

# EUROPEAN MASTERS IN DEPENDABLE SOFTWARE SYSTEMS

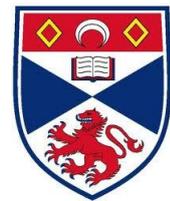
# DESEM STUDENT HANDBOOK 2017/2018



**Maynooth  
University**  
National University  
of Ireland Maynooth



**UNIVERSITÉ  
DE LORRAINE**



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**PLEASE NOTE :** This handbook contains information relevant to DESEM Programme. As far as possible, this handbook avoids duplication of information available in Partner University's Student Handbooks, focusing instead on issues specific to the DESEM Programme. It should be read in conjunction with the Student Agreement and the Student Handbooks of each partner University.

## 1. WELCOME

Welcome to the European Masters in Dependable Software Systems.

During the next two years you will have the opportunity to experience living and studying in two European countries, while participating in the European Masters in Dependable Software Systems. We hope that it will be an exciting and informative time for you, both culturally, and academically.

Each university involved in the DESEM programme has a long-standing record of offering postgraduate courses, addressing specialised topics in software development. The DESEM programme integrates these specialisms, to generate a unique programme that focuses on the development of software systems that are guaranteed to be reliable and trustworthy. The programme will also integrate you with the cultural environment of the country in which you study, as well as with other European and non-European students and scholars.

Postgraduate education is a joint venture - we are here to facilitate your learning about an exciting field of Computer Science and you are here to learn (and to also enjoy University life). You need to attend **all the lectures, all the laboratory sessions, and undertake independent study** if you are to do well. Work steadily throughout the year, and you will develop a good understanding of the subject, and you should do well in your examinations.

You are in the enviable position of embarking on a career in an area that is vibrant and exciting, at a time when the software industry is concerned with the development of software systems that are dependable throughout their lifespan. Our goal is to ensure that you will bring discipline and knowledge of appropriate techniques to your software development in order to guarantee this software quality and reliability.

If you have any questions about your course - please contact us at [mscdesem@cs.nuim.ie](mailto:mscdesem@cs.nuim.ie). If you have any questions about your lectures or course material, you should ask in lectures/tutorials/labs, or go as soon as possible to your relevant **university contact** (listed below) - It is important that you do not ignore things that you don't understand, but approach a member of staff for guidance.

On graduation you will be equally suited to a career in research where you will develop new techniques for developing more dependable software, or a career in industry where you will develop dependable industrial strength software. We look forward to working with you to achieve your qualification.

Kind Regards,

*Prof. Adam Winstanley*  
*Programme Director*

## 2. CONSORTIUM UNIVERSITIES CONTACTS

### Maynooth University (MU)

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### Université de Lorraine (UL)

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## 3. PROGRAMME OBJECTIVE

Our objective is to provide students with the knowledge, skill and in-depth technical understanding of the key concepts required to design and build dependable software systems. This will be achieved by bringing together the theory and practice of software development and, in particular, through the transfer of knowledge from the classroom via research driven and commercially relevant projects.

Each student on the integrated programme will study in two of the three partner universities achieving a diploma supplement from each university in which they accomplish 60 ECTS. No diploma supplement will be issued by the host institution until the student has completed 120 ECTS over two years. The double MSc in Dependable Software Systems (DESEM) will be achieved over two years through the allocation of 120 ECTS.

## 4. PROGRAMME STRUCTURE

The student will achieve 120 ECTS through a combination of coursework and project work that will present the student with both research and industrial aspects of dependable software systems. The student must accumulate at least 80 ECTS (40 ECTS per year) from coursework and at least 40 ECTS (20 ECTS per year) from project work. Semesters I and III will normally consist of taught modules, whereas semesters II and IV will normally consist of taught modules and project work. If students choose to accumulate more than 60 ECTS in one institution, they still have to achieve 60 ECTS in the second institution to fulfil the DESEM degree requirements

**First semester modules** in both years of the programme represent the necessary foundation upon which students can build their specialisations. Even though students will have some background in these topics from their undergraduate degree, these modules will cover them in more depth providing a basis for later specialised modules and project work. These modules will be available to students between late September and mid January of each year.

