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1 Introduction

This is the course handbook of the Management Science and Information Systems Studies (MSISS) degree programme offered by the School of Computer Science and Statistics in Trinity College Dublin. The MSISS degree programme is a four year honours degree course leading to a BA Moderatorship in Management Science and Information Systems Studies. This handbook contains information and regulations for all MSISS students. It provides a guide to what is expected of you on this programme, and the academic and personal support available to you. Please retain it for future reference.

We are confident that you will find this programme challenging and demanding, and we hope that you will find your studies at Trinity College Dublin both stimulating and rewarding. Our courses have been designed to offer students a dynamic, structured and coherent learning experience. The MSISS programme has several features which we believe will contribute to your studies being an effective and enjoyable period of personal and academic development.

If you are a new student to university, we invite you to read First Year in University (on page 9), which may help you understand what you need to do to have an enjoyable and productive time at college. You are also very strongly recommended to meet your tutor (see page 5) as he or she is your advocate in College and can also provide you with support should you have any difficulties.

We wish you every success in the coming year.

Simon Wilson and Jonathan Dukes
Course Directors, MSISS.

1.1 A Note on this Handbook and the College Calendar

Information provided in this handbook is believed to be accurate at the time of preparation except where noted. Any necessary revisions will be notified by college email.

This handbook contains regulations that apply to the MSISS programme. The College Calendar, which is published annually at the beginning of each academic year, contains the further regulations, including:

- General Regulations that apply to all degree programmes in the University;
- General Faculty Regulations that apply to courses within the Faculty of Engineering, Mathematics and Science;
- Regulations that apply specifically to the Moderatorship in Management Science and Information Systems Studies.

If any discrepancy exists between the regulations in this document and the College Calendar, the College Calendar takes precedence which is available online at http://www.tcd.ie/calendar

You are expected to be aware of the various regulations; ignorance is not a valid reason for failure to comply.

Please note that, in the event of any conflict or inconsistency between the General Regulations published in the University Calendar and information contained in course handbooks, the provisions
of the General Regulations will prevail. The University Calendar is available at http://www.tcd.ie/calendar/.

This handbook is available from the School of Computer Science and Statistics website. A hard copy of this document is available from the School Reception office on request.
2 General Information

2.1 Trinity College Dublin

Trinity College Dublin (TCD) - the College of the Holy and Undivided Trinity of Queen Elizabeth near Dublin - was founded in 1592 by Queen Elizabeth I. Trinity is sometimes referred to as the University of Dublin or Dublin University. Today, Trinity has nearly 800 academics catering for more than 16,500 students (of whom over 25% are postgraduates). TCD is recognized internationally as Ireland's premier university and ranks very highly among European and world universities.

2.2 Student Supports

Trinity College provides a wide range of personal and academic supports for its students. If you have problems, it saves you and us a great deal of hassle if they are directed to the right source. In general enquiries should be directed as follows:

2.2.1 Students with Disabilities

If you have a general or a specific learning disability (such as dyslexia) you may want to register with Student Disability Services. A variety of supports are available to disabled students within the College. Further information on these services can be found at http://www.tcd.ie/disability/

You can make an appointment to see staff of Student Disability Services:

- By phone: (01) 896 3111
- By text (deaf students): (087) 113 3185
- By email: askds@tcd.ie
- Or, by calling into the office (Room 2054, The Arts Building).

2.2.2 Personal or Academic Concerns: Tutors

Most matters including all personal problems and/or requests for special treatment (e.g. seeking permission to take a year off, obtaining details of your examination marks or appealing an examination result) should be taken to your tutor, whose job it is to help you. A tutor is a member of the academic staff who is appointed to look after the general welfare and development of the students in his or her care. Whilst your tutor may be one of your lecturers, the role of tutor is quite separate from the teaching role. Tutors are a first point of contact and a source of support, both on arrival in college and at any time during your time in college. They provide confidential help and advice on personal as well as academic issues or on anything that has an impact on your life. They will also, if necessary, support and defend your point of view in your relations with the college. Your personal tutor contact details are available to view via the student portal, my.tcd.ie.

Going to other staff members or the course administrator will only result in your being re-directed. If your tutor cannot be found, you should approach one of the other tutors or in an emergency, the Senior Tutor (phone (01) 896 2551).
2.2.3 Academic Concerns: Other Sources of Assistance

Academic issues (e.g. “I don’t understand this”, “Can we arrange a revision class?”) should be taken to the lecturer concerned. First year students are sometimes reluctant to approach lecturers with academic problems, but lecturers are here to help you. Be aware however, that lecturers are generally only willing to help students who attend lectures regularly (unless the students concerned are absent for some genuine reason). Many academic staff, including the Director of Studies, have ‘office hours’, i.e. times when they are available in their rooms to meet students without a prior appointment. These are usually posted on their office door. It is helpful to staff if a problem can wait until one of these times.

Programme or wider course issues (e.g., books are not available in the library, you can’t hear a certain lecturer because he/she does not speak clearly) should be taken to the class representative (you will have to elect one), or the Students’ Union Education Officer (email education@tcdsu.org, web http://www.tcdsu.org) who should in turn take them up with the Course Director. Of course if in doubt, speak to your tutor first.

2.2.4 Academic Concerns: Programming Centre

The Programming Centre is available to all MSISS students 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. For further information, please visit http://www.scss.tcd.ie/ugpc/

2.2.5 Academic Concerns: Maths Help Room

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

2.2.6 Academic Concerns: Student Learning Development

Student Learning Development provides learning support to help students reach their academic potential. They run workshops, have extensive online resources and provide individual consultations. The service is offered by the College's Student Counselling Service. To find out more, visit their website at http://www.tcd.ie/Student_Counselling/student-learning/

2.2.7 Student 2 Student

From the moment you arrive in College right the way through to your end of year exams Student 2 Student (S2S) seeks to make sure your first year is fun, engaging and a great foundation for the rest of your time in Trinity. You’ll meet your S2S mentors in Freshers’ Week and they’ll make sure you know other people in your course before your classes even start. They’ll keep in regular touch with you throughout your first year and invite you to events on and off campus. They’ll also give you useful information about your course and what to look out for.
Mentors are students who have been through first year and know exactly what it feels like, so you should not worry about asking them a question or talking to them about anything that’s worrying you. S2S also offers trained Peer Supporters if you want to talk confidentially to another student or just to meet a friendly face for a coffee and a chat. S2S is supported by the Senior Tutor's Office and the Student Counselling Service.

