar exercises (cloze tests) and a translation exercise (60 marks)
- 20-minute end-of-year Referat and oral examination (Referat with question/answer session) (20 marks)
- Fachsprache Project (20 marks)
- All students must complete weekly homework, do preparatory Referate.

GR2012 GERMAN CULTURAL HISTORY 5 ECTS, S1, S2, 1 hr per week plus 1-hr weekly optional tutorial

Aims: This module aims to increase students' background knowledge and cultural competence with respect to the historical and cultural development of the German-speaking world. It also provides training in listening comprehension. Both aspects are preparation for studying in a German-speaking country.

Content: The module investigates how the history and culture of Germany, Austria and Switzerland, especially since 1800, have shaped today's society. This will be achieved by a thematic rather than a chronological approach to the key issues of the cultural history of Austria, Germany and Switzerland.

Learning outcomes:

On successful completion of this module, students should be able:

- to discuss in detail aspects of the history and culture of the three German-speaking countries.
- to describe how cultural history has shaped modern society in these countries.
- to understand a lecture in German.
- to process the acquired knowledge and apply this critically to the writing of an extended essay.

Assessment

- 2-hour end-of-year written examination (70 marks)
- Essay of 1200-1500 words in German [Submission Wk. 4 HT] (30 marks)

SUMMARY OF SF ASSESSMENT Annual examinations are held in Trinity Term (April-May). Supplemental examinations are held in August/September.

1. Language Fluency (10 ECTS):

- 3 hr. written language exam (60)
- 20-minute *Referat* and oral (20)
- Fachsprache Project (20)

2. German Cultural Studies (5 ECTS):

- 2 hr. written exam (70 marks)
- Essay (30 marks)

Fails and Compensation: To rise with their year students must receive a mark of at least 40% overall in GR2000 and a pass in the GR2000 Language Fluency paper. GR2000 is a non-compensatable module. Students who are permitted to sit supplementals, are required to retake all failed assessment components within a module.

Modules are weighted according to their credit value. The German component taken as a whole makes up 25% of the total CSL annual mark.

In the event of a student being unsuccessful in any part of the annual examination, that student should contact the Department of Germanic Studies for full information regarding the regulations for supplementals.

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 Socrates 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 Socrates 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

The SS language programme trains students in advanced writing and oral skills which may be useful to them in their further careers. To this end SS students are expected to produce a greater volume of written homework and undertake more private study than in Freshman years.

The modules are

- GR4001 *Rhetorik* (10 ECTS)
- GR4010 Translation (Advanced German-English translation). (5 ECTS)

Further details follow.

GR4001 RHETORIK 10 ECTS, S1, S2, 3 hrs per week

Hours per week: 2 hours per week all year; 1 hour per week spoken German all year (GR3401); 1 hour per week grammar tutorial (optional) all year.

Aims: This module is designed to develop advanced oral and written rhetorical skills in the L2. It also aims to consolidate existing written, oral and aural German language skills through systematic revision of grammatical structures and to encourage the further development of communicative and cultural competence.

Content: The module develops advanced rhetorical skills in the L2 with a focus on analysis and production of a range of both written and oral/aural text types, including editorials, speeches, interviews, Erörterungen, Kommentare and Glossen.

Learning Outcomes:

On successful completion of this module, students should be able to:

- understand and analyse the stylistic and rhetorical strategies which characterise complex written and oral text types;
- filter information and to differentiate between fact and opinion as well as between relevant and irrelevant information in complex oral and written texts;
- produce stylistically appropriate Erörterungen, Kommentare and Glossen on contemporary social, economic, political, literary themes in idiomatic and accurate German;
- give oral presentations at an advanced level in idiomatic and accurate German, using the appropriate register, on contemporary social, economic, political, and literary themes;
- demonstrate a confident use of media such as PowerPoint during presentations and integrate all aspects of communication including gestures, facial expressions, body language
- to communicate at an advanced level in terms of accuracy, fluency and expression in the L2 in a variety of situations such as discussions, negotiations and interviews;
- demonstrate a sound knowledge and mastery of complex grammar and syntax including indirect speech, hypotaxis, conjunctions, modal particles, in spoken and written German.

