



NUI Galway
OÉ Gaillimh

***Coláiste na hEolaíochta
College of Science***

**2nd Year
Denominated Science Subjects**

***Subject Selection for
Denominated Degrees with Choices:***

Advisory Session 2010/2011

Wednesday, 31st March 2010

Venue: Aula Maxima (Ground Floor)

Time: 2.00 - 6.00 pm

***Attendance is compulsory for students on
programmes with subject choices***

ADVISORY SESSION 2010/2011

Wednesday, 31st March 2010

Venue: Aula Maxima (Ground Floor)

Time: 2.00 - 6.00 pm

INSTRUCTIONS

Denominated Degrees with Choices

1. **Read all instructions carefully.**
2. **Look at the compatibility of subjects when making choices.**
3. **Attend the Advisory Session and obtain advice on subject choices.**
4. **Carefully complete your Subject Choice Selection Form.**
5. **Return Subject Choice Selection Form (by hand and sign that you have submitted it) to the College of Science Office by deadline: Friday, 30th April 2010**
6. **You will be notified by the College of Science Office on which subjects you have been allocated following the release of examination results.**
7. **Register for these subjects at Registration in September.**

The 2010-2011 Information Booklet is valid for that Session. Whilst every effort is made to ensure the contents of the Information Booklet are accurate, the Information Booklet is issued for the guidance of students and staff only. The Information Booklet is not an offer to supply courses of study nor is it in any way to be construed as imposing any legal obligation on the College of Science or University to supply courses either at all or in part in respect of any subject. No guarantee is given that courses, syllabuses, fees or regulations may not be altered, cancelled or otherwise amended at any time. The Information Booklet confers no rights on any student registered for the Session 2010-2011.

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Welcome
from the
Dean of Science

Advisory Session

Wednesday, 31st March 2010

Welcome

Firstly, I would like to take this opportunity to congratulate you on your achievements to date and to wish you a pleasant summer.

To assist you in a smooth return to your 2nd Year next academic year, the College of Science has compiled this Advisory Session booklet which will provide you with all the initial necessary information. As you may know, you are required to select your 2nd Year subjects in April this year. This is to allow the College of Science Office sufficient time to make the necessary administrative arrangements to allocate slots to each student in the relevant disciplines for 2010/11 and, equally importantly, to allow individual disciplines to plan in advance for the coming academic year in the light of actual dispersal of students across all disciplines of the College. You are, therefore, required to complete the attached subject selection form carefully and return it to the College of Science Office (by hand) by **Friday, 30th April 2010 deadline**. You are also advised to attend the Advisory Session on 31st March 2010 (*Aula Maxima (Ground Floor) from 2.00 - 6.00 pm*) to obtain academic advice on the various options available to you in 2nd Year. A change of mind in terms of one or more subject(s) after registration in September may only be entertained if a place is still available in the subject(s) in question. However, such requests must be submitted on or before Wednesday, 15th September 2010.

In this booklet, you will find a list of all the available subjects on offer for the academic session 2010/2011. Also included is a list of

- (1) Incompatible Subject Combinations (including 20 ECTS and 10 ECTS Credit subjects) listing also the first year prerequisite subjects for each 2nd year subject (in relevant programmes), and
- (2) a general timetable,
- (3) Marks and Standards, etc.

Due to timetabling some subject combinations are **not** possible. The list of Incompatible Subject Combinations shows which combinations are **not** possible for each subject. This information has been incorporated on the computerised Student Record System and it will prevent you from registering for incompatible subjects. Therefore, when making a decision on your subject choices, **please refer carefully to this list**.

The College of Science Office staff will also be available to meet with students at the Advisory Session and to discuss any queries that may arise. We hope to make the Advisory Session and Registration process as smooth as possible for you.

I hope you find your 2nd Year of University life enjoyable and successful.

Dr. Gerry Morgan,
Dean, College of Science

Information
for
Students

Information for Students

Please read these instructions *carefully* before the Advisory Session on 31st March 2010.

Please note:

- Students must attend the Advisory Session.
- Students must fill in and return their choice selection form by Friday, 30th April 2010.
- If you fail to respond to the College Office by the deadline of 30th April 2010, your choice of subjects will inevitably be restricted as the available slots in all disciplines will be allocated, in the first instance, to those students who reply on time.
- Students who do not register on the Registration Day in September will be liable for a €200 Late Registration Fee.

1. Subject Listing for 2nd Year.

A list of subjects for each programme together with their breakdown of modules, weightings, etc. is listed on pages 16 - 49. Students are required to register for 60 ECTS Credits.

When completing the registration form, students do not have to list the obligatory modules as they are automatically put up for every student. Students must list their optional choices.

- In the case of a subject where all modules are obligatory, only the Level 1 code need be listed on the registration form, e.g., BT201: Botany (as students are obliged to take both sections of BT201 - BT216 and BT217).
- In the case of a subject where choices are available both the Level 1 code and the Level 2 codes must be indicated, e.g., AS200: Applied Mathematical Science has a list of module choices of which students must select four. Therefore the choices must also be listed, e.g., AS200: MA211, MA212, MP205 and MP206.

2. Incompatible Subject Combinations

There is an Incompatible Options listing available also for each subject in programmes where larger choices are available. This means that if a student wishes to take, for example, BI201: Biochemistry, he/she will be unable to select any of the subjects listed below BI201. This is due to timetabling clashes (lecture/examination) between subjects. The Student Record System will prevent students registering for incompatible subjects at registration. Therefore, when selecting subjects, this list of Incompatible Subject Combinations must be referred to carefully.

3. Prerequisites

There is also a Prerequisite listing for each subject. In order to register for a subject, the student must have taken the required prerequisite(s) in the previous year, e.g., SI201: Physiology - the prerequisites are BO101: 1st Year Biology and PH101: 1st year Physics or PH110: 1st Year Fisic. If a student does not meet the prerequisite(s), he/she cannot register for the subject.

4. Advice on Subject Selection

At the Advisory Session, each discipline will have an advisory desk at which members of staff will be available for discussion of subject selection. Once you receive advice, you should carefully complete your subject choice selection form, referring to the incompatible subject listings. This must be returned by **Friday, 30th April 2010**. If you fail to meet this deadline, the available places in each discipline will be allocated in the first instance to the students who respond on time and, consequently, your subject choices will be severely limited.

Ollscoil na hÉireann, Gaillimh/National University of Ireland, Galway

Coláiste na hEolaíochta/College of Science

1. The Academic Year

The session will be organised as follows:

Semester I: 6th September 2010 – 27th November 2010
Study Week: begins Monday, 29th November 2010
Examinations: 6th December 2010 – 17th December 2010

Semester II: 10th January 2011 – 2nd April 2011
Study Week: week of 4th April 2011
Examinations (Summer): 15th April 2011 – 20th April 2011
Easter Vacation: Thursday 21st April 2011 – Wednesday, 27th April 2011
Examinations (Summer) cont'd: 28th April 2011 – 20th May 2011

Examinations (Autumn Repeat): 3rd – 17th August 2011

2. Advisory Session and Registration:

Students of Denominated Degrees with Choices are required to attend the Advisory Session to obtain necessary and relevant up-to-date information on subject selection on the date stipulated (*31st March 2010*). All students are required to register on the date stipulated in the registration material. The Registration Office is not empowered to accept registrations after the specified registration date.

Course Registration

Subject listings for your programme are enclosed. You must complete the subject registration in accordance with this instruction. Modules to a total of 60 ECTS Credits must be taken.

3. Lecture Timetables

A general timetable is enclosed on page 56. Detailed timetables for each subject containing venue, etc., will be available from discipline offices. **They will not be available from the College Office.**

4. Examination Timetable – Semester I

The examination timetable will be posted on notice boards during the semester.

5. Honours and Pass Level

All subjects are lectured on and examined at honours level with the exception of Mathematics and Mathematical Physics where there are separate pass and honours courses. Applied Mathematical Science is available at pass level only.

6. Subject and Course Changes

Changes after submission of your subject selection form (30th April 2010) will only be permitted by the College of Science Office if there are places available in

the discipline in question after registration. However, such requests must be submitted on or before Wednesday, 15th September 2010.

7. **Examination Entry**

Subject registration also includes Examination Entry. You will not be required to complete another form. The importance of correct registration and course selection is therefore emphasised.

8. **Examinations**

8.1 **Date**

Examinations are held at the end of Semester I (December) and Semester II (May/June). However, examinations in some modules/subjects are held only at the end of Semester II (Summer).

8.2 **Autumn Examinations**

There are Autumn (repeat) examinations in Second Science usually held in August.

8.3 **Time-limit**

Students must complete the Second Science Examination within two academic years of having passed the First Science Examination.

8.4 **Deferral**

The College of Science considers applications for the deferral of examinations, where grounds of ill health, bereavement or other circumstances can be established to the satisfaction of the College. If in doubt, please consult with a member of the College of Science Office. Application can be made by contacting the College of Science Office to arrange an appointment with the Dean/College Office Staff initially and completing a Deferral Form, which is available from the College Office. Deferred examinations are held in the Autumn examination session (August) only.

9. **Calculation of Second Science Results**

The results of the Semester I examinations will be combined with Semester II results to give an overall result.

- (a) Students who **pass a 20 ECTS Credit subject on the average** between Semester I and Semester II whilst failing a 10 ECTS Credit component will not be required to repeat the failed component.
- (b) Students who **fail a 20 ECTS Credit subject on the average** between Semester I and Semester II will be permitted to retain grades of the component passed until the next sitting and will be required to repeat only the failed element. A repeat examination for courses failed in Semester I will be held in Autumn.

Results of Semester I examinations should be regarded as **Provisional** as no Examination Board meeting will be held following the Semester I examinations. Grades will be communicated verbally to students by 1st February 2011 at the latest, by the Course Director listed in the Calendar if possible. Alternatively, grades may be posted on appropriate notice boards, listing all students taking the module together with their ID numbers (**not** students' names). Please note that

these grades will **not** be issued to students by the Examinations Office or the College Office.

The Grades applicable will be as follows:

<u>Percentage Range</u>	<u>Grade</u>
70 -100%	A
60 - 69%	B
55 - 59%	C+
50 - 54%	C-
40 - 49%	D
35 - 39%	E+
30 – 34%	E-
0 – 29%	F

10. Information and Support Services

As a student of the College of Science, if you are confused by any aspect of your programme, by the registration requirements or if you are experiencing personal difficulties or any difficulties in your academic programme, you are strongly recommended to seek advice and support from the academic staff, the Dean, the University Offices and the Student Support Services of the University. Timely support may be the key to your success in the programme and to a level of achievement which does you justice.