- [http://student2student.tcd.ie](http://student2student.tcd.ie)
- E-mail: student2student@tcd.ie
- Phone: (01) 896 2438
2.2.8 Personal Concerns: Other Sources of Assistance

- The Student Counselling Service, a free and confidential service for students.  
  3rd Floor, 7-9 South Leinster Street, College.  
  Phone: (01) 896 1407. Email: student-counselling@tcd.ie  
  Web: http://www.tcd.ie/Student_Counselling

- Niteline: A confidential help-line for students run by students is available during term-time,  
  by telephone 9pm-2.30am,  
  Phone: 1800 793 793  
  Web: http://www.niteline.ie/

- The College Health Service, House 47, College (beside the rugby pitch).  
  Appointments may be made in person or by telephone. This service is free to most students.  
  Tel: (01) 896 1556 https://www.tcd.ie/collegehealth/

- The Welfare Officer, Students' Union, House 6, College.  
  Email: welfare@tcdsu.org;

- The Chaplains, House 27, College:

  Peter Sexton SJ (Catholic) (01) 896 1260  
  Steve Brunn (Church of Ireland) (01) 896 1402  
  Julian Hamilton (Methodist) (01) 896 1901

  The Chaplains run a Bereavement Support Group for those who have experienced loss. The  
  Chaplains will also help you make contact with other religious communities in Dublin. See  
  http://www.tcd.ie/chaplaincy

  IF YOU HAVE A CONCERN OF ANY SORT, PLEASE TALK TO SOMEONE STRAIGHT AWAY

2.3 Co-Curricular Activities

Trinity College has a significant number of diverse student societies which are governed by the  
Central Societies Committee. They provide information on the societies including how to get  
involved and even how to start your own society! See http://trinitiesocieties.ie/ for more details.  
Students are encouraged to get involved. Trinity College also has a huge range of sports clubs which  
are governed by the Dublin University Athletic Club (DUCAC). See  
2.4 Student Organisations

The Trinity College Students' Union (TCDSU) is run for students by students. TCDSU represent students at college level, fight for students' rights, look after students' needs, and are here for students to have a shoulder to cry on or as a friend to chat with over a cup of tea. Students of Trinity College are automatically members of TCDSU. It has information on accommodation, jobs, campaigns, as well as information pertaining to education and welfare. For more information see https://www.tcdsu.org/.

The Trinity Graduate Students' Union (TCD GSU) is the main representative body for postgraduate students in Trinity College. For more information see https://www.tcdgsu.ie/.

2.5 Emergency Procedure

In the event of an emergency, dial Security Services on extension 1999 (+353-1-8961999 from a mobile phone or an external landline). Security Services provide a 24-hour service to the college community, 365 days a year. They are the liaison to the Fire, Garda and Ambulance services and all staff and students are advised to always telephone extension 1999 (+353 1 896 1999) in case of an emergency. Should you require any emergency or rescue services on campus, you must contact Security Services. This includes chemical spills, personal injury or first aid assistance. It is recommended that all students save at least one emergency contact in their phone under ICE (In Case of Emergency).

2.6 Data Protection

Trinity College Dublin uses personal data relating to students for a variety of purposes. We are careful to comply with our obligations under data protection laws and we have prepared a short guide (available at https://www.tcd.ie/info_compliance/data-protection/student-data/) to ensure you understand how we obtain, use and disclose student data in the course of performing University functions and services.

2.7 First Year in University

Everybody says college is different from school. Of course, in lots of obvious ways it is different, and no doubt you'll enjoy finding out just what those differences are. In not-so-obvious ways though, college is very different from school, and in this section we concentrate on how the academic side of university life is different and what you need to do about it.

1. You are not at school. We want you to do more than simply reproduce what you are told in a lecture. You need to get a good command of the material. In computing-related disciplines, the best way to do this - and the best way to know that you have really learned something - is to apply your new knowledge to solving new problems; not just the examples done in class, but to similar problems you'll find in textbooks or elsewhere (later on, as a professional, you will have to apply your knowledge to problems you have never seen before - now is the time to start).
2. Expect the material to be covered much faster than at school. Lecture time is at a premium, so it must be used efficiently. You cannot be taught everything in lectures and tutorials. It is your responsibility to learn the material. Most of this learning will take place outside the classroom, and you must be willing to put in the study time necessary to ensure that this learning takes place. If you do fall behind in a course - that is, if you can't continue to understand the lectures as they are given - then you really need to make the effort to catch up right away. Don't be tempted to think that you can somehow catch up at the end of the year - it's almost impossible.

3. A lecturer's job is primarily to provide you with a framework, with some of the particulars, to guide you in doing your learning of the concepts and methods that comprise the material of the course. It is not to 'programme' you with isolated facts and problem types or to monitor your progress. Your job is to fill out that framework with a thorough understanding of the material.

4. You are expected to read the textbook for comprehension. It gives the detailed account of the material of the course. It also contains many examples of problems worked out, and these should be used to supplement those you see in the lecture. The textbook is not a novel; you cannot simply skim through it from start to finish. Reading the textbook must often be slow-going and careful; frequently you'll need to use pencil and paper to work through the material, but you can work at your own pace.

5. As for when to read the textbook, it's a good idea to read the appropriate section ahead of the lecture. This way, although you may not understand it fully, you'll be prepared for the lecture, and you'll have a good idea what areas to ask questions about. If you haven't looked at the book beforehand, pick up what you can from the lecture (absorb the general idea and/or take thorough notes) and count on sorting it out later while studying the book and transcribing your notes.

6. Laboratories and tutorials are far more important than the marks you might get for them, because they give you a chance to develop your understanding of the subject. They are also a good 'reality check' for you to see just how much you really do understand. Use them wisely.

7. In examinations, the examiners set out to probe your mastery of the material in the course. Primarily, they'll be looking for your command of the material, as noted above. You'll probably have to solve problems you've never seen before. (To be sure, you'll have encountered similar problems, but they won't be the same.) Hence, preparing for examinations simply by remembering lots of answers without understanding them simply won't work; examinations test your understanding of the material as well.

Adapted from Teaching at the University Level by Steven Zucker in Notices of the AMS August 1996.
3 MSISS Programme Information

MSISS is one of the most challenging and exciting undergraduate degree level courses available in Ireland. It was originally set up in 1980 in the Engineering faculty to provide a degree that would have a greater emphasis on management science and quantitative methods than was to be found in traditional engineering degrees; until 1995, it was called Management Science and Industrial Systems Studies. Over the past 38 years the programme has continuously evolved and changed so that, at this stage, its roots in engineering have almost disappeared to be replaced by a focus on modern information systems.

Today’s MSISS programme is designed to bridge a different gap - that between business, information technology and management science. This change reflects changes in society and technology and in particular what our own graduates tell us about what is happening out there in the world of work. The demand for graduates with both business and quantitative skills and a firm understanding of information technology has grown rapidly over the past ten years and is likely to continue to increase for the foreseeable future.

The primary objective of the MSISS programme is to produce graduates who are numerate as well as business and computer literate and who have a solid understanding of how to approach and solve practical problems using a variety of tools and techniques. To do this represents a considerable challenge, which makes MSISS one of the most interesting courses around. We hope you find that MSISS is both an exciting and challenging course that keeps you on your toes for the next four years.