Assessment Assessment is by examination and continuous assessment.

- 3-hour end-of-year written examination (60 marks)
- 20-30 minute end-of-year oral examination (to include a presentation) (40 marks)

Progress is maintained through private study and weekly homework.

GR4010 TRANSLATION 5 ECTS, S1, S2, 1 hr per week**Aims:**

This module aims to develop skills in translation from German to English.

Content:

This practical course in advanced German/English translation focuses on:

- a) general discursive registers (quality journalism, critical essays on current affairs, academic texts on German historical and contemporary themes) and:
- b) more area-specific discourses (though not Fachsprache) such as literary prose, texts on legal, business or IT themes, or in the history of ideas.

It presupposes a high degree of German and English competence acquired from general reading and writing skills practised during the current and previous years of the programme, as well as a familiarity with relevant text types.

Learning outcomes:

On successful completion of this module, students should be able to:

- translate advanced texts in the relevant text types with a satisfactory level of accuracy, consistency and appropriateness of register and expression;
- thus demonstrate a high degree of German comprehension (including knowledge of the cultural context) and English writing competence.

Assessment

3-hour end-of-year written paper (100 marks): Students answer one general text (no choice) - 50 marks; one text chosen from several, to include texts in the registers of literature, history/history of ideas, law, business studies, computer science - 50 marks.

Fortnightly assignments: in class-test at the end of Michaelmas and Hilary term. Assignment and tests do no count towards the module mark.

Spoken German and Grammar Tutorial Sophister Spoken German. 1 hr. p.w.: either *Stammtisch* fortnightly in a local pub (beginning week 2 of MT. For more details check departmental notice-board) or 1 hr. weekly conversation hour. Students who elect not to attend *Stammtisch* must attend the timetabled conversation hour GR3401. The SS Grammar Tutorial (1 hr. per week revision and consolidation of grammar skills) is optional.

Summary of SS ASSESSMENT

- GR4001 (10 ECTS)
 - one 3-hour end-of-year written exam (60 marks)
 - one 20-30 minute end-of-year oral examination (40 marks)
- GR4010 (5 ECTS)
 - one 3-hour end-of-year translation exam (100 marks)

Fails and Compensation: Modules are weighted according to their credit value. Students must receive a mark of at least 40% overall in GR4001 and a pass in the GR4001 written language paper. GR4001 is a non-compensatable module.

German linguistics option: Besides these obligatory modules CSL students are allowed to choose an option in German linguistics in place of those offered by the other participating departments.

4.5 Department of French

4.5.1 General

The Department, is one of the six disciplines that constitute the new 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 Johnnie Gratton

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 four other degree programmes besides CSL. These are Two Subject Moderatorship (TSM), European Studies (ES), Law and French (LawF) and Business Studies and a Language (BSL). 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 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)

4.5.4 Course outlines

4.5.4.1 Junior Freshman

JF Contact hours:

- 2 weekly lectures (one of which runs through the whole year and the other just for MT and HT)
- 3 weekly classes

JF weekly written work: Weekly written essays on topic of contemporary France (c. 200 words). Thirteen of these are assessed and count for 10% of the overall mark in the Annual examinations. Weekly grammar exercises (these do not count to the overall mark in the Annual examinations).

4.5.4.2 Senior Freshman

SF Contact hours:

- 1 weekly lecture (runs for whole year)
- 2 weekly classes

SF weekly written work: Composition or grammar exercises every week. Ten of the composition exercises (the students will be informed of which ones) will count for 25% of the overall mark in the Annual examinations.

4.5.4.3 Senior Sophister

SS Contact hours:

- 3 weekly classes
- no lectures

SS weekly written work: One piece of written work each week, none of which counts towards the overall mark in the Annual examinations.

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.

FR1014 Written Language 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: Introduction to basic grammatical concepts: articles, quantifiers, present tense, personal pronouns, perfect tense, relative pronouns, imperfect tense, adjectives, pluperfect tense, possessives, demonstratives, future and future perfect, prepositions, conditional, past historic and past anterior, conjunctions, passive, imperative, subjunctive, interrogatives.