College of Science Offices

Dean of Science	Professor Tom Sherry	Room 210 Concourse	Ext. 3615
Administrative Officer	Mr. Kilian Dooley	Room 208 Concourse	Ext. 4166
Executive Assistant	Ms. Claire Mitchell	Room 207 Concourse	Ext. 3700
Executive Assistant	Ms. Cora Costello	Room 209 Concourse	Ext. 3630
Clerical Assistant	Ms. Olive Mills	Room 211 Concourse	Ext. 2182

Code of Practice
for dealing with
Plagiarism

Code of Practice for dealing with Plagiarism

Introduction

1. Plagiarism is the act of copying, including or directly quoting from, the work of another without adequate acknowledgement. The submission of plagiarised materials for assessment purposes, plagiarism in publication or in public presentation is fraudulent and all suspected cases will be investigated and dealt with appropriately by the University following the procedures outlined here and with reference to the Disciplinary Code.
2. All work submitted by students for assessment purposes, for publication or in public presentation, is accepted on the understanding that it is their own work and written in their own words except where explicitly referenced using the accepted norms and formats of the appropriate academic discipline.
3. Whilst some cases of plagiarism can arise through poor academic practice with no deliberate intent to cheat, this still constitutes a breach of acceptable practice and requires to be appropriately investigated and acted upon.
4. Regulations, guidelines and procedures regarding plagiarism should be made widely available and a statement included in course handbooks, websites, departmental noticeboards or appropriate handouts to students. Plagiarism can arise through ignorance and therefore it is important to ensure that students understand what is meant by the term and the seriousness of the offence.
5. Schools are recommended to consider requiring students to sign a short declaration that work submitted by them for assessment purposes, for publication or in public presentation, is their own and that such a statement may be attached to a submitted piece of coursework, essay or dissertation (or signed at the start of each course/ academic year, acknowledging that the student has read and understood the plagiarism regulations). The purpose of this statement is to reinforce the principle of statement (2) above and to remind students of the requirements for the submission of a formally marked assessment.
6. Cases in which students knowingly permit others to copy their work shall also be subject to the procedures outlined here and considered an offence.

Procedures

7. A small number of staff should be identified in each College who would have responsibility for dealing with suspected and reported cases of plagiarism¹. These staff are Designated Authorities, as described in the NUI Galway Student Code of Conduct.

¹ This is in keeping with best practice recommendations from the UK's JISC Plagiarism Advisory Service and also reflects practice in a number of institutions. Whilst it may seem like an additional burden in terms of administration, it offers a number of advantages of either leaving the responsibility to the lecturer involved or indeed, the Head of Department. In some universities each department identifies one such staff member, in others, a single staff member may span a number of subjects within a broad "cognate area." Further, having a small number of such staff clearly identified, across the university, who can readily be trained in such issues, ensures consistency of practice. It also enables "fast-tracking" of "minor" or admitted offences and responds to the outcome of *Flanagan vs University College Dublin* (1988, <http://www.ucc.ie/law/irlii/cases/159jr-88.htm>), as do the remainder of these guidelines.

8. These staff should be trained on the basic issues, be made aware of current best practice guidelines; techniques for minimising, detecting and responding to plagiarism; and current national and international developments across the HE sector.
9. A member of teaching staff who suspects that a submitted piece of student work may be plagiarised should notify the appropriate plagiarism advisor in their College/cognate area. A short report including a copy of the suspected example and any evidence for plagiarism should be forwarded to the advisor.
10. The plagiarism advisor shall conduct an investigation of the alleged plagiarism, firstly determining whether it represents a “minor” or “major” offence.
11. Minor cases are those in which the suspected plagiarism is a first offence and represents poor academic practice. Such cases include:
 - apparently innocent misuse of materials;
 - inadequate citation such as poor referencing, inappropriate paraphrasing;
 - over-reliance on sources without sufficient of the candidate’s own work;
 - those in which the suspected plagiarism represents only a small proportion of the work and/or an element in a piece of work which makes a small contribution to the mark for the module
12. The advisor will, in such cases, normally interview the candidate to discuss the suspected plagiarism.
13. If the advisor is satisfied that there is sufficient evidence of such an offence, the student will be given a written warning and provided with advice on avoiding plagiarism and the necessity of properly acknowledging and referencing sources.
14. Major cases are those which may include, for example:
 - copying multiple paragraphs in full without acknowledgement of the source;
 - taking essays from the Internet without revealing the source;
 - copying all or much of the work of a fellow student with, or without, his/her knowledge or consent;
 - submitting the same piece of work for assessment under multiple modules;
 - those involving a final year undergraduate or postgraduate student (taught or research);
 - a second offence where the student has been in receipt of an earlier written warning.
15. In consideration of possible major cases, the student will be notified, in writing, of the suspected offence, provided with a copy of the marked-up piece of work and invited to attend an interview with the plagiarism advisor and an additional member of staff².

² For example, the Head of Department, a senior staff member in the department, or another plagiarism advisor.

16. The student will have the right to be accompanied and assisted, at the interview, by a “friend.”³
17. At the interview, the student will be given a clear explanation of what has been alleged, shown a copy of his/her work, given the opportunity to justify the work and be invited to admit or deny responsibility.
18. In such major cases, where the advisor is satisfied that an offence has occurred, the advisor is required to determine between three possible courses of action, depending on the apparent severity of the offence:
 - (a) an opportunity to repeat and resubmit the work, but where the maximum mark that can be awarded is the pass mark appropriate to the module;
 - (b) the immediate imposition of an academic penalty, which would normally be the award of zero marks to the plagiarised work, with no option to resubmit the work;
 - (c) the submission of the case for consideration by the university’s Discipline Committee.
19. In all cases, the student will be notified in writing of the decision of the advisor and any penalty imposed.
20. In keeping with the University’s Code, the student shall be entitled to appeal a decision to the Appeals Board.
21. An appropriate record should be kept⁴ in respect of any upheld allegation, which can be consulted by the plagiarism advisor to determine whether a new case is potentially a second, or subsequent, offence.
22. Basic statistical information covering the number of cases referred to advisors, the number of written warnings and other penalties applied and their distribution across Departments and Faculties, should be collated by the University to inform subsequent modifications to these regulations and ascertain the requirement for wider training and information dissemination on this topic.

³ As used in the University’s Code. This may, for example, be a parent or guardian; a fellow student or other friend; a representative from the Students’ Union; or a legal representative, if so desired.

⁴ By the appropriate University office.

Subject Codes

and

List of Course
Subjects

Subject Codes for 1st Year Science

BO101:	Biology
CH101:	Chemistry
CH107:	Cemic
CS102:	Computer Science
PH101:	Physics
PH110:	Fisic
EOS104:	Introduction to Earth & Ocean Sciences
MA100:	Mathematics
MA180:	Mathematics (Honours)
MA102:	Anailís & Algéabar (Onoracha)
MP103:	Introduction to Mathematical Physics

Denominated
Degree Programme
in
Biomedical Science

Denominated Degree Programme in Biomedical Science

Instructions for completing Subject Selection Form.

All students are automatically registered for BM201: Biomedical Science. This subject is worth 10 ECTS Credits. Therefore, students do not have to list this subject on their Subject Selection Form.

Students are required to select options to a value of 50 ECTS Credits. This must be done by selecting **two (2)** 20 ECTS subjects from the list of available subjects and **one (1)** 10 ECTS module from the list of available modules.

- Students are required to select **two** of the following 20 ECTS subjects:
AN202: Anatomy (comprises AN220.I and AN220.II)
BI201: Biochemistry (comprises BI204 and BI205)
PM202: Pharmacology (comprises PM203 and PM204)
SI201: Physiology (comprises SI216 and SI218)
- Students are also required to select **one** of the following 10 ECTS modules (ensuring that this module is not already part of the 20 ECTS subject which was selected from the above list):
AN220.I: Human Anatomy I
BI204: Biomolecules in the Cell
PM203: Fundamentals of Pharmacology I
SI216: Physiology I

Denominated Degree in Biomedical Science (2BO1)

Key:

AN: Anatomy BM: Biomedical Science
 BI: Biochemistry CT: Information Technology
 SI: Physiology

List of Second Year Subjects

<i>Level 1</i>	<i>Level 2</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught Sem I or Sem II</i>	<i>Exam Sem I or Sem II</i>	<i>Exam Duration</i>	<i>No. of Exam Papers</i>	<i>Course Director</i>
BM201	BM204	Community Knowledge Initiative Programme	4	I	I	C/A		
	BM202	Biomedical Science Seminars	6	II	II	C/A		Dr. Creighton
Please select two (2) subjects below to a value of 40 ECTS Credits								
AN202	AN220.I	Human Anatomy I	10	I	I	2 hours	1	Dr. Garcia
	AN220.II	Human Anatomy II	10	II	II	2 hours	1	Dr. Garcia
BI201	BI204	Biomolecules in the Cell	10	I	I	3 hours	1	Dr. Byrnes
	BI205	The Cell Factory	10	II	II	3 hours	1	Dr. Byrnes
PM202	PM203	Fundamentals of Pharmacology I	10	I	I	2 hours	1	Dr. Welsby
	PM204	Fundamentals of Pharmacology II	10	II	II	2 hours	1	Dr. Welsby
SI201	SI216	Physiology I	10	I	I	2 hours	1	
	SI218	Physiology II	10	II	II	2 hours	1	
Please select one (1) module below to a value of 10 ECTS Credits								
AN220.I	AN220.I	Human Anatomy I	10	I	I	2 hours	1	Dr. Garcia
BI204	BI204	Biomolecules in the Cell	10	I	I	3 hours	1	Dr. Byrnes
PM203	PM203	Fundamentals of Pharmacology I	10	I	I	2 hours	1	Dr. Welsby
SI216	SI216	Physiology I	10	I	I	2 hours	1	

Denominated Degree Programme in

Physics with Astrophysics

Denominated Degree Programme in Physics with Astrophysics

Instructions for completing Registration Form.

All students are automatically registered for PH200: Astronomy and PH201: Physics. These subjects are worth 40 ECTS Credits in total. Therefore, students do not have to list these subjects on their Registration Form.

Students are required to select **one option** from
(a) MP200: Mathematical Physics (Pass Level) or
(b) MP280: Mathematical Physics (Honours Level)
to a value of 20 ECTS Credits.

There is also a Prerequisite listing for the options. In order to register for a subject, the student must have taken the required prerequisite(s) in the previous year. In this case, the prerequisite for MP200 is MP103: Introduction to Mathematical Physics.

Denominated Degree in Physics with Astrophysics (2BPA1)

Key:

MP: Mathematical Physics

PH: Physics

List of Second Year Courses

<i>Level 1</i>	<i>Level 2</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught Sem I or Sem II</i>	<i>Exam Sem I or Sem II</i>	<i>Exam Duration</i>	<i>No. of Exam Papers</i>	<i>Course Director</i>
PH200	PH222	Astrophysical Concepts	5	I	I	2 hours	1	Head of School of Physics
	PH223	Observational Astronomy	5	II	II	2 hours	1	Head of School of Physics
	CS211	Programming & Operating Systems	5	I	I	2 hours	1	Head of School of Maths
	CS209	Algorithms & Scientific Computing	5	II	II	2 hours	1	Head of School of Maths
PH201	PH211	Electricity Magnetism & Electrical Circuits	5	I	I	2 hours	1	Head of School of Physics
	PH212	Mechanics, Oscillations and Waves	5	I	I	2 hours	1	Head of School of Physics
	PH213	Modern Physics	5	II	II	2 hours	1	Head of School of Physics
	PH214	Thermodynamics	5	II	II	2 hours	1	Head of School of Physics
Options	Select <u>one</u> option to a total of 20 ECTS Credits							
MP200	MP205	Methods of Mathematical Physics I	5	I	I	2 hours	1	Head of School of Maths
	MP206	Methods of Mathematical Physics II	5	II	II	2 hours	1	Head of School of Maths
	MP212	Mechanics I (Pass)	5	I	I	2 hours	1	Head of School of Maths
	MP213	Mechanics II (Pass)	5	II	II	2 hours	1	Head of School of Maths
MP280	MP207	Methods of Mathematical Physics I (Hons)	5	I	I	2 hours	1	Head of School of Maths
	MP208	Methods of Mathematical Physics II (Hons)	5	II	II	2 hours	1	Head of School of Maths
	MP204	Mechanics (Hons)	10	I & II	II	3 hours	1	Head of School of Maths

Denominated Degree
Programme in

Biopharmaceutical
Chemistry

Denominated Degree in Biopharmaceutical Chemistry (2BPC1)

Key:

BI: Biochemistry
 CH: Chemistry
 PM: Pharmacology

List of Second Year Courses

<i>Level 1</i>	<i>Level 2</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught Sem I or Sem II</i>	<i>Exam Sem I or Sem II</i>	<i>Exam Duration</i>	<i>No. of Exam Papers</i>	<i>Course Director</i>
BI201	BI204	Biomolecules in the Cell	10	I	I	3 hours	1	Dr. Byrnes
	BI205	The Cell Factory	10	II	II	3 hours	1	Dr. Byrnes
CH201	CH203	Physical Chemistry 2	5	I	I	2 hours	1	Dr. Leech
	CH204	Inorganic Chemistry 2	5	I	I	2 hours	1	Prof. Mc Ardle
	CH202	Organic Chemistry 2	5	II	II	2 hours	1	Dr. O'Leary
	CH205	Analytical & Environmental Chemistry	5	II	II	2 hours	1	Dr. Ryder
PM203	PM203	Fundamentals of Pharmacology I	10	I	I	2 hours	1	Dr. Welsby
CH207	CH207	Computers in Chemistry	10	I	Con. Ass			Dr. Geraghty

Instructions for Registration:

All subjects are obligatory and students are automatically registered for them. However, students must still present for registration (self-service registration during week beginning 6th September 2010) in order to confirm return to University and to obtain a current student identification card.