**Second semester modules**, in both years of the programme; provide specialised theory and practice that will prepare students for project work in their chosen area of expertise. As each student must complete 40ECTS of taught modules at the institution at which they undertake their project work the student will have time to become fully acquainted with the culture of the host country prior to the project start date.

Extensive project work must commence in the second semester in order to allow students to complete their dissertation before presenting their work at the annual summer school. Semester dates include time for study breaks, examinations and vacations. As the partner institutions are in different European countries, special care will be taken to ensure that adequate time is allocated for study breaks, examinations, and transfer between universities and vacations. Care has also been taken to ensure that students have a balanced work load in each semester.

Students will attend each host institution for a full academic year and timetables are available from the host institutions.

## **5. PROJECT WORK**

Project work is a major aspect of this Masters programme accounting for approximately 33% of the total degree marks. The student will experience two projects during the DESEM Programme, normally one research based project and one project addressing an Industry relevant problem.

To ensure that the student maximises their European experience we require that project work should be completed in two different universities and countries. These projects will give the student the opportunity to work with both highly acclaimed research groups and well-respected industrial teams. A thesis must be submitted for examination at the end of each project.

## **6. MODULES**

Individual modules offered by each partner university are listed annually at [www.mscedesem.ie](http://www.mscedesem.ie)

## **7. SUMMER SCHOOL**

In addition to regular modules, all students will attend a one to two-week summer school at the end of the first year and again at the end of the second year. The summer school is a compulsory part of the Programme and all students must attend for the duration. The summer schools rotate between partner institutions and provide an opportunity for participating students to meet each other and to meet members of staff from partner universities.

The summer school will offer a forum in which guest lecturers will be invited to speak about their subject area. Students who meet at the summer schools will be encouraged to form online friendships that will continue through the Moodle social forum. This will also act as an exemplar to year 1 students, who will be encouraged to get involved in online course activities throughout the programme.

### **Course Integration via Summer Schools:**

- The summer schools will introduce students to different European cultures as we will rotate the summer school between partners annually, thus ensuring that every student will experience at least two cultures during their MSc programme. Cultural activities, in addition to those that will be made available to students throughout the traditional academic year, will be provided to introduce both professional and cultural aspects of the host country to participants.
- The summer school will provide a forum through which the students who are attending different universities may present their project work and have it evaluated by a panel of examiners from all three partner universities. This, together with a transparent marking scheme will ensure that the grading of project work is consistent no matter what specialisation is chosen and that the standard of project work is comparable across all partner universities.
- An essential aspect of the summer school is its support of student integration across institutions: it will allow 1<sup>st</sup> year and 2<sup>nd</sup> year students to meet, so that they can share their experiences of different institutions and specialisations on the European Masters Programme. This will help 1<sup>st</sup> year students to finalise their decision on which specialisation to take in the 2<sup>nd</sup> year and will provide information about the project work available at each university.
- Through the summer school, we will motivate students by providing presentations which will educate them on technical issues in software development as well as presentations that will develop their generic skills sets as computer scientists.
- Third country scholars will be invited to participate in the summer school to assist with and to benefit from scheduled activities.
- Students who meet at the summer schools will be encouraged to form online friendships that will continue through the Moodle social forum. This will also act as an exemplar to year 1 students, who will be encouraged to get involved in online course activities throughout the programme.

## **8. REGISTRATION**

On admission, students will register for the two-year Programme at the admitting institution as well as the host institution for the upcoming year.

All Students will register remotely with the admitting institution (MU). Students will also register locally with a host institution for 60 ECTS in each year of their degree. Registration at each institution will follow the normal registration rules for that institution. Please see [www.mscedsem.ie](http://www.mscedsem.ie) for registration requirements and registration dates for each institution.

## **9. STUDENT AGREEMENT**

Students are required to sign a Student Agreement. The purpose of this agreement is to ensure that:

- the enrolled student is provided with a comprehensive picture of all academic, research, administrative and other aspects related to his/her participation in the Programme
- both parties- i.e the consortium and the individual participant – agree on these aspects and their respective responsibilities towards them.