Assessment: Assessment is based on continuous assessment and also a 2 hour written exam, a 15 minute oral exam and 1 hour aural exam

FR1009 Oral Language ECTS 5; S1, S2; 1 hour;

Aim: Through discussion concerning aspects of contemporary France, this class aims to develop aural comprehension and oral expression.

Content: Students attend a weekly class with native lecteurs/lectrices to develop oral and aural comprehension.

Assessment: Assessment is based on continuous assessment and also a 15 minute oral exam and 1 hour aural exam

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 and 4074. Room 4074 houses a bank of television monitors receiving a variety of foreign stations by satellite, including France 2. You are free to watch this at any time. Note particularly the news bulletin at 13h00 French time. The neighbouring room, 4073, provides you with language resources on computer, including Internet access to many sites in France.

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

4.5.5.3 Examination/Assessment

The examination/assessment process The examination/assessment process is structured along the following lines

- Language I 20%
 - a 3-hour written paper testing grammar, comprised of:
 - exercises in grammatical analysis;
 - cloze test or tests;
 - exercises concerned with the specific points of grammar treated in the course;
- Language II 20%
 - a 3-hour written paper testing comprehension and composition, comprised of two passages, each followed by comprehension questions and a brief composition;
- Continual assessment: 10% An overall average for the year is calculated on the basis of 13 pieces of submitted written work. (See above).
- Aural: 20%
 - a test of aural comprehension, based on a short taped passage with multiple-choice questions. You will hear the tape-recording once. (There is one practice session every term for this test in the Language Assistant classes).
- Oral: 20%
 - a 15-minute oral examination, which will include an 'exposé' on a topic arising from the course, and proceed to more general conversation. (A list of Oral topics will be posted up 10 days prior to the examination. Students choose one).
- NB: INTRODUCTION TO CONTEMPORARY FRANCE 10% a NEW two-hour examination paper based on the material covered in the Wednesday Language 1 lecture, comprising multiple-choice questions and a number of questions requiring short written answers. Further details and a sample paper will be circulated during the year.

4.5.6 SF CSLF Language Programme

FR2008 Oral and Written French ECTS 10; 3 hours; Semester 1 and Semester 2

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.

FR2022 Linguistics ECTS 5; 1 hour; Semester 1 and Semester 2

Understand sociolinguistic variation in the French Language.

4.5.6.1 Examination/Assessment

A mark for language composed of four elements of equal weight:

- | | |
|--|-----|
| 1. a continuous assessment mark derived from the year's work: | 25% |
| 2. a 3-hour paper combining a test of grammar and a composition: | 25% |
| 3. a 3-hour paper combining translation from French and a résumé | 25% |
| 4. an oral examination including a formal exposé: | 25% |
- (30% of this mark is given to content, 70% to the level of French)

4.5.7 Junior Sophister

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

4.5.8 Senior Sophister

FR4032 Written Language 10 ECTS;

FR4042 Oral Skills for CSL 5 ECTS;

Senior Sophister Assessment (Moderatorship)

- Paper 1 (3 hours): Translation from French (50 marks) and essay (50 marks)
- Paper 2 (2 hours): Résumé (50 marks)
- Oral examination (15 mins) (50 marks)

4.5.9 Research

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

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 specifically to 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>

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.

Application forms, with guidelines, can be found here:

<https://www.scss.tcd.ie/undergraduate/ethics/>

The Research Ethics Committee will consider each application and normally provide a response within two weeks but not more than one month later. You will not receive an automated acknowledgement that your application has been received (therefore, you can be certain that when you receive mail about your application, it has been addressed).

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.

To apply for research ethics approval, you should email your application to research-ethics@scss.tcd.ie. You will not receive an automated acknowledgement that your application has been received (therefore, you can be certain that when you receive mail about your application, it has been addressed).

All applications must be reviewed and signed by the research Supervisor or Principal Investigator on the project. This signature confirms an assertion that the application is complete in terms of its formal requirements; it does not stand as proxy for ethical approval. Forms which are not signed or presented to an acceptable standard (eg: incomplete; excessive typographical or grammatical errors) will be returned and may therefore incur delays for the researchers involved.

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.