Denominated Degree

in

Physics with

Medical Physics

Denominated Degree in Physics with Medical Physics (2BPM1)

Key:

AN: Anatomy

MA: Mathematics

MM: Mathematics/Mathematical Physics

EP: Physics

MP: Mathematical Physics

List of Second Year Subjects

<i>Level 1</i>	<i>Level 2</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught Sem I or Sem II</i>	<i>Exam Sem I or Sem II</i>	<i>Exam Duration</i>	<i>No. of Exam Papers</i>	<i>Course Director</i>
AN202	AN220.I	Human Anatomy I	10	I	I	2 hours	1	Dr. Garcia
	AN220.II	Human Anatomy II	10	II	II	2 hours	1	Dr. Garcia
PH201	PH211	Electricity Magnetism & Electrical Circuits	5	I	I	2 hours	1	Head of School of Physics
	PH212	Mechanics, Oscillations and Waves	5	I	I	2 hours	1	Head of School of Physics
	PH213	Modern Physics	5	II	II	2 hours	1	Head of School of Physics
	PH214	Thermodynamics	5	II	II	2 hours	1	Head of School of Physics
MM230	MA237	Statistics I	5	I	I	2 hours	1	Head of School of MSAM
	MA238	Statistics II	5	II	II	2 hours	1	Head of School of MSAM
	MP205	Methods of Mathematical Physics I	5	I	I	2 hours	1	Head of School of MSAM
	MP206	Methods of Mathematical Physics II	5	II	II	2 hours	1	Head of School of MSAM

Instructions for Registration:

All subjects are obligatory and students are automatically registered for them. However, students must still present for registration (self-service registration during week beginning 6th September 2010) in order to confirm return to University and to obtain a current student identification card.

Denominated Degree
Programme in

Physics and
Applied Physics

Denominated Degree Programme in Physics and Applied Physics

Instructions for completing Subject Selection Form.

All students are automatically registered for PH201: Physics. This subject is worth 20 ECTS Credits. Therefore, students do not have to list this subject on their Subject Selection Form.

Students are required to select options to a value of 40 ECTS Credits. This may be done by selecting **two (2)** 20 ECTS subjects from the list of available subjects:

MP200: Mathematical Physics (Pass) **or**
MP280: Mathematical Physics (Honours)

MA200: Mathematics (Pass) **or**
MA280: Mathematics (Honours)

AS200: Applied Mathematical Science **or**
CH201: Chemistry **or**
CS201: Computer Science **or**

When completing the Subject Selection Form, students are reminded to check their subject choices against the Incompatible Subject listings for this programme to ensure that all their choices are compatible with one another. The Student Record System will prevent students registering for incompatible subjects at registration. Therefore, when selecting subjects, this list of Incompatible Subject Combinations must be referred to carefully. Please note, all options are compatible with PH201: Physics.

There is also a Prerequisite listing for each subject. In order to register for a subject, the student must have taken the required prerequisite(s) in the previous year, e.g., CH201: Chemistry - the prerequisites are CH101: 1st Year Chemistry or CH107: 1st year Cemic (Chemistry through Irish). If a student does not meet the prerequisite(s), he/she cannot register for the subject.

Denominated Degree Programme in Physics and Applied Physics (2BPP1)

Key:
 AS: Applied Mathematical Science CS: Computing Studies MP: Mathematical Physics
 CH: Chemistry PH: Physics MA: Mathematics

List of Second Year Subjects

Level 1	Level 2	Module Name	ECTS Credits	Taught Sem I or Sem II	Exam Sem I or Sem II	Exam Duration	No. of Exam Papers	Course Director
PH201	PH211	Electricity Magnetism & Electrical Circuits	5	I	I	2 hours	1	Head of School of Physics
	PH212	Mechanics, Oscillations and Waves	5	I	I	2 hours	1	Head of School of Physics
	PH213	Modern Physics	5	II	II	2 hours	1	Head of School of Physics
	PH214	Thermodynamics	5	II	II	2 hours	1	Head of School of Physics
Options - 20 ECTS Credit Subjects								
AS200	Please select any four modules from the options available within AS200 to a total of 20 ECTS Credits							
	MA211	Calculus I	5	I	I	2 hours	1	Head of School of Maths
	MA212	Calculus II	5	II	II	2 hours	1	Head of School of Maths
	MA203	Algebra	5	II	II	2 hours	1	Head of School of Maths
	MA204	Discrete Mathematics	5	I	I	2 hours	1	Head of School of Maths
	MA215	Mathematical Molecular Biology I	5	I	I	2 hours	1	Head of School of Maths
	MA216	Mathematical Molecular Biology II	5	II	II	2 hours	1	Head of School of Maths
	MA237	Statistics I	5	I	I	2 hours	1	Head of School of Maths
	MA238	Statistics II	5	II	II	2 hours	1	Head of School of Maths
	MM245	Numerical Analysis I	5	I	I	2 hours	1	Head of School of Maths
	MM246	Numerical Analysis II	5	II	II	2 hours	1	Head of School of Maths
	MP205	Methods of Mathematical Physics I	5	I	I	2 hours	1	Head of School of Maths
	MP206	Methods of Mathematical Physics II	5	II	II	2 hours	1	Head of School of Maths
	MP212	Mechanics I	5	I	I	2 hours	1	Head of School of Maths
	MP213	Mechanics II	5	II	II	2 hours	1	Head of School of Maths
CH201	CH203	Physical Chemistry 2	5	I	I	2 hours	1	Dr. D. Leech
	CH204	Inorganic Chemistry 2	5	I	I	2 hours	1	Prof. Mc Ardle
	CH202	Organic Chemistry 2	5	II	II	2 hours	1	Dr. O'Leary
	CH205	Analytical & Environmental Chemistry	5	II	II	2 hours	1	Dr. Ryder
CS201	CS211	Programming and Operating Systems	5	I	I	2 hours	1	Head of School of Maths
	CS209	Algorithms and Scientific Computing	5	I & II	II	3 hours	1	Head of School of Maths
	CT232	Methodology	5	I	I	2 hours	1	Ms. Griffith
	CT233	Information Systems	5	II	II	2 hours	1	Ms. Griffith

<i>Level 1</i>	<i>Level 2</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught Sem I or Sem II</i>	<i>Exam Sem I or Sem II</i>	<i>Exam Duration</i>	<i>No. of Exam Papers</i>	<i>Course Director</i>
MA200	MA203	Linear Algebra	5	II	II	2 hours	1	Head of School of Maths
	MA204	Discrete Maths	5	I	I	2 hours	1	Head of School of Maths
	MA211	Calculus I	5	I	I	2 hours	1	Head of School of Maths
	MA212	Calculus II	5	II	II	2 hours	1	Head of School of Maths
MA280	MA283	Algebra Mathematics	5	II	II	2 hours	1	Head of School of Maths
	MA284	Discrete Maths	5	I	I	2 hours	1	Head of School of Maths
	MA286	Analysis I	5	I	I	2 hours	1	Head of School of Maths
	MA287	Analysis II	5	II	II	2 hours	1	Head of School of Maths
MP200	MP205	Methods of Mathematical Physics I	5	I	I	2 hours	1	Head of School of Maths
	MP206	Methods of Mathematical Physics II	5	II	II	2 hours	1	Head of School of Maths
	MP212	Mechanics I (Pass)	5	I	I	2 hours	1	Head of School of Maths
	MP213	Mechanics II (Pass)	5	II	II	2 hours	1	Head of School of Maths
MP280	MP207	Methods of Mathematical Physics I (Hons)	5	I	I	2 hours	1	Head of School of Maths
	MP208	Methods of Mathematical Physics II (Hons)	5	II	II	2 hours	1	Head of School of Maths
	MP204	Mechanics (Hons)	10	I & II	II	3 hours	1	Head of School of Maths

Please note: Under AS200: students must take the following module combinations:

MA211 + MA212 MM245 + MM246 MA215 + MA216
MA203 + MA204 MP212 + MP213
MA237 + MA238 MP205 + MP206

Under AS200: students cannot take the following combinations:

MA211 + MA212 cannot be taken with MA203 + MA204
MP205 + MP206 cannot be taken with MP212 + MP213

Incompatible Subject Combinations for 2nd Year
Physics and Applied Physics
2010/11

Key:

AS: Applied Mathematical Science MA: Mathematics
 CH: Chemistry MM: Mathematics/Mathematical Physics
 CS: Computing Studies MP: Mathematical Physics

Subject Choice	AS200	CH201	CS201	MA200	MA280	MP200	MP280
Incompatible options	CH201	AS200	AS200	MA203	MA200	MP205	MP200
	CS201	CS201	CH201	MA204	MA203	MP206	MP205
				MA211	MA204	MP212	MP206
				MA212	MA211	MP213	MP212
				MA280	MA212	MP280	MP213
					MA237		
					MA238		
Prerequisites		CH101 or CH107	CS102	MA100 or MA180 or MA102	MA180 or MA102 (result = 50% +)	MP103	MP103 (result = 50% +)

Subject Choice	MA211 & MA212	MA203 & MA204	MA215 & MA216	MA237 & MA238	MM245 & MA246	MP205 & MP206	MP212 & MP213
Incompatible options	MA200	MA200	CS201	MA280	CH201	MP200	MP200
	MA280	MA211				MP280	MP280
	MA203	MA212					
	MA204	MA280					
Prerequisites	MA100 or MA180 or MA102	MA100 or MA180 or MA102	MA100 or MA180 or MA102	MA100 or MA180 or MA102	MA100 or MA180 or MA102 or	MP103 or MA100 or MA180 or MA102	MP103

Denominated Degree Programme in Biotechnology

Denominated Degree in Biotechnology (2BY1)

Key:

BI: Biochemistry MI: Microbiology

BG: Biotechnology

CH: Chemistry

List of Second Year Courses

<i>Level 1</i>	<i>Level 2</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught Sem I or Sem II</i>	<i>Exam Sem I or Sem II</i>	<i>Exam Duration</i>	<i>No. of Exam Papers</i>	<i>Course Director</i>
BI201	BI204	Biomolecules in the Cell	7.5	I	I	3 hours	1	Dr. Byrnes
	BI205	The Cell Factory	7.5	II	II	3 hours	1	Dr. Byrnes
CH201	CH203	Physical Chemistry 2	3.75	I	I	2 hours	1	Dr. Leech
	CH204	Inorganic Chemistry 2	3.75	I	I	2 hours	1	Prof. Mc Ardle
	CH202	Organic Chemistry 2	3.75	II	II	2 hours	1	Dr. O'Leary
	CH205	Analytical & Environmental Chemistry	3.75	II	II	2 hours	1	Dr. Ryder
MI201	MI211	The Microbial Cell	7.5	I	I	3 hours	1	Dr. O'Byrne
	MI212	Microbes and the Environment	7.5	II	II	3 hours	1	Dr. O'Byrne
BG201	BG202	Biotechnology 2	7.5	I & II	II	2 hours	1	Dr. Gorman
	FR259	French	7.5	I & II	II	3 hours	1	Dr. Rodgers
	GR253	German	7.5	I & II	II	2 hours	1	Dr. Brennan-Loffler

Instructions for Registration:

All subjects are obligatory and students are automatically registered for them. However, students must still present for registration (self-service registration during week beginning 6th September 2010) in order to confirm return to University and to obtain a current student identification card.