The programme has three main streams:

- **Business and Management** - Subjects covered include economics, management, finance and organisational psychology. Most of the modules in this area are taken in conjunction with Business Studies students.

- **Quantitative Methods** - It is a key objective of the course that students be numerate and at home with important mathematical and statistical tools. To this end, this part of the programme encompasses mathematics, statistics and management science/operations research methods.

- **Information Technology and Systems** - Emphasis is on the practical application of IT, but the programme starts with basics, including fundamentals of computing and use of end user tools such as spreadsheets and word processing. In later years you will go on to study information systems, databases and state of the art systems development techniques.

While the above areas make up the core of the programme, there is also a firm emphasis on personal skills such as verbal communication, interviewing, teamwork and report writing. In some cases, these will be taught explicitly. In other modules, these skills are woven into the fabric of the teaching approach. The course and, in particular, the modules in the third and fourth years, are under constant review, so it is probable that the subjects in the final two years will be slightly different by the time you get there. Changes will be incremental so don’t worry too much about this. MSISS subject skills are built up in layers.
3.1 Contact Information

The School of Computer Science and Statistics (SCSS) was formed in 2005 by the amalgamation of the Department of Computer Science and the Department of Statistics. The School has more than 60 academic staff and more than 200 full-time postgraduate students and support staff. It comprises five academic disciplines: (i) Software and Systems, (ii) Artificial Intelligence, (iii) Networks and Distributed Systems, (iv) Graphics & Vision and (v) Statistics & Information Systems.

The School Reception is beside Room G.8 in the O'Reilly Institute.

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

Tel: (01) 896 1765, Email: enquiries@scss.tcd.ie, Web: http://www.scss.tcd.ie/

Address: School of Computer Science and Statistics, O'Reilly Institute, Trinity College Dublin, Dublin 2, Ireland, D02 PN40.

3.1.1 Academic and Administrative Staff

Prof Simon Wilson Course Director
Dr Jonathan Dukes Course Director
Dr Jonathan Dukes School Director of Undergraduate Teaching and Learning
Prof Jeremy Jones Head of School
Ms Gillian Long Course Administration Officer, SCSS Teaching Unit

The Course Directors are Simon Wilson (swilson@tcd.ie) and Jonathan Dukes (jdukes@tcd.ie). However, academic enquiries regarding modules, assignments, feedback, supervision and requests for transcripts should be directed to the SCSS Teaching Unit who will, where appropriate, inform the director or coordinator. The Teaching Unit can be contacted by emailing teaching-unit@scss.tcd.ie.

3.2 Key Dates

The key dates of the Academic Year are specified by the College at https://www.tcd.ie/calendar/.

All students must attend College during all Teaching and Learning weeks and during all Assessment weeks (including Saturdays). It should be noted that examinations can be scheduled during Trinity week and might even be scheduled towards the end of the Revision weeks.

Teaching is conducted in two academic terms with a total of twenty four weeks. The following table lists the duration of each term and the start and end dates for teaching in each term for the 2018-19 academic year. No lectures are held during the study weeks in each term.
<table>
<thead>
<tr>
<th>Term</th>
<th>Duration</th>
<th>Start and End Dates (2018-2019)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michaelmas Term</td>
<td>12 weeks followed by Revision week then</td>
<td>9th September 2019– 29th November 2019 &lt;br&gt;Study Week commencing 21st October 2019  &lt;br&gt;Revision Week commencing 2nd December 2019  &lt;br&gt;Assessment Week commencing 9th December 2019&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>(MT)</td>
<td>Assessment week</td>
<td></td>
</tr>
<tr>
<td>Hilary Term (HT)</td>
<td>12 weeks followed by Revision week then</td>
<td>20th January 2020 – 9th April 2020  &lt;br&gt;Study Week commencing 2nd March 2020  &lt;br&gt;Revision Week commencing 13th April 2020  &lt;br&gt;Assessment Week commencing 20th April 2020&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>Assessment week</td>
<td></td>
</tr>
</tbody>
</table>

*Note the above timetable can be subject to changes so make sure you make corrections as appropriate. It is the student’s responsibility to determine dates, times and locations of examinations.*

### 3.3 Timetables

Timetables are provided through [https://my.tcd.ie/](https://my.tcd.ie/) but are also made available at [https://scss.tcd.ie/undergraduate/timetables.php](https://scss.tcd.ie/undergraduate/timetables.php).

### 3.4 Key Locations and Means of Communication

The SCSS is head quartered in the O’Reilly Institute, though the MSISS laboratory, most MSISS lectures, and MSISS lecturer office locations are in the Lloyd Institute directly opposite. However, lectures, laboratory classes, and examinations can be scheduled anywhere within the University. A searchable online campus map is provided at [https://www.tcd.ie/Maps/map.php](https://www.tcd.ie/Maps/map.php).

An MSISS notice board is located on the first floor of the Lloyd Institute opposite the entrance to the stairs in the North East corner. Notices for MSISS students may be posted here. Individual messages for students may also be left here. Please check this notice board regularly.

All students are issued with an e-mail name and address on arrival in College which you can access through [http://myzone.tcd.ie](http://myzone.tcd.ie). It is expected that you will check your College email regularly as nearly all messages for individual students and broadcast messages for the class are sent via e-mail.

Communications from many College services will be sent to you via your online portal at [https://my.tcd.ie](https://my.tcd.ie), which will give you access to an `intray’ of your messages. You can view your timetables online, both for your teaching and for your examinations. Fee invoices and payments, student levies and commencement fees will be issued online and all payments will be carried out online. Examination results are also published online through this portal.

<sup>1</sup> Extra contingency days may be required outside the formal assessment/reassessment weeks.
The 'TCD Blackboard' online learning system is accessible via http://mymodule.tcd.ie.

The Academic Registry (see https://www.tcd.ie/academicregistry/about/) provides central academic administrative services in support of Undergraduate and Postgraduate Admissions, Fees & Payments, Annual Student Registration, Lecture Timetables, Erasmus & Study Abroad, Examinations, Assessment & Progression and Commencements & Graduation.

3.5 Health and Safety

The Faculty of Engineering, Mathematics and Science (FEMS) - of which our school is part - publishes a Health & Safety Guidance Manual. It can be viewed online at http://ems.tcd.ie/assets/documents/pdf/Health%20&%20Safety%20Guidance%20Manual%202016%202017.pdf
4 Teaching and Learning

4.1 Programme Overview

Students typically enter Year 1 from secondary school via the Central Applications Office (CAO) system. Suitably qualified students may also join the programme on the recommendation of the Course Director. Students normally exit the programme at the end of Year 4, with a B.A. (Mod.) in Management Science and Information Systems Studies, though provision is made for students to exit the programme with an ordinary B.A. degree at the end of Year 3.