<http://www.tcd.ie/about/policies/assets/pdf/TCDGoodResearchPractice.pdf>

Chapter 6

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. Some modules may simply require a weighted average of the component marks to exceed 40. For other modules, however, it is a possibility that it specify a particular minimum mark (a *Qualifying Mark*) on one of its assessment components, and if missed the module is failed (a *Qualified Fail*) . You should check this with individual lecturers, but the information should also be available via *my.tcd.ie*, under *Courses & Modules* then either *Module Descriptive Details* or *Module Data Report*

To progress at summer examination 'Progression' is the Trinity term for meeting the academic requirements to move from one year into the next. 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**. This average is taken over all but the DCLRS module; this module is pass/fail without a grade.
2. additionally each module must be either **passed outright** (that is a grade 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.
- (b) if all but a single 5 credit module have been passed outright, the remaining module may be passed by compensation at a mark of 30 per cent.
- (c) If all but a module or modules totalling 10 credits have been passed outright, the remaining module(s) may be passed by compensation at a mark of 35 per cent.
- (d) 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 maxima (5 or 10), and marks minima (30 or 35), is not likely to be relevant to many students. It is further restricted in that certain modules are designated as **non-compensatable**. The exact details are given in the separate *Modules and Compensation* document, but in outline the situation is as follows

- All CS (and Maths) modules are compensatable.
- *most* linguistics modules in JF and SF years are non-compensatable.

- For French and German, the larger 10 credit module is non-compensatable and the smaller 5 credit module is compensatable. For Irish both modules are compensatable.
- The DCLRS module is non-compensatable.

To progress at Supplemental examinations If a student fails to meet the Progression criteria at the Summer examinations, then concerning all modules¹ which were not passed there is a process of *supplemental* assessment/examination – though there are no supplementals in the final year.

These assessments/examinations will be completed before the commencement of the next year. In particular, at the end of August there is a Supplemental exam session.

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 summer examinations to determine if all modules are now passed, including by compensation.

Failure to progress If after the Summer and Supplemental sessions, 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.

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.

Chapter 7

General regulations and pointers

- Please refer to pages H1-H30 of the College Calendar for general regulations about College policy.
- Included among these is the statement of policy (on H6) non-satisfactory attendance and course work, which includes the potential consequence of being required to repeat the relevant academic year.
- You will not be notified personally of the dates of examinations, registration, beginning of term, examination results, etc.—you must check yourself. You are advised to frequently check the notice boards in each department.
- Attendance at all lectures, tutorials and laboratory classes is compulsory.
- Results are posted using the following format.
 - I - 70% or over First class honor
 - II.1 - 60% - 69% Second class honor - first division
 - II.2 - 50% - 59% Second class honor - second division
 - III - 40% - 49% Third class honor
 - F1 - 30% - 39% Fail
 - F2 - 29% or less Fail
- Your attention is also drawn to pp. H18-H20 of the College Calendar, in connection with Plagiarism. Please note that all assignments submitted may be assessed automatically using software such as that provided by TurnItIn.com.

Plagiarism

- 77 Plagiarism is interpreted by the University as the act of presenting the work of others as one's own work, without acknowledgement. Plagiarism is considered as academically fraudulent, and an offence against University discipline. The University considers plagiarism to be a major offence, and subject to the disciplinary procedures of the University.
- 78 Plagiarism can arise from deliberate actions and also through careless thinking and/or methodology. The offence lies not in the attitude or intention of the perpetrator, but in the action and in its consequences. Plagiarism can arise from actions such as: (a) copying another student's work; (b) enlisting another person or persons to complete an assignment on the student's behalf. (c) quoting directly, without acknowledgement, from books, articles or other sources, either in printed, recorded or electronic format; (d) paraphrasing, without acknowledgement, the writings of other authors; Examples (c) and (d) in particular can arise through careless thinking and/or methodology where students: (i) fail to distinguish between their own ideas and those of others. (ii) fail to take proper notes during preliminary research and therefore lose track of the sources from which the notes were drawn; (iii) fail to distinguish between information which needs no acknowledgement

because it is firmly in the public domain, and information which might be widely known, but which nevertheless requires some sort of acknowledgement; (iv) come across a distinctive methodology or idea and fail to record its source; All the above serve only as examples and are not exhaustive. Students should submit work done in co-operation with other students only when it is done with the full knowledge and permission of the lecturer concerned. Without this, work submitted which is the product of collusion with other students may be considered to be plagiarism.