Denominated Degree
Programme in

Computing
Studies/Mathematical
Science

Denominated Degree Programme in Computing Studies/Mathematical Science

Instructions for completing Subject Selection Form.

All students are automatically registered for CS201: Computing Studies and MM291: Mathematical Science. These subjects are worth 20 ECTS Credits each. Therefore, students do not have to list these subjects on their Subject Selection Form.

Students are required to select options to a value of 20 ECTS Credits. This must be done by selecting **two (2)** modules from MM292: Mathematical Science (options) worth 10 ECTS Credits each.

Denominated Degree in Computing Studies/Mathematical Science (2CS1)

Key:

CS: Computing Studies
 MP: Mathematical Physics
 MA: Mathematics
 MM: Mathematics/Mathematical Physics

Please note: Under MM292: students must take the following module combinations:

MA211 + MA212 MM245 + MM246 MA215 + MA216
 MA286 + MA287 MP212 + MP213
 MA237 + MA238 MP214 + MP215

List of Second Year Courses

<i>Level 1</i>	<i>Level 2</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught Sem I or Sem II</i>	<i>Exam Sem I or Sem II</i>	<i>Exam Duration</i>	<i>No. of Exam Papers</i>	<i>Course Director</i>
CS201	CS211	Programming and Operating Systems	5	I	I	2 hours	1	Head of School of MSAM
	CS209	Algorithms and Scientific Computing	5	I & II	II	2 hours	1	Head of School of MSAM
	CT232	Methodology	5	I	I	2 hours	1	Ms. Griffith
	CT233	Information Systems	5	II	II	2 hours	1	Ms. Griffith
MM291	MA283	Algebra Mathematics	5	II	II	2 hours	1	Head of School of MSAM
	MA284	Discrete Mathematics	5	I	I	2 hours	1	Head of School of MSAM
	MP207	Methods of Mathematical Physics I	5	I	I	2 hours	1	Head of School of MSAM
	MP208	Methods of Mathematical Physics II	5	II	II	2 hours	1	Head of School of MSAM
Options	Select <u>four</u> modules to a value of 20 ECTS Credits							
MM292	MA211	Calculus I	5	I	I	2 hours	1	Head of School of MSAM
	MA212	Calculus II	5	II	II	2 hours	1	Head of School of MSAM
	MA286	Analysis I (Hons)	5	I	II	2 hours	1	Head of School of MSAM
	MA287	Analysis II (Hons)	5	II	II	2 hours	1	Head of School of MSAM
	MA237	Statistics I	5	I	I	2 hours	1	Head of School of MSAM
	MA238	Statistics II	5	II	II	2 hours	1	Head of School of MSAM
	MM245	Numerical Analysis I	5	I	I	2 hours	1	Head of School of MSAM
	MM246	Numerical Analysis II	5	II	II	2 hours	1	Head of School of MSAM
	MP212	Mechanics I	5	I	I	2 hours	1	Head of School of MSAM
	MP213	Mechanics II	5	II	II	2 hours	1	Head of School of MSAM
	MP214	Mechanics I (Hons)	5	I	II	3 hours	1	Head of School of MSAM
	MP215	Mechanics II (Hons)	5	II	II	3 hours	1	Head of School of MSAM
	MA215	Mathematical Molecular Biology I	5	I	I	2 hours	1	Head of School of MSAM
	MA216	Mathematical Molecular Biology II	5	II	II	2 hours	1	Head of School of MSAM

Denominated Degree
Programme in

Earth and Ocean
Sciences

Denominated Degree Programme in Earth and Ocean Sciences

Instructions for completing Subject Selection Form.

- All students are automatically registered for EOS218: Fundamental Skills in EOS (20 ECTS Credits).
- Students are required to select at least **one** of the following 10 ECTS modules:
EOS212: Sediments and the Biosphere I
EOS213: Introduction to Ocean Sciences
- Students are required to select options to a value of 20 or 30 ECTS Credits. This must be done by selecting
 - (a) **one** or **two** 10 ECTS Credit Subject, *or*
 - (b) **one** 20 ECTS Credit Subject

i.e. 10 + 20 **or** 10 + 10 **or** 20.

When completing the Subject Selection Form, students are reminded to check their subject choices against the Incompatible Subject listings for this programme to ensure that all their choices are compatible with one another. The Student Record System will prevent students registering for incompatible subjects at registration. Therefore, when selecting subjects, this list of Incompatible Subject Combinations must be referred to carefully. Please note, all options are compatible with EOS2nn: Fundamental Skills in EOS.

There is also a Prerequisite listing for each subject. In order to register for a subject, the student must have taken the required prerequisite(s) in the previous year, e.g., CH201: Chemistry - the prerequisites are CH101: 1st Year Chemistry or CH107: 1st year Cemic (Chemistry through Irish). If a student does not meet the prerequisite(s), he/she cannot register for the subject.

Denominated Degree in Earth and Ocean Sciences (2EH1)

Key:

AS: Mathematics EOS: Earth & Ocean Sciences MA: Mathematics ST: Statistics
 BT: Botany EP: Exp. Physics MM: Maths/Maths Physics
 CH: Chemistry FR: French MP: Mathematical Physics
 CS: Computing GE: German MT: Meteorology

List of Second Year Courses

Level 1	Level 2	Module Name	ECTS Credits	Taught Sem I or Sem II	Exam Sem I or Sem II	Exam Duration	No. of Exam Papers	Course Director
Core Subjects								
EOS218	EOS221	Fundamentals Skills in EOS I	10	I	I	Con. Ass.		Dr. Henry
	EOS220	Fundamentals Skills in EOS I	10	II	II	Con. Ass.		Dr. Feely
Please select at least <u>one</u> of the following EOS modules (to a value of 10 or 20 ECTS Credits)								
EOS212	EOS212	Sediments and the Biosphere I	10	II	II	2 hours	1	Dr. Murray
EOS213	EOS213	Introduction to Ocean Sciences	10	I	I	2 hours	1	Dr. Cave
Options – select options to a value of 20 or 30 ECTS Credits								
20 ECTS Credit Subjects								
AS200	Please select any four modules from the options available within AS200 to a total of 20 ECTS Credits							
	MA211	Calculus I	5	I	I	2 hours	1	Head of School of MSAM
	MA212	Calculus II	5	II	II	2 hours	1	Head of School of MSAM
	MA203	Algebra	5	II	II	2 hours	1	Head of School of MSAM
	MA204	Discrete Mathematics	5	I	I	2 hours	1	Head of School of MSAM
	MA215	Molecular Mathematical Biology I	5	I	I	2 hours	1	Head of School of MSAM
	MA216	Molecular Mathematical Biology II	5	II	II	2 hours	1	Head of School of MSAM
	MA237	Statistics I	5	I	I	2 hours	1	Head of School of MSAM
	MA238	Statistics II	5	II	II	2 hours	1	Head of School of MSAM
	MM245	Numerical Analysis I	5	I	I	2 hours	1	Head of School of MSAM
	MM246	Numerical Analysis II	5	II	II	2 hours	1	Head of School of MSAM
	MP205	Methods of Mathematical Physics I	5	I	I	2 hours	1	Head of School of MSAM
	MP206	Methods of Mathematical Physics II	5	II	II	2 hours	1	Head of School of MSAM
	MP212	Mechanics I	5	I	I	2 hours	1	Head of School of MSAM
	MP213	Mechanics II	5	II	II	2 hours	1	Head of School of MSAM
BT201	BT216	Aquatic Plant Science I: an introduction to the biology, ecology and physiology of aquatic plants	10	I	I	3 hours	1	Dr. Stengel

<i>Level 1</i>	<i>Level 2</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught Sem I or Sem II</i>	<i>Exam Sem I or Sem II</i>	<i>Exam Duration</i>	<i>No. of Exam Papers</i>	<i>Course Director</i>
BT201	BT217	Plants and the Environment: an introduction to terrestrial plant ecology	10	II	II	3 hours	1	Dr. Sheehy Skeffington
CH201	CH203	Physical Chemistry 2	5	I	I	2 hours	1	Dr. Leech
	CH204	Inorganic Chemistry 2	5	I	I	2 hours	1	Prof. Mc Ardle
	CH202	Organic Chemistry 2	5	II	II	2 hours	1	Dr. O'Leary
	CH205	Analytical & Environmental Chemistry	5	II	II	2 hours	1	Dr. Ryder
PH201	PH211	Electricity Magnetism & Electrical Circuits	5	I	I	2 hours	1	Head of School of Physics
	PH212	Mechanics, Oscillations and Waves	5	I	I	2 hours	1	Head of School of Physics
	PH213	Modern Physics	5	II	II	2 hours	1	Head of School of Physics
	PH214	Thermodynamics	5	II	II	2 hours	1	Head of School of Physics
MA200	MA203	Linear Algebra	5	II	II	2 hours	1	Head of School of Maths
	MA204	Discrete Maths	5	I	I	2 hours	1	Head of School of Maths
	MA211	Calculus I	5	I	I	2 hours	1	Head of School of Maths
	MA212	Calculus II	5	II	II	2 hours	1	Head of School of Maths
MA280	MA283	Algebra Mathematics	5	II	II	2 hours	1	Head of School of Maths
	MA284	Discrete Maths	5	I	I	2 hours	1	Head of School of Maths
	MA286	Analysis I	5	I	I	2 hours	1	Head of School of Maths
	MA287	Analysis II	5	II	II	2 hours	1	Head of School of Maths
MP200	MP205	Methods of Mathematical Physics I	5	I	I	2 hours	1	Head of School of Maths
	MP206	Methods of Mathematical Physics II	5	II	II	2 hours	1	Head of School of Maths
	MP212	Mechanics I (Pass)	5	I	I	2 hours	1	Head of School of Maths
	MP213	Mechanics II (Pass)	5	II	II	2 hours	1	Head of School of Maths
MP280	MP207	Methods of Mathematical Physics I (Hons)	5	I	I	2 hours	1	Head of School of Maths
	MP208	Methods of Mathematical Physics II (Hons)	5	II	II	2 hours	1	Head of School of Maths
	MP204	Mechanics (Hons)	10	I & II	II	3 hours	1	Head of School of Maths
ZO201	ZO205	Invertebrate Zoology	10	I	I	3 hours	1	Dr. Schlosser
	ZO206	Vertebrate Zoology	10	II	II	3 hours	1	Dr. Schlosser
10 ECTS Credit Subjects								
BT216	BT216	Aquatic Plant Science I: an introduction to the biology, ecology and physiology of aquatic plants	10	I	I	3 hours	1	Dr. Stengel
BT217	BT217	Plants and the Environment: an introduction to terrestrial plant ecology	10	II	II	3 hours	1	Dr. Sheehy Skeffington
CH207	CH207	Computers in Chemistry	10	I	Con. Ass			Dr. Geraghty
FR252	FR252	French	10	I & II	II	3 hours	1	Prof. Ó Gormaile
GR224	GR224	Beginner's German for Science	10	I & II	II	3 hours	1	Dr. Ryan