The terms Junior Fresh, Senior Fresh, Junior Sophister and Senior Sophister are widely used in Trinity to refer to a first-year, second-year, third-year and fourth-year student respectively; thus, for example, Junior Fresh year, (or JF year), refers to Year 1. The teaching year is divided into two twelve-week semesters. The first semester (running roughly September to December) is known as Michaelmas Term (MT), the second (running roughly January to April) is known as Hilary Term.

In the Fresh years (JF and SF) instruction is given in the foundations of MSISS with compulsory courses taken in its three main strands of Business and Management, Quantitative Methods, and Information Technology and Systems. In the Sophister years (JS and SS), students may select a number of options in addition to core courses. In the final SS year students undertake a capstone project working with a real client.

4.2 Plagiarism

It is important to highlight that all work submitted must be your own, and not taken directly from the internet or other sources. The College takes plagiarism seriously (see the College plagiarism policy at [http://www.tcd.ie/teaching-learning/assets/pdf/PlagPolicy02-06-2016.pdf](http://www.tcd.ie/teaching-learning/assets/pdf/PlagPolicy02-06-2016.pdf)).

The College regulations governing plagiarism are available in the college calendar and are copied in Appendix B. You are expected to be familiar with these rules and to understand what is considered plagiarism.

Before beginning your first assignment, you must complete the online tutorial on avoiding plagiarism Ready, Steady, Write, located at: [http://tcd-ie.libguides.com/plagiarism/ready-steady-write](http://tcd-ie.libguides.com/plagiarism/ready-steady-write).

Please note that our School may use tools such as TurnItIn to identify plagiarism.

You are also encouraged to use the College Library's repository of resources on plagiarism and its avoidance at [http://tcd-ie.libguides.com/plagiarism](http://tcd-ie.libguides.com/plagiarism).

In the case of group work, groups should establish some mechanism to ensure that no member engages in plagiarism. Do not sign the Group Assignment Declaration if you have not assured yourself that the whole assignment is original.
4.3 Rules for Handing in in-term Assessments

Many MSISS modules include an element of continuous assessment. Different departments have their own rules on assessments and homework. You should make sure that you are familiar with these rules and that you understand them.

A coversheet should be completed and attached to ALL work submitted in hard or soft copy or via Blackboard. A template is available at: https://scss.tcd.ie/undergraduate/msiss/quicklinks.php

The coversheet includes the declaration:

I have read and I understand the plagiarism provisions in the General Regulations of the University Calendar for the current year, found at http://www.tcd.ie/calendar.

I have also completed the Online Tutorial on avoiding plagiarism ‘Ready Steady Write’, located at http://tcd-ie.libguides.com/plagiarism/ready-steady-write.

The MSISS rules for handing in and marking of assessments are summarised below.

1. Unless otherwise stated, the deadline for all MSISS continual assessment work will be 12.00 noon on a Monday. The Lecturer-in-Charge will give notice of alternative deadlines. Where non standard procedures apply, they will give notice of:
   • the deadline;
   • where and how assessments are to be handed in;
   • the penalties for late submission;
   • the procedures for granting permission for late submissions.

   Otherwise the default rules as set out below will apply.

2. The default procedure for assignment submission is as follows.

   All module work must be handed in to the School Reception. When handing in an assignment or project, you must sign the “Student Assessment Sign-in” sheet. The date and time the assessment is handed in is noted on this sheet. Assessments must be clearly labelled and show:
   • Your name;
   • The correct description of the assignment (e.g. Applied Prob. Exercise 3); 
   • The name of the appropriate lecturer.

3. Penalties for late submission are as follows. Material submitted late will be down marked 20% of the mark that would otherwise have been awarded for each day (or part thereof) that it is late. Thus work that is late at all will incur a penalty of 20%, work submitted more than 24 hours late will incur a penalty of 40% and so on. Work submitted more than 96 hours late will receive a mark of zero. For MSISS this means that work submitted after 12.00 noon on the Friday of the relevant week will receive a mark of zero.
4. **Extensions** are normally granted only if you can present a good reason for not being able to submit on time, and not retrospectively. If you need an extension you should speak to your tutor not to the Lecturer. Lecturers will normally grant you an extension following a letter from your tutor who must ask for a specified number of days extension. Tutors will only recommend extensions if the difficulties could not have been foreseen.

Sometimes, where there is a general problem, a Lecturer may award an extension to the entire class. In this case, the details of the extension will be notified to all students. The penalty will operate as before, after the extension. If the assessment in question is a team project, and the extension is sought - through the tutor - by one team member, the maximum extension that can be given is 1 week.

5. **You should always retain a copy of everything submitted in case of dispute; a paper copy is recommended.** If kept in electronic form, you should have a backup copy. This is important. If, for example, a Lecturer says he/she never received your submission and you do not have a copy, it may be difficult to prove that you ever submitted it.

Coursework is an integral part of MSISS and it is essential that every student participate fully in the coursework associated with each module. If a student does not make a serious attempt at the coursework in a module this is considered in the same way as if a student does not make a serious attempt at an examination.

Any student who submits less than two thirds of their coursework in a module is considered as not making a serious attempt. In such circumstances, if the student fails the module overall, they may be excluded from the degree programme at the discretion of the Examination Board.

In really exceptional problems, e.g. your tutor is ill, you should speak to the Course Director.

### 4.4 European Credit Transfer System

Subjects are taught in modules. Modules may be taught for one or two semesters, and consist of lectures, tutorials, seminars, and laboratory sessions. Each module is assigned a *European Credit Transfer System* (ECTS) rating. Modules in the first three years are each assigned 5 or 10 ECTS credits (where typically full year modules are assigned 10 ECTS credits and one semester modules are assigned 5 ECTS credits). The SS capstone project is assigned 20 ECTS.

The ECTS is an academic credit transfer and accumulation system representing the student workload required to achieve the specified objectives of a study programme. The ECTS weighting for a module is a measure of the student input or workload required for that module, based on factors such as the number of contact hours, the number and length of written or verbally presented assessment exercises, class preparation and private study time, laboratory classes, examinations, clinical attendance, professional training placements, and so on as appropriate. There is no intrinsic relationship between the credit volume of a module and its level of difficulty.
In College, one ECTS unit is defined as 20-25 hours of student input so a 5 ECTS module will be designed to require 100-125 hours of student input including class contact time and independent or group work. Each year of the programme is composed of modules worth a total of 60 credits. Where there is the option to choose from a range of modules, it is the responsibility of the student to ensure that they successfully complete modules worth 60 credits. ECTS credits are awarded to a student only upon successful completion of the course year. Progression from one year to the next is determined by the course regulations. Exceptions to this rule are one-year and one-semester visiting students, who are awarded credit for individual modules successfully completed.

4.5 Programme Structure

Brief descriptions of the modules listed below are provided on the relevant year page of the course website https://scss.tcd.ie/undergraduate/msiss/. Full details, including learning outcomes, book recommendations and important evaluation and assessment criteria are available at http://my.tcd.ie.