- 79 It is clearly understood that all members of the academic community use and build on the work of others. It is commonly accepted also, however, that we build on the work of others in an open and explicit manner, and with due acknowledgement. Many cases of plagiarism that arise could be avoided by following some simple guidelines: (i) Any material used in a piece of work, of any form, that is not the original thought of the author should be fully referenced in the work and attributed to its source. The material should either be quoted directly or paraphrased. Either way, an explicit citation of the work referred to should be provided, in the text, in a footnote, or both. Not to do so is to commit plagiarism. (ii) When taking notes from any source it is very important to record the precise words or ideas that are being used and their precise sources. (iii) While the Internet often offers a wider range of possibilities for researching particular themes, it also requires particular attention to be paid to the distinction between one's own work and the work of others. Particular care should be taken to keep track of the source of the electronic information obtained from the Internet or other electronic sources and ensure that it is explicitly and correctly acknowledged.
- 80 It is the responsibility of the author of any work to ensure that he/she does not commit plagiarism.
- 81 Students should ensure the integrity of their work by seeking advice from their lecturers, tutor or supervisor on avoiding plagiarism. All departments should include, in their handbooks or other literature given to students, advice on the appropriate methodology for the kind of work that students will be expected to undertake.
- 82 If plagiarism as referred to in §77 above is suspected, the head of school¹ will arrange an informal meeting with the student, the student's tutor, and the lecturer concerned, to put their suspicions to the student and give the student the opportunity to respond.
- 83 If the head of school forms the view that plagiarism has taken place, he/she must notify the Senior Lecturer in writing of the facts of the case and suggested remedies, who will then advise the Junior Dean. The Junior Dean will interview the student if the facts of the case are in dispute. Whether or not the facts of the case are in dispute, the Junior Dean may implement the procedures set out in CONDUCT AND COLLEGE REGULATIONS §2.
- 84 If the offence can be dealt with under the summary procedure, the head of school will recommend to the Senior Lecturer one of the following penalties:
- (a) that the piece of work in question receive a reduced mark, or a mark of zero; or
 - (b) if satisfactory completion of the piece of work is deemed essential for the student to rise with his/her year or to proceed to award of the degree, the student may be required to re-submit the work. However the student may not receive more than the minimum pass mark applicable to the piece of work on satisfactory resubmission.
- 85 Provided that the appropriate procedure has been followed and all parties in §82 above are in agreement with the proposed penalty, the Senior Lecturer may approve the penalty and notify the Junior Dean accordingly. The Junior Dean may nevertheless implement the procedures as referred to under CONDUCT AND COLLEGE REGULATIONS §2.

¹The director of teaching and learning (undergraduate) may also attend the meeting as appropriate. As an alternative to their tutor, students may nominate a representative from the Students' Union to accompany them to the meeting.

7.1 Other Pointers

The College makes considerable use of electronic means of transmitting information about its timetables, examination results, policies, etc. Some specific links that you should be aware of are detailed here.

- Policy and Procedures for dealing with complaints of Harassment including Sexual Harassment and Racial Harrassment

<http://www.tcd.ie/about/policies/respect.php>

- College Alcohol Policy

<http://www.tcd.ie/about/policies/alcohol.php>

- Safety Issues

<http://www.tcd.ie/Buildings/Safety/safetystatement.php>

- Code of Conduct for Computing Facilities

http://www.tcd.ie/about/policies/it_and_network_code_of_conduct.php

- Emergency Procedures

<http://www.tcd.ie/Buildings/Safety/safetyemergencyprocedures.php>

- Other College Policies

<http://www.tcd.ie/about/policies/>

A great many other items of interest are available on the Departmental and College web pages.

7.2 Timetables: 2014/2015

Please keep an eye on the appropriate section of the the College website for updates to your timetable:
my.tcd.ie

Additionally, concerning modules from the computer science component, please see the following for time-table information

<https://www.scss.tcd.ie/undergraduate/timetables.php>

7.3 College Calendar

Please note that College regulations prevail over those stipulated by this handbook:

<http://www.tcd.ie/calendar/>

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