<i>Level 1</i>	<i>Level 2</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught Sem I or Sem II</i>	<i>Exam Sem I or Sem II</i>	<i>Exam Duration</i>	<i>No. of Exam Papers</i>	<i>Course Director</i>
GR252	GR252	Improvers I Science - German	10	I & II	II	3 hours	1	Prof Bourke
MA201	MA211	Calculus I	5	I	I	2 hours	1	Head of School of Maths
	MA212	Calculus II	5	II	II	2 hours	1	Head of School of Maths
MA293	MA203	Algebra	5	II	II	2 hours	1	Head of School of Maths
	MA204	Discrete Mathematics	5	I	I	2 hours	1	Head of School of Maths
MA209	MA215	Molecular Mathematical Biology I	5	I	I	2 hours	1	Head of School of Maths
	MA216	Molecular Mathematical Biology II	5	II	II	2 hours	1	Head of School of Maths
ST299	MA237	Statistics I	5	I	I	2 hours	1	Head of School of Maths
	MA238	Statistics II	5	II	II	2 hours	1	Head of School of Maths
MM255	MM245	Numerical Analysis I	5	I	I	2 hours	1	Head of School of Maths
	MM246	Numerical Analysis II	5	II	II	2 hours	1	Head of School of Maths
MP201	MP205	Methods of Mathematical Physics I	5	I	I	2 hours	1	Head of School of Maths
	MP206	Methods of Mathematical Physics II	5	II	II	2 hours	1	Head of School of Maths
MP202	MP212	Mechanics I	5	I	I	2 hours	1	Head of School of Maths
	MP213	Mechanics II	5	II	II	2 hours	1	Head of School of Maths

Please note: Under AS200: students must take the following module combinations:

MA211 + MA212 MM245 + MM246 MA215 + MA216

MA203 + MA204 MP212 + MP213

MA237 + MA238 MP205 + MP206

Under AS200: students cannot take the following combinations:

MA211 + MA212 cannot be taken with MA203 + MA204

MP205 + MP206 cannot be taken with MP212 + MP213

Incompatible Subject Combinations for 2nd Year Denominated Degree in Earth and Ocean Sciences
2010/2011 (10 ECTS Credit Subjects)

Subject Choice	BT216	BT217	CH207	EOS212	EOS213	FR252	GR224	GR252	MA201	MA293	MA209	ST299	MM255	MP201	MP202	
Incompatible options	BT201	BT201	MM255	PH201	MA209	GR252	GR252	FR252	MA200	MA200	EOS213	MA280	CH201	BT201	MP200	
	PH201	PH201	MM245		MA215	GR224	FR252	GR224	MA280	MA201	MA215	MA237	MM245	BT216	MP280	
	MP200	MP200	MM246		MA216				MA293	MA280	MA216	MA238	MM246	BT217	MP205	
	MP201	MP201							ZO201	MA211				MP200	MP206	
	MP280	MP280							MA211	MA212				MP280	MP201	
	MP205	MP205							MA212	MA203				ZO201	MP212	
	MP206	MP206							MA203	MA204				MP205	MP213	
									MA204						MP206	
															MP202	
															MP212	
														MP213		
Prerequisites	BO101	BO101	CH101 or CH107	None	None	None	None	None	MA100 or MA180 or MA102	MA100 or MA180 or MA102	MA100 or MA180 or MA102	MA100 or MA180 or MA102	MA100 or MA180 or MA102 or MP180	MP180 or MA100 or MA180 or MA102	MP180	

Incompatible Subject Combinations for 2nd Year Denominated Degree in Earth and Ocean Sciences
2010/2011 (10 ECTS Credit Subjects)

Under AS200: Applied Mathematical Science

Subject Choice	MA211 & MA212	MA203 & MA204	MA215 & MA216	MA237 & MA238	MM245 & MM246	MP205 & MP206	MP212 & MP213
Incompatible options	MA200	MA200	EOS213	MA280	CH201	BT201	MP200
	MA280	MA201	MA209	ST299	MM255	BT216	MP280
	MA293	MA280				BT217	MP205
	ZO201	MA211				MP200	MP206
	MA201	MA212				MP280	MP201
	MA203	MA293				ZO201	MP202
	MA204					MP201	
						MP202	
						MP212	
						MP213	
Prerequisites	MA100 or MA180 or MA102	MA100 or MA180 or MA102	MA100 or MA180 or MA102	MA100 or MA180 or MA102	MA100 or MA180 or MA102 or MP103	MP103 or MA100 or MA180 or MA102	MP103

Denominated Degree
Programme in
Environmental Science

Denominated Degree in Environmental Science (2EV1)

Key:

BT: Botany EV: Environmental Science
 CH: Chemistry LW: Law
 ZO: Zoology

List of Second Year Courses

<i>Level 1</i>	<i>Level 2</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught Sem I or Sem II</i>	<i>Exam Sem I or Sem II</i>	<i>Exam Duration</i>	<i>No. of Exam Papers</i>	<i>Course Director</i>
BT201	BT216	Aquatic Plant Science I	9	I	I	3 hours	1	Dr. Stengel
	BT217	Plants and the Environment	9	II	II	3 hours	1	Dr. Sheehy Skeffington
CH201	CH203	Physical Chemistry 2	4.5	I	I	2 hours	1	Dr. D. Leech
	CH204	Inorganic Chemistry 2	4.5	II	II	2 hours	1	Prof. Mc Ardle
	CH202	Organic Chemistry 2	4.5	I	I	2 hours	1	Dr. O'Leary
	CH205	Analytical & Environmental Chemistry	4.5	II	II	2 hours	1	Dr. Ryder
ZO201	ZO205	Invertebrate Zoology	9	I	I	3 hours	1	Dr. Schlosser
	ZO206	Vertebrate Zoology	9	II	II	3 hours	1	Dr. Schlosser
EV201	EV202	Environmental Management	4	I	I	2 hours	1	Dr. Gormally
	LW217	Environmental Legislation	2	I	I	2 hours	1	Dr. Long

Instructions for Registration:

All subjects are obligatory and students are automatically registered for them. However, students must still present for registration (self-service registration during week beginning 6th September 2010) in order to confirm return to University and to obtain a current student identification card.

Denominated Degree
Programme in

Financial
Mathematics and
Economics

Denominated Degree in Financial Mathematics and Economics (2FM1)

Key:

MA: Mathematics EC: Economics
 MP: Mathematical Physics CS: Computing Studies

List of Second Year Courses

<i>Level 1</i>	<i>Level 2</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught Sem I or Sem II</i>	<i>Exam Sem I or Sem II</i>	<i>Exam Duration</i>	<i>No. of Exam Papers</i>	<i>Course Director</i>
MA280	MA283	Algebra Mathematics	5	II	II	2 hours	1	Head of School of Maths
	MA284	Discrete Maths	5	I	I	2 hours	1	Head of School of Maths
	MA286	Analysis I	5	I	I	2 hours	1	Head of School of Maths
	MA287	Analysis II	5	II	II	2 hours	1	Head of School of Maths
MA240	MA235	Probability	5	I	I	2 hours	1	Head of School of Maths
	MA236	Statistical Inference	5	II	II	2 hours	1	Head of School of Maths
EC230	EC215	Microeconomics	5	I	I	2 hours	1	Dr. Twomey
	MP291	Mathematical Methods II	5	I	I	2 hours	1	Head of School of Maths
	EC217	Macroeconomics	5	II	II	2 hours	1	Dr. Twomey
	EC247	Introduction to Financial Economics	5	II	II	2 hours	1	Dr. Twomey
CS210	CS204	Algorithms	5	I	II	2 hours	1	Head of School of Maths
	CS212	Modelling, Analysis and Simulation	5	II	II	2 hours	1	Head of School of Maths

Instructions for Registration:

All subjects are obligatory and students are automatically registered for them. However, students must still present for registration (self-service registration during week beginning 6th September 2010) in order to confirm return to University and to obtain a current student identification card.

Denominated Degree
Programme in

Health & Safety
Systems

Denominated Degree in Health & Safety Systems (2HF1)

Key:

AN: Anatomy
CH: Chemistry
EP: Experimental Physics

HF: Health & Safety Systems
IE: Industrial Engineering
LW: Law

MA: Mathematics
MI: Microbiology
SI: Physiology

SP: Spring Examination

List of Second Year Courses

<i>Level 1</i>	<i>Level 2</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught Sem I or Sem II</i>	<i>Exam Sem I or Sem II</i>	<i>Exam Duration</i>	<i>No. of Exam Papers</i>	<i>Course Director</i>
BO200	AN230	Human Body Structure	5	I	I	2 hours	1	Dr. Garcia
	SI317	Human Body Function	5	I	I	3 hours	1	Dr. Quinlan
IE227	MA237	Statistics I	2.5	I	I	2 hours	1	Head of School of Maths
	MA238	Statistics II	2.5	II	II	2 hours	1	Head of School of Maths
	LW214	Health & Safety Law	5	I	I	2 hours	1	
IE217	PH328	Physics of the Environment I	5	I	I	1.5 hours	1	Head of School of Physics
	PH329	Physics of the Environment II	5	II	II	1.5 hours	1	Head of School of Physics
	MI430	Environmental Microbiology	5	II	II	3 hours	1	
	CH205	Analytical and Environmental Chemistry	5	II	II	2 hours	1	Dr. Ryder
IE218	IE222	Industrial Systems I	5	I	I	2 hours	1	
	IE223	Industrial Systems II	5	II	II	3 hours	1	
	IE224	Health & Safety Practice	10	I & II	II	3 hours	1	

Instructions for Registration:

All subjects are obligatory and students are automatically registered for them. However, students must still present for registration (self-service registration during week beginning 6th September 2010) in order to confirm return to University and to obtain a current student identification card.

Denominated Degree
Programme in
Marine Science

Denominated Degree Programme in Marine Science

Instructions for completing Subject Selection Form.

All students are automatically registered for ST299: Statistics (10 ECTS Credits) and EOS213: Introduction to Ocean Sciences (10 ECTS Credits). These subjects are worth 20 ECTS Credits in total. Therefore, students do not have to list these subjects on their Subject Selection Form.

Students are required to select options to a value of 40 ECTS Credits. This must be done by selecting **two (2)** subjects from the list of options worth 20 ECTS Credits each.

When completing the Subject Selection Form, students are reminded to check their subject choices against the Incompatible Subject listings for this programme to ensure that all their choices are compatible with one another. The Student Record System will prevent students registering for incompatible subjects at registration. Therefore, when selecting subjects, this list of Incompatible Subject Combinations must be referred to carefully. Please note, all options are compatible with ST299: Statistics and EOS213: Introduction to Ocean Sciences.

There is also a Prerequisite listing for each subject. In order to register for a subject, the student must have taken the required prerequisite(s) in the previous year, e.g., BT201: Botany - the prerequisite is BO101: 1st Year Biology. If a student does not meet the prerequisite(s), he/she cannot register for the subject.