The mark in each subject is generally a combination of an exam mark and a coursework mark. The method which is used to combine exam and assignment marks into the overall mark is at the discretion of the course lecturer and is set out in each Module Descriptor. Students should make themselves aware of the assessment regulations for each module. Module Descriptors are available through the course website.

The School reserves the right to amend the list of available modules and, in particular to withdraw and add modules. Timetabling may restrict the availability of modules to individual students.
### 4.5.1 Year 1 – Junior Fresh 2019/2020

In Year 1 (Junior Fresh) 2019/2020, MSISS students take the following modules in Michaelmas and Hilary Terms:

<table>
<thead>
<tr>
<th>Michaelmas Term</th>
<th>Hilary Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Applications I STU11001 / 5 credits</td>
<td>Statistical Analysis I STU11002 / 5 credits</td>
</tr>
<tr>
<td>Introduction to Management Science STU11004 / 10 credits</td>
<td></td>
</tr>
<tr>
<td>Introduction to Programming CSU11010 / 10 credits</td>
<td></td>
</tr>
<tr>
<td>Engineering Mathematics I MAU11E01 / 5 credits</td>
<td>Engineering Mathematics II MAU11E02 / 5 credits</td>
</tr>
<tr>
<td>Fundamentals of Management and Organisation BUU11510 / 10 credits</td>
<td></td>
</tr>
<tr>
<td>Introduction to Economics ECU11011 / 10 credits</td>
<td></td>
</tr>
</tbody>
</table>
### 4.5.2 Year 2 – Senior Fresh 2019/2020

In Year 2 (Senior Fresh) 2019/2020, MSISS students take the following modules in Michaelmas and Hilary Terms:

<table>
<thead>
<tr>
<th>Michaelmas Term</th>
<th>Hilary Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Applications II</td>
<td>Applied Probability II</td>
</tr>
<tr>
<td>STU22001 / 10 credits</td>
<td>STU22005 / 5 credits</td>
</tr>
<tr>
<td>Applied Probability I</td>
<td>Management Science Methods</td>
</tr>
<tr>
<td>STU22004 / 5 credits</td>
<td>STU22006 / 10 credits</td>
</tr>
<tr>
<td>Management Science Methods</td>
<td>Algorithms and Data Structures</td>
</tr>
<tr>
<td>STU22006 / 10 credits</td>
<td>CSU22010 / 10 credits</td>
</tr>
<tr>
<td>Engineering Mathematics III</td>
<td>Engineering Mathematics IV</td>
</tr>
<tr>
<td>MAU22E01 / 5 credits</td>
<td>MAU22E02 / 5 credits</td>
</tr>
<tr>
<td>Introduction to Accounting</td>
<td>Introduction to Finance</td>
</tr>
<tr>
<td>BUU22530 / 5 credits</td>
<td>BUU22530 / 5 credits</td>
</tr>
</tbody>
</table>

Students entering Year 2 of the programme from 2020 onwards will follow a revised curriculum, which is set out in Appendix A of this handbook.
4.5.3 Year 3 – Junior Sophister 2019/2020

In year 3 (Junior Sophister) 2019/2020, MSISS students take the following modules in Michaelmas and Hilary Terms:

<table>
<thead>
<tr>
<th>Michaelmas Term</th>
<th>Hilary Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Applications III</td>
<td>Statistical Analysis III</td>
</tr>
<tr>
<td>STU33001 / 10 credits</td>
<td>STU33002 / 5 credits</td>
</tr>
<tr>
<td>Forecasting</td>
<td>Research Methods</td>
</tr>
<tr>
<td>STU33010 / 5 credits</td>
<td>STU33004 / 5 credits</td>
</tr>
<tr>
<td>Multivariate Linear Analysis</td>
<td>Information Systems</td>
</tr>
<tr>
<td>STU33011 / 5 credits</td>
<td>STU33005 / 5 credits</td>
</tr>
<tr>
<td>Software Engineering</td>
<td></td>
</tr>
<tr>
<td>CSU33012 / 5 credits</td>
<td></td>
</tr>
<tr>
<td>Management Science Case Studies</td>
<td></td>
</tr>
<tr>
<td>STU33008 / 10 credits</td>
<td></td>
</tr>
<tr>
<td>ELECTIVE MODULES</td>
<td></td>
</tr>
<tr>
<td>10 credits</td>
<td></td>
</tr>
</tbody>
</table>

**Elective Modules**

<table>
<thead>
<tr>
<th>Introduction to Fixed Income Securities and Alternative Investments</th>
<th>Corporate Finance and Equity Valuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUU33530 / 10 credits</td>
<td>BUU33630 / 5 credits</td>
</tr>
<tr>
<td>Intermediate Economics A</td>
<td>Intermediate Economics B</td>
</tr>
<tr>
<td>ECU22011 / 5 credits</td>
<td>ECU22012 / 5 credits</td>
</tr>
<tr>
<td>Investment Analysis A</td>
<td>Investment Analysis B</td>
</tr>
<tr>
<td>ECU33051 / 5 credits</td>
<td>ECU33052 / 5 credits</td>
</tr>
<tr>
<td>Probability and Theoretical Statistics</td>
<td></td>
</tr>
<tr>
<td>STU23501 / 5 credits</td>
<td></td>
</tr>
<tr>
<td>Introduction to Functional Programming</td>
<td></td>
</tr>
<tr>
<td>CSU34016 / 5 credits</td>
<td></td>
</tr>
</tbody>
</table>

Please note that not all electives may run in a given year, depending on demand and availability of appropriate staff to teach the electives. Students may change options by informing the teaching unit up to the end of the second week of Michaelmas Term. Late changes will not be accepted.

Students entering Year 3 of the programme from 2021 onwards will follow a revised curriculum, which is set out in Appendix A of this handbook.
### 4.5.4  Year 4 – Senior Sophister 2019/2020

In year 4 (Senior Sophister) students take the following modules in Michaelmas and Hilary Terms:

<table>
<thead>
<tr>
<th>Michaelmas Term</th>
<th>Hilary Term</th>
</tr>
</thead>
</table>
| MSISS Final Year Project  
STU44001 / 20 credits |  |
| Data Analytics  
STU44003 / 10 credits |  |
| Strategic Information Systems  
STU45006 / 10 credits |  |

#### ELECTIVE MODULES

15 credits

<table>
<thead>
<tr>
<th>Elective Modules</th>
<th></th>
</tr>
</thead>
</table>
| Financial Reporting and Analysis  
BUU44530 / 10 credits | Corporate Finance and Equity Valuation  
BUU33630 / 5 credits |
| Introduction to Fixed Income Securities and Alternative Investments  
BUU33620 / 5 credits | Economic Analysis B  
BUU33012 / 5 credits |
| Human Factors  
CSU44051 / 5 credits | Investment Analysis B  
ECU33052 / 5 credits |
| Technology Entrepreneurship  
CSU44081 / 5 credits | Applied Linear Statistical Methods II  
STU34502 / 5 credits |
| Economic Analysis A  
ECU33011 / 5 credits | Statistical Inference I  
STU34507 / 5 credits |
| Investment Analysis A  
ECU33051 / 5 credits |  |
| Manufacturing Systems and Project Management  
MEU44806 / 5 credits |  |
| Statistical Inference II  
STU34508 / 5 credits |  |
| Applied Linear Statistical Methods I  
STU34501 / 5 credits |  |

Please note that not all electives may run in a given year, depending on demand and availability of appropriate staff to teach the electives. Students may change options by informing the teaching unit up to the end of the second week of Michaelmas Term. Late changes will not be accepted.