## 10. FEES

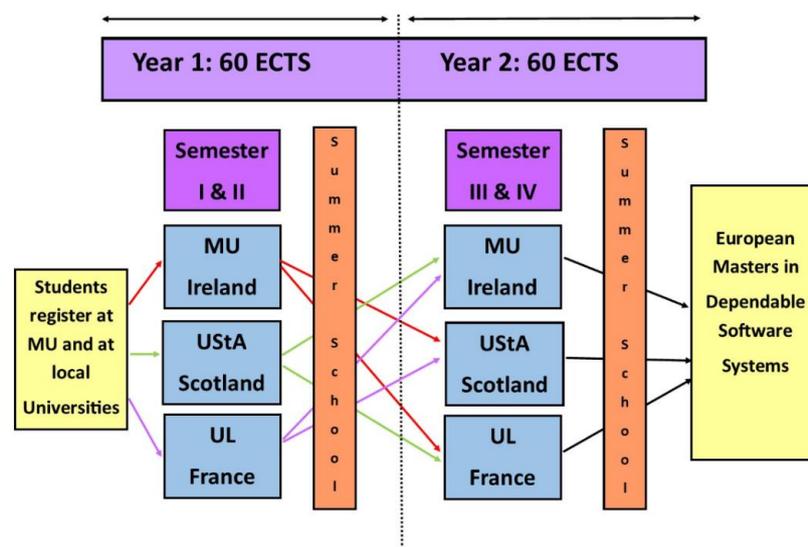
The DESEM Consortium retains 9000 Euros per annum for Consortium students of the awarded scholarship funds to cover the participation costs to the DESEM Masters programme. These participation costs include any compulsory administrative and operational costs related to the participation of the Student in the DESEM Masters programme (e.g., admission fees, registration, university tuition, course exams, thesis examination, library and computer access, etc.).

The costs for travel, room and board are the responsibility of each student and shall be paid from his or her own funds. Additional obligatory fees for student related concerns must be paid by each student in the host Institution. Fees other than tuition fees, such as re-examination, late registration or graduation fees, may be payable by students in addition to the tuition fee. These shall be levied at the standard rate of each institution.

## 11. MOBILITY

Each student on the Programme will study in two of the three partner universities, obtaining a diploma supplement from each university in which they accomplish 60 ECTS.

All combinations of university are permitted in the mobility component of the programme (see Fig 2.1 below). However, each mobility combination has been carefully designed to eliminate overlap of material and to guarantee the inclusion of necessary modules. The result is a set of **Integration Requirements** which are documented on/in the Programme website and documentation.



In addition to regular modules, all students will attend a one-week summer school at the end of the first year and again at the end of the second year. These summer schools will rotate between partner institutions and provide common training on topics such as European culture, the Software Industry and Entrepreneurship skills. It will also provide a forum for students to present their project work to examiners from all partner universities.

## **12. INSURANCE**

It is the responsibility of the student to ensure they have a suitable insurance policy to cover themselves in case of accident, injury, hospitalisation and illness while participating in the European Masters Programme.

## **13. LANGUAGE**

The principal language of instruction and in the consortium is English with all partner Universities offering course modules through English. Hence, a proficiency in English is a pre-requisite for all applicants wishing to enter our European Masters programme. The second language is French, which is the language of operation in Université de Lorraine. However, at least 60 ECTS will be available in English at each partner institution. Examinations will be provided in the language of instruction for the relevant course component thus ensuring that all students can achieve the double MSc through English. While some ECTS will be available in French, it will not normally be possible to complete the full Masters programme through the French language. All three partner universities provide Language Centres with appropriate courses and facilities for students who wish to improve their language skills. These courses and facilities will be available to students on an optional basis throughout their registration on the MSc in Dependable Software Systems.

## **14. ATTENDANCE**

Attendance is recognised by the respective Universities as an integral part of the DESEM Programme. The Student is expected to maintain a 100% attendance level at prescribed lectures, seminars, summer sessions and examinations of the MSc in Dependable Software Systems. Students are required to be in attendance on campus during all required times as listed in the Academic Calendar including study weeks, lecture weeks and weeks allocated to project work. Adequate time is allocated in the calendar for holidays and students should arrange any holidays during this time only. Any deliberate failure on the part of the Student to maintain attendance at the Programme constitutes sufficient reason for action to be taken towards resolving the issue and could lead to the exclusion of the Student from the DESEM Masters Programme and the reimbursement of any scholarship funds awarded.