Denominated Degree in Marine Science (2MR1)

Key:

AS: Applied Mathematical Science
 BT: Botany
 EOS: Earth and Ocean Sciences
 MA: Mathematics

MP: Mathematical Physics
 MI: Microbiology
 MR: Marine Science
 ZO: Zoology

List of Second Year Courses

Level 1	Level 2	Module Name	ECTS Credits	Taught Sem I or Sem II	Exam Sem I or Sem II	Exam Duration	No. of Exam Papers	Course Director
ST299	MA237	Statistics I	5	I	I	2 hours	1	Head of School of MSAM
	MA238	Statistics II	5	II	II	2 hours	1	Head of School of MSAM
EOS213	EOS213	Introduction to Ocean Sciences	10	I	I	2 hours	1	Dr. Cave
Options – select two 20 ECTS Credit subjects								
AS200	Please select any four modules from the options available within AS200 to a total of 20 ECTS Credits							
	MA211	Calculus I	5	I	I	2 hours	1	Head of School of MSAM
	MA212	Calculus II	5	II	II	2 hours	1	Head of School of MSAM
	MA203	Algebra	5	II	II	2 hours	1	Head of School of MSAM
	MA204	Discrete Mathematics	5	I	I	2 hours	1	Head of School of MSAM
	MM245	Numerical Analysis I	5	I	I	2 hours	1	Head of School of MSAM
	MM246	Numerical Analysis II	5	II	II	2 hours	1	Head of School of MSAM
	MP205	Methods of Mathematical Physics I	5	I	I	2 hours	1	Head of School of MSAM
	MP206	Methods of Mathematical Physics II	5	II	II	2 hours	1	Head of School of MSAM
	MP212	Mechanics I	5	I	I	2 hours	1	Head of School of MSAM
	MP213	Mechanics II	5	II	II	2 hours	1	Head of School of MSAM
BT201	BT216	Aquatic Plant Science I	10	I	I	3 hours	1	Dr. Stengel
	BT217	Plants and the Environment	10	II	II	3 hours	1	Dr. Sheehy Skeffington
EOS219	EOS221	Fundamental Skills in EOS I	10	I	I	Con. Ass.		Dr. Henry
	EOS212	Sediments and the Biosphere I	10	II	II	2 hours	1	Dr. Murray
MA200	MA203	Linear Algebra	5	II	II	2 hours	1	Head of School of MSAM
	MA204	Discrete Maths	5	I	I	2 hours	1	Head of School of MSAM
	MA211	Calculus I	5	I	I	2 hours	1	Head of School of MSAM
	MA212	Calculus II	5	II	II	2 hours	1	Head of School of MSAM
MI201	MI211	The Microbial Cell	10	I	I	3 hours	1	Dr. O'Byrne

<i>Level 1</i>	<i>Level 2</i>	<i>Module Name</i>	<i>ECTS Credits</i>	<i>Taught Sem I or Sem II</i>	<i>Exam Sem I or Sem II</i>	<i>Exam Duration</i>	<i>No. of Exam Papers</i>	<i>Course Director</i>
MI201	MI212	Microbes and the Environment	10	II	II	3 hours	1	Dr. O'Byrne
MP200	MP205	Methods of Mathematical Physics I	5	I	I	2 hours	1	Head of School of MSAM
	MP206	Methods of Mathematical Physics II	5	II	II	2 hours	1	Head of School of MSAM
	MP212	Mechanics I (Pass)	5	I	I	2 hours	1	Head of School of MSAM
	MP213	Mechanics II (Pass)	5	II	II	2 hours	1	Head of School of MSAM
ZO201	ZO205	Invertebrate Zoology	10	I	I	3 hours	1	Dr. Schlosser
	ZO206	Vertebrate Zoology	10	II	II	3 hours	1	Dr. Schlosser

Please note: Under AS200: students must take the following module combinations:

MA211 + MA212 MM245 + MM246

MA203 + MA204 MP212 + MP213 MP205 + MP206

Under AS200: students cannot take the following combinations:

MA211 + MA212 cannot be taken with MA203 + MA204

MP205 + MP206 cannot be taken with MP212 + MP213

Incompatible Subject Combinations for 2nd Year Marine Science
2010/11

Key:

AS: Applied Mathematical Science

MI: Microbiology

BT: Botany

MM: Mathematical/Mathematical Physics

EOS: Earth and Ocean Sciences

MP: Mathematical Physics

MA: Mathematics

ZO: Zoology

Subject Choice	BT201	EOS219	MA200	MP200	MI201	ZO201
Incompatible options	MP200		MA211	BT201	MA200	MA200
	MP205		MA212	MP205	MA211	MA211
	MP206		MA203	MP206	MA212	MA212
			MA204	MP212		MP200
			MI201	MP213		MP205
			ZO201	ZO201		MP206
Prerequisites	BO101	None	MA100 or MA180 or MA102	MP103	BO101	BO101

Subject Choice	MA211 & MA212	MA203 & MA204	MM245 & MM246	MP205 & MP206	MP212 & MP213
Incompatible options	MA200	MA200		BT201	MP200
	MA203	MA211		MP200	MP205
	MA204	MA212		MP212	MP206
	MI201			MP213	
	ZO201			ZO201	
Prerequisites	MA100 or MA180 or MA102	MA100 or MA180 or MA102	MA100 or MA180 or MA102 or MP103	MP103 or MA100 or MA180 or MA102	MP103

2nd Year

Timetable

2010/11

2nd Year TIMETABLE 2010/2011

AN: Anatomy	EOS: Earth & Ocean Sciences	MP: Mathematical Physics
AS: Applied Mathematical Science	FR: French	PH: Physics
BI: Biochemistry	GR: German	PM: Pharmacology
BT: Botany	MA: Mathematics	SI: Physiology
CH: Chemistry	MI: Microbiology	ZO: Zoology
CS: Computing Studies	MM: Numerical Analysis	

L = Lecture; PR = Practical; S1 = Semester 1; S2 = Semester 2

Time	Monday	Tuesday	Wednesday	Thursday	Friday
9.00 – 10.00	L MI201	L PH201 L ZO201	L MP200 L MP201 L MP280 L ZO201	L BT201 L BT216 (S1) L BT217 (S2) L PH201 L SI201	L MP200 L MP202 L MP280 (S2) L SI201
10.00 – 11.00	PR AN202 L BT201 L BT216 (S1) L BT217 (S2) L MP200 L MP201 L MP280 L SI201	L BT201 L BT216 (S1) L BT217 (S2) L PH201 PR MI201	PR AN202 L CH201 PR CS201	L PH201 L MI201	PR AN202 PR BI201 L CH201
11.00 – 12.00	PR AN202 L MA200 L MA201 L MA280 L ZO201	L AN202 L MP200 L MP202 PR MI201	PR AN202 PR CS201 L MA200 L MA201 L MA280 L MI201	PR AN202 L BI201 L EOS221 (S1) L EOS220 (S2) L EOS218 L EOS219 (S1) PR ZO201	PR AN202 PR BI201 L MA200 L MA280 L MA293
12.00 – 1.00	L BI201 L EOS221 (S1) L EOS220 (S2) L EOS218 L EOS219 (S1) L MM255	PR FR252 PR MI201	L CH201 L ST299	PR AN202 L BI201 L EOS220 (S2) L EOS218 (S2) PR EOS221 (S1) PR EOS218 (S1) PR EOS219 (S1) PR ZO201	PR BI201 L CH201 L MM255
1.00 – 2.00	L AN202 L EOS213 (S1) L EOS212 (S2) L EOS219 (S2)	L AN202 L CS201 L EOS213 (S1) L MA209	L MA200 L MA280 L MA293 PR MI201 L PM202	PR EOS221 (S1) PR EOS218 (S1) PR EOS219 (S1) L MA209 L PM202	L CS201 L EOS212 (S2) L EOS221 (S1) L EOS218 (S1) L EOS219 L PM202

2.00 – 3.00	PR BT201 PR BT216 (S1) PR BT217 (S2) PR CH201 L CH207 (S1) PR CS201 PR MI201	PR BI201 PR CH201 L EOS212 (S2) L EOS219 (S2) PR PH201 PR PM202 L ST299	PR CH201 PR PH201 PR MI201 L MP280 PR SI201	PR BI201 PR CH201 L CS201 PR EOS220 (S2) PR EOS218 (S2) PR PH201	L MP280 PR SI201 L ZO201
3.00 - 4.00	PR BT201 PR BT216 (S1) PR BT217 (S2) PR CH201 L CH207 (S1) PR CS201 PR MI201	PR BI201 PR CH201 PR EOS213 (S1) PR EOS212 (S2) PR EOS219 (S2) PR PH201 PR PM202	PR CH201 L CS201 PR PH201 PR MI201 PR SI201	PR BI201 PR CH201 L CS201 PR EOS220 (S2) PR EOS218 (S2) PR PH201	PR EOS213 (S1) PR SI201
4.00 – 5.00	PR BT201 PR BT216 (S1) PR BT217 (S2) PR CH201 L CH07 (S1) PR MI201 L ST299	PR BI201 PR CH201 PR EOS213 (S1) PR EOS212 (S2) PR EOS219 (S2) PR PH201 PR PM202 L ST299	PR CH201 PR PH201 PR SI201	PR BI201 PR CH201 PR EOS220 (S2) PR EOS218 (S2) PR PH201 PR ZO201	PR EOS213 (S1) PR SI201
5.00 – 6.00	PR BT201 PR BT216 (S1) PR BT217 (S2) L CH207 (S1) L CT250 (S1) PR FR252	PR EOS213 (S1) PR EOS212 (S2) PR EOS219 (S2) PR PH201	L EOS213 (S1) PR PH201	PR EOS220 (S2) PR EOS218 (S2) PR PH201 PR ZO201	PR EOS213 (S1)

Practicals:

- AN202 Students must attend one practical session per week, chosen by the discipline of Anatomy on the basis of their other subject combinations.
- BI201 Tuesday or Thursday
- BT201 2-4 or 4-6 on Mondays.
- CH201 Students must attend one practical session per week – whichever fits in best with their timetable
- CS201 Students must attend Monday or Wednesday sessions.
- EOS219: Taken only by Marine Science students
- FR252 Student must attend one practical/lab hour session.
- GR252 Students must attend all lectures and language labs as provided by the German discipline.
- GR224 Students must attend all lectures and language labs as provided by the German discipline.
- MI201 One of the three Lab Practicals
- MM255 Computing Practical Tuesday 5 – 7 pm or 7 - 9 pm.
- MP280 Students attend four lectures per week in Semester I and five lectures per week in Semester II.
- PH201 Tuesday or Wednesday* or Thursday - *Wednesday practical is held only if class numbers exceed 80
- PM202 Students must attend Tuesday session.
- SI201 Students must attend Wednesday or Friday sessions.
- ST299 Students attend two lectures per week Monday or Tuesday and Tuesday or Wednesday.
- ZO201 Students must attend one Thursday session.