Students entering Year 4 of the programme from 2022 onwards will follow a revised curriculum, which is set out in Appendix A of this handbook.
4.6 Study Abroad

Undergraduate students in the School of Computer Science and Statistics have opportunities to spend part of their degree programme abroad either through an Erasmus exchange or through a Non-EU partner exchange. Information is available at https://scss.tcd.ie/international/

4.7 Registration

Students in Year 1 of Management Science and Information Systems Studies will be invited during the Trinity term to register their preferences for Year 2 of their course, including Trinity Electives and Open Modules.

Students will be advised of how they will do this and where they will find relevant module information several weeks before they are invited to register. Timetabling may restrict the availability of modules to individual students.

4.8 Marking Scale

Grades for individual subjects and overall grades are awarded based on the (rounded) percentage achieved as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>70%-100%</td>
</tr>
<tr>
<td>II.1</td>
<td>60%-69%</td>
</tr>
<tr>
<td>II.2</td>
<td>50%-59%</td>
</tr>
<tr>
<td>III</td>
<td>40%-49%</td>
</tr>
</tbody>
</table>

4.9 Progression Regulations

For one semester modules students are examined at the end of the semester and for two semester modules they are examined at the end of the second semester. To complete an academic year (and hence progress to the next year of the programme or exit with a degree award), students must be successful at the Annual or Supplemental Examinations.

In order to be successful in the Annual or Supplemental Examinations, students must pass all modules. The pass mark is 40%. Alternatively, students may pass by compensation if they (i) achieve an overall weighted average pass mark and (ii) pass modules totalling 50 credits, and (iii) get a ‘Qualified Pass’ mark (35%) in the failed module(s) (either one 10-credit module or one/two 5-credit modules).

If a student is successful in the Annual Examinations his/her overall mark will be calculated as the average of each module's mark weighted by its ECTS rating and an overall grade awarded (according to the scale above). If a student is unsuccessful in the Annual Examinations, he/she is required to take a supplemental examination or assessment in all modules in which they have not achieved a pass mark, as indicated in the examination results.

Permission to take supplemental examinations will not normally be granted to students whom the court of examiners considers not to have made a serious attempt at the annual examinations unless
an adequate explanation is furnished. The method of assessment of modules may vary between annual and supplemental examinations.

Supplemental examinations are held in Michaelmas term each year (i.e. towards the end of the summer break).

If a student is successful in the Supplemental Examinations his/her overall mark will be calculated as the average of each module's mark (weighted by its ECTS rating and an overall grade awarded (according to the scale above). This average is based on the marks achieved in the supplemental examinations together with the marks achieved in the annual examinations for the modules in which supplemental examinations/assessments were not required.

A student who does not feel their returned mark is correct should first ask to view their script with the examiners, and may (through their tutor) if they still believe that something is incorrect request a recheck, remark (of the full class) or lodge an appeal. A student who does not pass by either of the methods above is required to repeat the year in full.

When a student must repeat a year, they must do so in full (i.e. repeating all modules and all assessment elements of those modules). Students may repeat years 1-4 of the programme but may only repeat a particular year once and may only repeat two years within the programme.

In exceptional circumstances some students are permitted to repeat off-books (taking only examinations in the subjects which they failed). This is applied for through the tutor.

4.10 Awards

4.10.1 Ordinary BA Degree (exit only)

Students who have passed their Year 3 examinations may have an ordinary BA degree conferred if they do not choose, or are not allowed, to proceed to Year 4 of the programme, or if they fail to complete satisfactorily Year 4 of the course. Except by permission of the University Council, on the recommendation of the Executive Committee of the School of Computer Science and Statistics, an ordinary BA degree may be conferred only on candidates who have spent at least two years in the University.

4.10.2 Moderatorship (Honors) Degree

The B.A. Mod. degree result is awarded if a student has successfully completed Years 3 and 4, based on a combined mark from the Year 3 examinations (which count for 35% of the moderatorship result) and Year 4 examinations (which count for 65% of the moderatorship result).

For students entering from 2019/2020 onwards, or current students who are required to repeat one or more years or who go off-books for one or more years, Year 3 will contribute 30% of the final degree result and Year 4 will contribute 70% of the final degree result.

Where students are awarded an honors degree, the class of degree awarded is based on the weighted average mark achieved as follows: First Class Honors: 70%-100%, Second Class Honors,
First Division: 60%-69%, Second Class Honours, Second Division: 50%-59%, Third Class Honours: 40%-49%.

4.11 Attendance Requirements

Students are required to attend all lectures, laboratory and tutorial sessions associated with their programme of study and to participate fully in the academic work of their class. Note that the use of laptops (and other devices) is at the lecturer’s discretion in lectures, laboratory and tutorial sessions. Students must notify the lecturer concerned or their tutor as early as possible if they are unable to attend lectures, laboratories or tutorials or to submit coursework for any reason. Students who are absent for medical reasons should notify their tutor and will usually be required to provide a medical certificate to their tutor.

4.12 Non-Satisfactory Attendance or Performance

At the end of Michaelmas term and during the study week of Hilary term, students whose attendance or performance in coursework has not been satisfactory may be reported to the Senior Lecturer’s Office as non-satisfactory for that term (see https://www.tcd.ie/undergraduate-studies/academic-progress/attendance-course-work.php).

Normally, where students are non-satisfactory in a course for two terms in the year they may be refused permission to take their annual examinations and may be required to repeat the year. Unless otherwise specified for an individual module, a student’s attendance and participation will be deemed to be non-satisfactory if they do not attend at least two thirds of the scheduled lectures, laboratories or tutorials or if they do not make a serious attempt to complete at least two thirds of the coursework for any individual module.

4.13 Viewing Examination Scripts and Appealing Results

Once the results are published students can discuss their examination/assessment performance with the examiners to understand why a specific mark was awarded. This is their right and, if they wish to do so, the student should contact the Teaching Administration (teaching-unit@scss.tcd.ie) who will instruct them on how to arrange a meeting with the examiner. Note that such consultations should be individual meetings where the topic is confined to the student’s performance in the examination. They are not an opportunity to negotiate an increase of marks. Lecturers cannot independently change any marks once they have been approved by the Court of Examiners.