## **15. EXAMINATION**

All modules (taught and project) are weighted according to the ECTS system. Precise weightings for each module on the course are listed on/in the Programme website and documentation. At the end of each year, student results will be processed by an exam board at their host institution. The results processed will be those for the 60 ECTS offered at that host institution.

The rules for determining an overall grade for these 60 ECTS are local to the host institution. However, examiners from all consortium institutions will be involved in the grading of each student's project work, as presented each year at the annual programme summer school. At the end of each year, the result for each 60 ECTS component of the programme will be communicated from the host institutions to the admitting institution. Both UStA and UL use a 20 point scale for postgraduate taught programmes while MU uses a percentage scale. The ECTS grading scale will be used to translate a student's grade from one institution to the grading scale used in another. This procedure will be transparent, as ECTS grading scales will be available with student transcripts from each institution.

At the end of each double degree programme, student results will be processed at the admitting institution's Autumn exam board. At this stage the admitting institution will have received two grades for a student registered on the Programme. The host institution can then issue the Diploma Supplements for the 60 ECTS achieved at that institution.

Progression to Year 2 is conditional on the completion of Year 1

While at the host institution, the local policies for re-sitting Masters level examinations will apply: re-sits for Masters level modules are not permitted at UStA; students who have failed their exams at UL are permitted to re-sit at a second session of exams in late June; and students who have failed their exams at MU are (subject to certain limits) permitted to re-sit their exams at the next session for that module.

When the student receives the double MSc in Dependable Software Systems, their award will be accompanied by two diploma supplements which will document the grades and ECTS achieved in each component of the double degree.

## **16. GRADUATION**

The double MSc in Dependable Software Systems will be awarded after two years on the completion of 120 ECTS in two of the three partner universities. The students must obtain 60 ECTS from each university in which they study and must have satisfied the requirements of at least two partner institutions for the award of their double Masters degree. Students will be issued one degree certificate which will include the crests of the partner Institutions. The degree certificate will normally be awarded by the University which the student attended in the 2<sup>nd</sup> year of the programme.

If the criteria of two 60 ECTS awards are not met, the student's eligibility for any alternative degree award shall be subject to the regulations of the partner institutions.

## **17. PLAGIARISM**

**Plagiarism is the passing off of another person's work as your own.** It includes copying without acknowledgement from a published source (print or electronic), or from unpublished sources (e.g. another student's essay or notes).

Plagiarism also occurs when the substance or argument of a text is copied even with some verbal alterations, such as in paraphrase or translation, without acknowledgement. Plagiarism includes using material from books or periodicals, from the internet, from grind tutors, or from other students, without full acknowledgement of the sources.

**Plagiarism in any form of assignment contributing to marks or a grade for a course is a serious offence.** It is a form of cheating on several counts: the perpetrator is attempting to obtain credit for work not done, and is also attempting to benefit from work done by somebody else. Plagiarism undercuts the whole thrust of scholarly enquiry that is the essence of education. Plagiarism will be severely penalised wherever it is detected. Students submitting assignments, essays, dissertations or any form of work for assessment may be required to sign a declaration that the material in question is wholly their own work except where indicated by referencing or acknowledgement

**Cases in which students knowingly permit others to copy their work shall also be subject to disciplinary procedures.**

## **18. STUDENT SERVICES**

Each institution of the consortium has an International office with suitable opening hours and linguistic coverage. Orientations specifically arranged for international and Erasmus students are on offer at the beginning of the academic semesters. Activities aimed at social integration, as well as assistance with immigration registration, and social insurance, are offered. In particular, advice on how third-country students and scholars can obtain visas and suitable accommodation is available. Cultural activities will be available to assist students and scholars integration into the host country as well as providing a way for students to get to know local people. Assistance with accommodation is normally offered to all international students through the standard procedures in University accommodation offices. Optional language courses will be available through the Language centres at each University.

Student services in each university will be made available to each double Masters participant. These include services such as coaching and counselling, welfare services, services for students with a family or special needs, library facilities, sports facilities, etc.

**Further information is available at [www.mscedsem.ie](http://www.mscedsem.ie)**