MARKS

AND

STANDARDS

2010/2011

	<p>programme director, in the period between Semester II (Spring) examinations and commencement of the following academic year. Except in exceptional circumstances, approved by the College of Science, students who fail to meet this requirement will not be permitted to proceed to Fourth Year.</p> <p>(ii) Third Year Health & Safety Systems (3HF) Examinations take place in Semester I and in Spring, with supplemental/repeat examinations in Autumn. Students failing more than two Level 2 subjects (24 ECTS) at the Summer examination board, will not normally be allowed to re-sit at that Autumn's examinations.</p> <p><i>Note: Where there are specific Course Requirements to be passed outright or 0 ECTS (Pass/Fail) modules on the course structure please give details including the module code</i></p>
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Created by Sheila Coyle and Grainne Morahan on behalf of the Academic Records Office

ADDITIONAL INFORMATION

SECOND UNIVERSITY EXAMINATION IN SCIENCE (Including Denominated Degree Programmes)

Results of Semester I examinations will be communicated to students by means of the following grades:

Percentage	Grade
70-100	A
60-69	B
55-59	C+
50-54	C-
40-49	D
35-39	E+
30-34	E-
0-29	F

Examinations for Second Science will be held at the end of Semester I or the end of Semester II. The results of Semester I examinations will be incorporated with Semester II results to give an overall result. A candidate who passes a Level 1 subject on the average between Semester I and Semester II whilst failing a Level 2 module component at not less than 30%, will not be required to repeat the failed component. A candidate who fails a Level 1 subject on the average between Semester I and Semester II will be permitted to retain any passed Level 2 module component, but will be required to repeat the failed component. Repeat examinations for subjects failed either in Semester I or Semester II will be held in the Autumn.

Capping of Repeat Examination Results:

Repeat Examination Results (for 2nd and subsequent sittings) will be capped at 40% in each module repeated.

Progression to Third Year:

NOTE: Undenominated Science students who wish to take a biological subject (*i.e., Anatomy, Biochemistry, Botany, Microbiology, Pharmacology, Physiology and Zoology*) in third year must select another 24 or 36 ECTS major subject. ECTS Credits choices therefore are 36 + 24 or 24 + 24 + 12.

Students who wish to specialise in the following subjects will be exempt from this requirement: Chemistry, Computer Science, Earth and Ocean Sciences (*EOS327 with EOS306 or EOS307 or EOS308 or EOS309*), Mathematics (Honours), Mathematical Physics (Honours), Physics.

Calculation of 4th Year (Honours) Degree Results

For information: to be implemented in the calculation of 4th Year results from the Academic Year 2011/12: The overall degree result will be based on 80% of overall 4th Year results + 15 % of overall 3rd Year results + 5% overall of 2nd Year results.

Distribution of Marks for Written and Practical Examination:

	<i>Written</i>	<i>Practical and/or Oral</i>
Mathematical Physics/Applied Mathematics	80%	20%
CS202 Computer Methods	50%	50%
CS201 Computer Science	A proportion of marks up to a maximum of 30% may be awarded for any combination of course work, orals, practicals and projects.	
PH200 Astronomy	A proportion of marks, up to a maximum of 60% may be awarded for any combination of course work, orals, practicals and projects.	
PH201 Physics		
All other subjects (except those governed by note on Mathematics Course).	70%	30%

Recognised Subjects
for the
Postgraduate Diploma
in Education

Recognised Subjects for the Postgraduate Diploma in Education

Extract from PAC Information Booklet

For further information on application procedures, candidates should refer to the Postgraduate Applications Centre website for up-to-date official information: <http://www.pac.ie/hdip.php>. The extract below is for general information only.

Necessity for approval of degrees and subjects by the Teaching Council for the purposes of Registration as a Post Primary Teacher

In order to be eligible for appointment to an incremental salaried teaching position in a State funded Post Primary school, a teacher must be registered with the Teaching Council. Once Section 30 of the Teaching Council Act is commenced, Registration will be a mandatory requirement for all teachers.

Each applicant for registration as a post primary teacher must possess, among other things, a third-level degree (*or equivalent*) which the Teaching Council considers to be adequate to enable the holder to teach at least one of the approved second level curricular subjects.

Recognised Degrees:

List A (*extract of Science Degrees, NUI Galway listed below*) overleaf outlines the degree qualifications which may be recognised by the Teaching Council as being appropriate to teaching in a recognised post primary school. This List must however be read in conjunction with the *General and Special Requirements for Teachers of Recognised Subjects in Mainstream Post Primary Education* (see Blue pages) to ensure your degree, including subject and module options taken, meets all the requirements for Post Primary teaching.

All degrees listed are also recognised for the purposes of admission to the Postgraduate Diploma in Education course as offered by any constituent College of NUI or University of Dublin, Trinity College.

NATIONAL UNIVERSITY OF IRELAND, GALWAY
Science Degrees only

Qualification code	Qualification Title	Subjects
GY03P	Bachelor of Science ¹	See below
GY04P	Bachelor of Science Degree in Marine Science ²	Biology
GY05P	Bachelor of Science Degree in Environmental Science ³	Biology
GY06P	Bachelor of Science Degree in Computer Studies	Mathematics and Computer Studies
GY10P	Bachelor of Science Degree in Biotechnology	Biology
GY11P	Bachelor of Science Degree in Physiology	Biology
GY12P	Bachelor of Science Degree in Anatomy	Biology
GY13P	Bachelor of Science Degree in Microbiology	Biology
GY18P	Bachelor of Science – Applied Physics and Electronics	Physics
GY22P	Bachelor of Science Degree – Applied Mathematics	Mathematics & Applied Mathematics
GY23P	Bachelor of Science Degree in Chemistry & Applied Chemistry	Chemistry
GY24P	Bachelor of Science in Biomedical Science ⁴	Biology
GY25P	Bachelor of Science – Financial Mathematics and Economics	Economics and Mathematics
GY30P	Bachelor of Science in Physics and Astronomy	Physics

1 Provided one or more of the following subjects are taken in the third or fourth year of an honours degree or the third year of a general degree:

Microbiology, Biotechnology, Physiology, Anatomy, Biochemistry, Biology, Botany, Chemistry, Experimental Physics, Food Chemistry, Geography, Mathematics, Mathematical Physics, Applied Mathematical Science, Plant Science, Science of Materials, Statistics, Theoretical Physics, Zoology.

- 2 Recognised in the subject area Biology provided that the 3rd year of the honours degree (Final year of B.Science General degree) contains in addition to the Fundamentals of Marine Science, one of the core subject 24 ECTS courses (Botany or Zoology).
- 3 Recognised in the subject area Biology provided that the 3rd Year of the honours degree (Final year of B.Science General degree) contains in addition to stated obligatory subjects, both of the 9 ECTS courses Botany (BT303) **AND** Zoology (ZO303).
- 4 Subject to an applicant taking the following modules in 3rd and 4th year. Anatomy, Biochemistry or Physiology.

Queries regarding teacher registration and information on recognised courses should be directed to:

The Teaching Council
Block A
Maynooth Business Campus
Maynooth
Co. Kildare

Telephone: LoCall 1890 224 224 or +353 1 6517900

Fax: +353 1 6517901

E-mail info@teachingcouncil.ie

Web Address: <http://www.teachingcouncil.ie>

Scholarships & Prizes

available to

College of Science

Students

Scholarships and Prizes available to College of Science students

University Scholar Scheme

1. Number

Údarás na hOllscoile will confer the title University Scholar on students who obtain the minimum requirement at the relevant examination as specified at 5.2 below.

The title University Scholar may be held with other Scholarships or Grants awarded by the University or by an external body.

2. Value

An award of €250 will be made to each University Scholar.

3. Tenure

The title is tenable only at National University of Ireland, Galway.

4. Condition of Award

To register as a student of the University in the College in which the title is awarded by the due registration date. Failure to complete the registration requirement will render the student ineligible without further notice.

5. Basis of Award

5.1 The award will be made on the results of fulltime undergraduate degree examinations other than the degree examination itself.

5.2 In September, 2011 the title will be awarded to students who obtained the following minimum standards in the session 2010/11.

College	Examination	Minimum Requirement
Science	First, Second and Third	An overall average of at least 70% including First Class Honours (at Level 1) in at least 48 of the total 60 ECTS

SCOLÁIREACHTAÍ BHORD NA GAEILGE

- Scoláireachtaí iad seo atá á dtairiscint ag Údarás na hOllscoile, ar mholadh Bhord na Gaeilge san Ollscoil mar thacaíocht don chlár teagaisc trí Ghaeilge san Ollscoil, agus ar mhaithe le céimithe ar ardchaighdeán acadúil agus Gaeilge a chur ar fáil in ábhair éagsúla.
- Bronnfar na Scoláireachtaí ar mhic léinn a bheas cláraithe sa chéad, sa dara nó sa tríú bliain de chúrsa fochéime san Ollscoil faoi na coinníollacha seo a leanas:-
 - go bhfuil siad ag freastal ar chúrsaí a gcéime trí mheán na Gaeilge.
nó
 - go leanfaidh siad an chéad, an dara agus an tríú bliain dá gcúrsa céime trí Ghaeilge, nó an méid den chúrsa a bheas ar fáil trí Ghaeilge san Ollscoil ó thráth go chéile, agus air sin go seasfaidh siad scrúduithe an chúrsa trí Ghaeilge nó an méid díobh a bheas á réachtáil trí Ghaeilge ó thráth go chéile.
 - gur éirigh go maith leo i scrúdú na hArdeistiméireachta (i gcás na mac léinn chéad bhliana agus sa scrúdú deiridh ollscoile i gcás na mac léinn dara agus tríú bliana).
- Is fiú €1600 an Scoláireacht agus íocfar mar a leanas í, faoi réir tuairisc shásúil a fháil ón a Ranna cuí maidir le dul chun cinn an tsealbhóra.

Samhain – €800 Márta – €800

An Coiste Scoláireachta, ar chomhairle ó na ranna cuí, a chinnfeas íocaíocht do gach sealbhóir scoláireachta ar leith, nuair a bhíonn an Coiste sásta go bhfuil cúrsaí trí Ghaeilge á ndéanamh ag an sealbhóir i rith na bliana acadúla i gceist.

- 4 Féadfar an Scoláireacht a athnuachan faoi na coinníollacha céanna i leith an dara bliain den chúrsa Céime ach tuairisc shásúil a fháil ó na Ranna cuí maidir le dul chun cinn an tsealbhóra. Is ar thorthaí scrúduithe an chéad bhliain ollscoile a bhronnfar scoláireachtaí sa dara bliain agus is ar thorthaí scrúduithe na dara bliana a bhronnfar scoláireachtaí sa tríú bliain orthu siúd a dhéanann freastal ar na cúrsaí trí Ghaeilge.
 - 5 Coiste Scoláireachta, arna cheapadh ag an Uachtarán, a bhronnfaidh na Scoláireachtaí ar fad. Cuirfidh an Coiste san áireamh:
 - (i) torthaí na hArdteistiméireachta agus torthaí agallaimh i gcás mhic léinn don chéad bhliain agus torthaí an scrúdaithe deiridh ollscoile i gcás na mac léinn don dara agus tríú bliain.
 - (ii) tuairisc ó chomhaltaí den fhoireann teagaisc;
 - (iii) oiriúnacht an chláir oibre ó thaobh aidhmeanna na scoláireachta.
- Féadfar agallamh a chur ar iarrthóirí freisin.
- 6 Le haghaidh 2004-05, féadfar fiche a cúig (25) Scoláireacht a bhronnadh ar mhic léinn sa chéad, dara agus tríú bliain.
 - 7 Féadfaidh an Coiste an Scoláireacht a tharraingt siar tráth ar bith má tharlaíonn nach bhfuil coinníollacha na scéime á gcomhlíonadh ag an sealbhóir.
 - 8 Ní bheidh dul thar bhreith an Choiste i bhfeidhmiú na scéime.