Students are entitled to view their script when discussing their examination or assessment. If a student is still unhappy with their result and has reason to believe that:

1. The grade is incorrect because of an error in calculation of results,
2. The examination paper contained questions on subjects which were not part of the course prescribed for the examination, or
3. Bias was shown by the examiner in marking the script,
they should contact their Tutor to discuss the situation. Their Tutor can request a (a) re-check or (b) a re-mark or (c) can appeal the result.

Appeals are first presented to the Court of First Appeal for your Faculty. If unsuccessful, your case may be taken to the Academic Appeals Committee. If your Tutor is unwilling to act on your behalf you can contact the Senior Tutor in House 27.

There are 3 grounds on which you can take an appeal:

1. Your case/situation is not adequately covered by College regulations
2. The regulations were not properly applied
3. Ad misericordiam grounds, such as illness, bereavement, serious personal crisis, etc.

Please note that an Appeal cannot change exam results or marks but can change the effect of the results.

4.14 Absence from Examinations

Students must attend all examinations. An unexplained absence from any examination and/or not making a serious attempt at an examination results in an automatic exclusion from the degree programme.

4.15 Relevant University Regulations

College regulations are set out in the University Calendar, which may be consulted in any College Library, the Enquiries Office, any academic or administrative office or online at http://www.tcd.ie/calendar/.

The two most relevant extracts of the Calendar, entitled General Regulations and Information and Faculty of Engineering, Mathematics and Science, are handed out at registration at the beginning of the year. You are expected to be aware of the various regulations. Ignorance of the regulations is not a valid reason for failure to comply.

4.16 Careers Information and Events

College provide a Careers Advisory Service (See https://tcd.ie/careers and https://mycareerconnect.tcd.ie).

4.17 External Examiner

The external examiner for 2019-2021 is Prof. Refik Soyer of the George Washington University’s School of Business. He is involved in ensuring that examinations in the Sophister years are run properly in terms of how the exam papers are set and assessed. (As the external examiner for the programme is from outside the EU/EHEA, students should be aware that personal information required for the purposes of external examining may be transferred outside the EU/EHEA. The
School adheres to a College Procedure for the transfer to External Examiners of students’ assessed work.

4.18 Feedback and Evaluation

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

4.19 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. 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.

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

It takes time to prepare an application for research ethics approval, to have the application considered, and to respond to feedback on the application where issues are raised. You should plan in your work for the time it takes to obtain research ethics approval. Retrospective approval will not be granted. Please also note, research conducted in the School of Computer Science and Statistics should be undertaken with cognisance of the TCD Guidelines for Good Research Practice; see
http://www.tcd.ie/about/policies/assets/pdf/TCDGoodResearchPractice.pdf

4.19.3 Learning Outcomes and Graduate Attributes

Throughout their time at Trinity, our students will be provided with opportunities to develop and evidence achievement of a range of graduate attributes that support their academic growth. Graduate attributes can be achieved in academic and co- and extra-curricular activities. A BA (Mod) graduate of MSISS is expected to be able to demonstrate:

1. advanced knowledge and understanding of mathematics, economics, business management, and computer sciences;
2. the ability to identify, formulate, analyse and solve complex problems;
3. the ability to perform the detailed design of a novel system using the analysis and interpretation of relevant data;
4. the ability to design and conduct experiments and to apply a range of standard and specialised research (or equivalent) tools and techniques of enquiry;
5. an understanding of the need for high ethical standards in research;
6. the ability to work effectively as an individual, in teams and in multi-disciplinary settings together with the capacity to undertake lifelong learning;
7. the ability to communicate effectively on complex activities with the industrial community and with society at large.

4.19.4 Scholarships and Prizes
Various studentships, scholarships, exhibitions, and other prizes are awarded to students on the results of honor and other examinations, provided that sufficient merit is shown. Monetary awards are sent direct to prize-winners unless otherwise stated under the regulations for the prize. For details please refer to the University Calendar.
# Appendix A  Programme Structure for 2019 Entry

## A.1 Year 2 – Commencing 2020/2021

<table>
<thead>
<tr>
<th>Michaelmas Term</th>
<th>Hilary Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering Mathematics III</td>
<td>Software Applications II</td>
</tr>
<tr>
<td>MAU22E01 / 5 credits</td>
<td>STU22001 / 5 credits</td>
</tr>
<tr>
<td>Applied Probability I</td>
<td>Applied Probability II</td>
</tr>
<tr>
<td>STU22004 / 5 credits</td>
<td>STU22005 / 5 credits</td>
</tr>
<tr>
<td>Management Science Methods</td>
<td></td>
</tr>
<tr>
<td>STU22006 / 10 credits</td>
<td></td>
</tr>
<tr>
<td>Algorithms and Data Structures</td>
<td></td>
</tr>
<tr>
<td>CSU11010 / 10 credits</td>
<td></td>
</tr>
<tr>
<td><strong>APPROVED MODULES IN BUSINESS OR ECONOMICS</strong></td>
<td></td>
</tr>
<tr>
<td>10 credits</td>
<td></td>
</tr>
<tr>
<td><strong>OTHER APPROVED MODULES</strong></td>
<td></td>
</tr>
<tr>
<td>10 credits</td>
<td></td>
</tr>
<tr>
<td><strong>Approved Modules</strong></td>
<td></td>
</tr>
<tr>
<td>Introduction to Accounting</td>
<td>Introduction to Finance</td>
</tr>
<tr>
<td>BUU22530 / 5 credits</td>
<td>BUU22530 / 5 credits</td>
</tr>
<tr>
<td>Software Engineering Group Project I</td>
<td></td>
</tr>
<tr>
<td>CSU22013 / 5 credits</td>
<td></td>
</tr>
<tr>
<td>Other Approved Modules to be confirmed</td>
<td>Other Approved Modules to be confirmed</td>
</tr>
<tr>
<td><strong>Elective Modules</strong></td>
<td></td>
</tr>
</tbody>
</table>
A.2  Year 3 – Commencing 2021/2022

<table>
<thead>
<tr>
<th>Michaelmas Term</th>
<th>Hilary Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Applications III</td>
<td>Information Systems</td>
</tr>
<tr>
<td>STU33001 / 5 credits</td>
<td>STU33005 / 5 credits</td>
</tr>
<tr>
<td>Multivariate Linear Analysis</td>
<td>Research Methods</td>
</tr>
<tr>
<td>STU33011 / 5 credits</td>
<td>STU33004 / 5 credits</td>
</tr>
<tr>
<td>Statistical Analysis III</td>
<td></td>
</tr>
<tr>
<td>STU33002 / 5 credits</td>
<td></td>
</tr>
<tr>
<td>Applied Forecasting</td>
<td>APPROVED MODULE</td>
</tr>
<tr>
<td>STU33010 / 5 credits</td>
<td>(5 credits)</td>
</tr>
</tbody>
</table>

APPROVED MODULES
(10 credits, either STU33008 or CSU33012 with CSU33013)

<table>
<thead>
<tr>
<th>TRINITY ELECTIVE MODULE</th>
<th>TRINITY ELECTIVE MODULE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved Modules</td>
<td></td>
</tr>
<tr>
<td>Management Science Case Studies</td>
<td></td>
</tr>
<tr>
<td>STU33008 / 10 credits</td>
<td></td>
</tr>
<tr>
<td>Software Engineering</td>
<td>Software Engineering Group Project</td>
</tr>
<tr>
<td>CSU33012 / 5 credits</td>
<td>CSU33013 / 5 credits</td>
</tr>
<tr>
<td>Other Approved Modules to be confirmed</td>
<td>(e.g. in Business, Economics or Computer Science)</td>
</tr>
</tbody>
</table>

Elective Modules
A.3 Year 4 – Commencing 2022/2023

<table>
<thead>
<tr>
<th>Michaelmas Term</th>
<th>Hilary Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Year Project</td>
<td>STU44091 / 20 credits</td>
</tr>
<tr>
<td>Strategic Information Systems</td>
<td>STU45006 / 10 credits</td>
</tr>
<tr>
<td>Data Analytics</td>
<td>STU44003 / 10 credits</td>
</tr>
</tbody>
</table>

**ELECTIVE MODULES**
(20 credits)

<table>
<thead>
<tr>
<th>Approved Modules</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Elective Modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective Modules to be confirmed</td>
</tr>
<tr>
<td>(e.g. in Statistics, Computer Science, Business or Economics)</td>
</tr>
</tbody>
</table>
Appendix B  Plagiarism

The following is an extract from the 2018-2019 College Calendar relating to Plagiarism (Part II Undergraduate Studies, Part B General Regulations).

96 General

It is clearly understood that all members of the academic community use and build on the work and ideas of others. It is commonly accepted also, however, that we build on the work and ideas of others in an open and explicit manner, and with due acknowledgement.

Plagiarism is the act of presenting the work or ideas of others as one’s own, without due acknowledgement.

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.

It is the responsibility of the author of any work to ensure that he/she does not commit plagiarism.

Plagiarism is considered to be academically fraudulent, and an offence against academic integrity that is subject to the disciplinary procedures of the University.

97 Examples of Plagiarism

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) procuring, whether with payment or otherwise, the work or ideas of another;
(d) quoting directly, without acknowledgement, from books, articles or other sources, either in printed, recorded or electronic format, including websites and social media;
(e) paraphrasing, without acknowledgement, the writings of other authors.

Examples (d) and (e) 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.

98 Plagiarism in the context of group work

Students should normally 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, submitting work which is the product of collaboration with other students may be considered to be plagiarism.

When work is submitted as the result of a group project, it is the responsibility of all students in the group to ensure, so far as is possible, that no work submitted by the group is plagiarised. In order to avoid plagiarism in the context of collaboration and group work, it is particularly important to ensure that each student appropriately attributes work that is not their own.

99 Self plagiarism

No work can normally be submitted for more than one assessment for credit. Resubmitting the same work for more than one assessment for credit is normally considered self-plagiarism.

100 Avoiding plagiarism
Students should ensure the integrity of their work by seeking advice from their lecturers, tutor or supervisor on avoiding plagiarism. All schools and departments must include, in their handbooks or other literature given to students, guidelines on the appropriate methodology for the kind of work that students will be expected to undertake. In addition, a general set of guidelines for students on avoiding plagiarism is available on http://tcd-ie.libguides.com/plagiarism.

101 If plagiarism as referred to in §96 above is suspected, in the first instance, the Director of Teaching and Learning (Undergraduate), or their designate, will write to the student, and the student’s tutor advising them of the concerns raised. The student and tutor (as an alternative to the tutor, students may nominate a representative from the Students’ Union) will be invited to attend an informal meeting with the Director of Teaching and Learning (Undergraduate), or their designate, and the lecturer concerned, in order to put their suspicions to the student and give the student the opportunity to respond. The student will be requested to respond in writing stating his/her agreement to attend such a meeting and confirming on which of the suggested dates and times it will be possible for them to attend. If the student does not in this manner agree to attend such a meeting, the Director of Teaching and Learning (Undergraduate), or designate, may refer the case directly to the Junior Dean, who will interview the student and may implement the procedures as referred to under CONDUCT AND COLLEGE REGULATIONS §2.

102 If the Director of Teaching and Learning (Undergraduate), or designate, forms the view that plagiarism has taken place, he/she must decide if the offence can be dealt with under the summary procedure set out below. In order for this summary procedure to be followed, all parties attending the informal meeting as noted in §101 above must state their agreement in writing to the Director of Teaching and Learning (Undergraduate), or designate. If one of the parties to the informal meeting withholds his/her written agreement to the application of the summary procedure, the Director of Teaching and Learning (Undergraduate), or designate, will recommend one of the following penalties:

(a) Level 1: Student receives an informal verbal warning. The piece of work in question is inadmissible. The student is required to rephrase and correctly reference all plagiarised elements. Other content should not be altered. The resubmitted work will be assessed and marked without penalty;

(b) Level 2: Student receives a formal written warning. The piece of work in question is inadmissible. The student is required to rephrase and correctly reference all plagiarised elements. Other content should not be altered. The resubmitted work will receive a reduced or capped mark depending on the seriousness/extent of plagiarism;

(c) Level 3: Student receives a formal written warning. The piece of work in question is inadmissible. There is no opportunity for resubmission with corrections. Instead, the student is required to submit a new piece of work as a reassessment during the next available session. Provided the work is of a passing standard, both the assessment mark and the overall module mark will be capped at the pass mark. Discretion lies with the Senior Lecturer in cases where there is no standard opportunity for a reassessment under applicable course regulations.

103 Provided that the appropriate procedure has been followed and all parties in §101 above are in agreement with the proposed penalty, the Director of Teaching and Learning (Undergraduate) should in the case of a Level 1 offence, inform the course director and where appropriate the course office. In the case of a Level 2 or Level 3 offence, the Senior Lecturer must be notified and requested to approve the recommended penalty. The Senior Lecturer may approve, reject, or vary the recommended penalty, or seek further information before making a decision. If the Senior Lecturer considers that the penalties provided for under the summary procedure are inappropriate given the circumstances of the case, he/she may also refer the matter directly to the Junior Dean who will interview the student and may implement the procedures as referred to under CONDUCT AND COLLEGE REGULATIONS §2. Notwithstanding his/her decision, the Senior Lecturer will inform the Junior Dean of all notified cases of Level 2 and Level 3 offences accordingly. The Junior Dean may nevertheless implement the procedures as referred to under CONDUCT AND COLLEGE REGULATIONS §2.

104 If the case cannot normally be dealt with under the summary procedures, it is deemed to be a Level 4 offence and will be referred directly to the Junior Dean. Nothing provided for under the summary procedure diminishes or prejudices the disciplinary powers of the Junior Dean under the 2010 Consolidated Statutes.