IRISH LANGUAGE PRIZES

1. Údarás na hOllscoile offers for competition among registered students of the University the following Prizes:

(a) three Irish Language Prizes (one of €32, one of €26, and one of €13) open for competition to all students of the First Year (holders of Government Gaeltacht Scholarships and holders of University Gaeltacht Scholarships excepted);

(b) three Irish Language Prizes (one of €32, one of €26, one of €13) open for competition to all students of the Second Year (holders of Government Gaeltacht Scholarships and holders of University Gaeltacht Scholarships excepted).

2. The Examinations for these Prizes will be oral and written. The Examinations will be held in October; due notice of the Examinations will be given.
- 3.

THE BLAYNEY EXHIBITION

(Founded by the late Lord Blayney)

An Examination for one Exhibition, originally established under the Blayney Bequest and now valued at €1,000, is held in the month of June in each year, on the following conditions:

1. The Exhibition is awarded in alternate years for proficiency (1) in Greek, Latin, and one other language set forth in 4; and (2) in any two subjects for the B.Sc. Degree set forth in 4; the standard required is that of the Pass Degree.

2. Should no candidate present himself or should insufficient merit be shown, the Exhibition may be held over for one year and offered again in the following year in the same course of study.

3. The Examination will be held in June. Candidates must enter their names with the Dept. on or before 31st March.

4. The Courses for the Academic Year 2006-2007, 2007-08, etc., will be the B.A. Courses in the following subjects for the Session:—

(1) Greek; (2) Latin; (3) French; (4) German; (5) Irish; (6) Italian; (7) English; (8) Spanish.

The Courses for the Academic Year 2004-05, 2006-07, etc., will be the B.Sc. Pass Courses in any two of the following subjects for the Session:—

(1) Mathematics; (2) Mathematical Physics; (3) Experimental Physics; (4) Chemistry; (5) Zoology; (6) Botany and Plant Physiology; (7) Geology and Mineralogy; (8) Anatomy and Anthropology; (9) Physiology; (10) Pathology and Bacteriology; (11) Biochemistry.

(The maximum number of marks obtainable is the same in each subject.)

5. No student of Medicine may take Anatomy and Physiology for the Examination if more than three years have elapsed from the date of his registration as a student of Medicine. No other student may enter for the Examination if more than three years have elapsed from the date of his Matriculation.

6. No candidate will be admitted to the examination for the Exhibition who has not attended Honours Classes of

the First and Second Years in the subjects in which he intends to compete.

7. Údarás na hOllscoile retains the power of withholding, or of awarding only a portion of, the Exhibition.

8. The Blayney Exhibition may be held along with any Scholarship.

9. The Exhibition will be paid in July.

DR. RICHARD JOHN ANDERSON BOOK PRIZE IN BIOLOGY

The Prize was founded under the Trusts of the Will of the late Dr. Hannah Perry Anderson in memory of her husband, Professor R. J. Anderson, Professor of Natural History in this University (1883-1914). The value of the Prize, originally the interest on €127, being the amount of legacy bequeathed, is now €125. In accordance with the Terms of the Will, the interest is to form a Book Prize in Biology to be called the Richard John Anderson Book Prize.

The Prize shall be awarded to the second year student who, in the opinion of the Professor, has the highest qualifications in Biology.

Ó CARRA MEDAL

The discipline of Biochemistry awards the Ó Carra medal annually to the student who demonstrates overall best performance in the second year Biochemistry course.

BOOK PRIZE IN CHEMISTRY

The value of the Prize, originally the interest on €64, donated to the Chemistry Department by Dr. Thomas Dillon, former Professor of Chemistry, is now €125.

The interest will form a Book Prize to be awarded to the student who obtains the highest marks at the Second Year Science Examination in Chemistry.

MICROSOFT SCHOLARSHIP

The Microsoft European Product Development Centre funds two scholarships at NUI Galway worth €1270 each year for 5 years, which commenced in 2000/01. Scholarships will be awarded for one year in the first instance but students may reapply for the following year. Applicants should have already completed one year of undergraduate studies.

Eligibility is restricted to those students currently enrolled on the following programmes at NUI Galway:

B.Sc. in Computing Studies / Mathematical Science

B.Sc. in Applied Physics and Electronics or Experimental Physics

B.Sc. (Undenominated) - if taking at least 20 or 24 ECTS Credits of Computer Science

B.Sc. in Information Technology

B.E. in Electronic Engineering

B.E. in Electronic and Computer Engineering

B.A. Degree (taking Information Technology as one of two subjects possibly with French, German, Italian or Spanish)

B.Comm. Year 3 - if majoring in MIS

In offering these scholarships, Microsoft is aiming to provide assistance to students who are in *genuine financial need* and whose studies are being jeopardised as a result. The company is looking not specifically at just the top students, but very good students who are suffering genuine financial hardship.

SCHOOL OF PHYSICS SECOND YEAR LABORATORY GOLD MEDAL.

This medal is awarded to the student who achieves the highest mark in the second year physics laboratory, provided that a high overall mark is obtained in the subject.

SPORTS SCHOLARSHIPS

The University offers a number of sports scholarships to student-athletes of outstanding calibre who register as students of the University. These scholarships are aimed at persons who have the potential to achieve a high level of performance in sport while pursuing a full-time undergraduate degree course, postgraduate degree course, or postgraduate diploma course.

Scholarship Application Forms are available from the Sports Officer, National University of Ireland, Galway. Tel: (091) 524411, Extn. 2165; Fax (091) 750545.

UNIVERSITY PRIZES

Students of this University may compete for the Prizes, Medals, Scholarships and Studentships offered for competition by the National University of Ireland.

For information regarding these Prizes, etc., students are referred to the Registrar, The National University of Ireland, 49 Merrion Square, Dublin 2; Tel. No. 01 - 4392424.

MONSIGNOR P. DE BRÚN ANNUAL MEMORIAL LECTURE

1. The Monsignor de Brún Memorial Fund is derived from a Testimonial to Right Reverend Monsignor Pádraig de Brún, M.A., D.Sc., subscribed by his many friends to mark the occasion of his retirement from the Presidency of National University of Ireland, Galway. An eminent and remarkably versatile Scholar, especially gifted in the study of Languages and of Mathematical Science, Monsignor de Brún was President of the University from 1945 to 1959. The Memorial Fund, which amounted to €508 on 15th December 1960, comprised the balance of the Testimonial Fund left after defraying the costs of a bronze portrait bust (which was presented to Monsignor de Brún, in Galway, in May, 1960).

2. The income from the Fund shall be used to endow an annual public lecture in the University, to be known as Léacht Chuimhneacháin an Mhonsignor P. de Brún.

3. The Lectures shall be given on subjects in the Sciences and in the Humanities (including Fine Arts), alternately.

4. The Lecturers shall be Visiting Lecturers selected by the President.

5. Proposals for the Lecture may be submitted to the President before 1st December each year.

SCOLÁIREACHTAÍ NA GAELTACHTA CURTHA AR BUN AG ÚDARÁS NA hOLLSCOILE

Fuagraí Faoi Leith

Ní bheidh costas taistil ná costas átochta le fáil ag aon duine dá dtiúrfaidh Coiste Scoláireachtaí na Gaeltachta cuireadh dhó teacht ag an scrúdú Gaeilge le haghaidh na Scoláireachtaí.

Caithfear iarratais le haghaidh na Scoláireachtaí a chur isteach ar 1 Meán Fómhair nó roimhe, chuig an Oifig Iontrála, Ollscoil na hÉireann, Gaillimh

I.

Is ionann an “Ghaeltacht”, maidir leis an gCóras seo, agus an chuid d’Éirinn atá fá dhath dearg agus buí ar léarscáil Choimisiúin na Gaeltachta.

II.

1. Tá Údarás na hOllscoile ag tairscint roinnt áirithe Scoláireachtaí san Ollscoil do chainteoirí dúchais Gaeilge a rugadh nó a tóigeadh sa nGaeltacht, a bhfuil Scrúdú na hArdeistiméireachta bainte amach acu.

Má bhíonn iarrthóirí istigh as an mbreac-Ghaeltacht nach bhfuil ina gcainteoirí dúchais amach agus amach agus má bhíonn an scrúdaitheoir Gaeilge sásta gur Gaeilgeoirí maithe iad, tig leis an gCoiste, má bhíonn airgead sparála sa gciste, scoláireachtaí a thabhairt do dhaoine den tsórt seo.

2. Is fiú €254 sa mbliain ar feadh cheithre mbliain gach Scoláireacht acu seo, ach beidh cead ag Coiste Scoláireachtaí na Gaeltachta scoláire a bhfuil an chéim bainte amach aige nó aici, d’ainmniú, ar chuntair áirithe, le haghaidh Scoláireachtaí den 5ú bhliain.

3. Duine ar bith atá ag cur isteach ar cheann de na Scoláireachtaí seo ní mór dhó Foirm Iarratais a fhail ón Oifig Iontrála, agus é a bheith istigh aige, líonta go dlisteanach, ar 1 Meán Fómhair, nó roimhe.

4. Ní mór don Iarrthóir na scrúduithe seo a sheasamh:—

(a) Scrúdú na hArdeistiméireachta.

(b) Scrúdú béil agus scríofa i nGaeilge.

Bronnfar na Scoláireachtaí do réir iarmhartha na scrúduithe tuasríofa. Ligfear 300 marcanna le haghaidh na Gaeilge ag an Scrúdú béil agus scríofa i nGaeilge ((b) thuas). Cuirfear na gráid a bainfear amach (taobh amuigh den Ghaeilge) ag Scrúdú na hArdeistiméireachta san áireamh le haghaidh na Scoláireachtaí.

Má bhíonn pas faighte ag iarrthóir i níos mó ná cúig ábhair (taobh amuigh den Ghaeilge) is iad gráid na gcúig n-ábhar is fearr ar éirigh leis an iarrthóir iontu, a cuirfear san áireamh.

5. Ní mór d’iarrthóirí an Ardeistiméireacht a bhaint amach in aon iarracht amháin, na hábhair a bheith do réir

mar tá luaite i riail 4 thuas.

6. Gheobhaidh gach iarrthóir dlísteanach cuireadh go dtí an scrúdú Gaeilge le haghaidh na Scoláireachtaí.

7. Beidh an scrúdú seo i nGaeilge ar bun san Ollscoil chomh luath agus faightear toradh Scrúdú na hArdeistiméireachta. Is é Ollamh na Nua-Ghaeilge san Ollscoil a chuirfeas na hiarrthóirí faoi scrúdú. Gheobhaidh gach iarrthóir fuagra roimh ré fá dháta an scrúduithe.

8. Ní bronnfar scoláireacht ar aon duine nach sroicheann an caighdeán atá ceaptha, le haghaidh na Scoláireachtaí, ag an gCoiste.

Ní bheidh feidhm le scoláireacht ach amháin sa mbliain ina mbronntar í — muna mbí cúis an-speisialta leis.

9. An té a n-éireoidh leis Scoláireacht a bhaint amach, cuirfidh sé/sí in iúl don Oifig Iontrála, i dtosach an tSeisiúin cé na hábhair léinn ar mian leis/léi freastal orthu.

Pér bith cúrsa a shocraíós Scoláire a dhéanamh, is ar na léachtaí i nGaeilge le haghaidh an chúrsa sin a dhéanfas sé/sí freastal. Mura bhfuil cúrsa iomlán le fáil i nGaeilge, déanfaidh sé/sí freastal ar phér bith léachtaí atá le fáil i nGaeilge le haghaidh an chúrsa.

Ní bheidh cead ag aon scoláire a chúrsa léinn d'athrú gan cead faoi leith ó'n gComhairle Acadúil.

10. Ina fo-choda a híocfar an Scoláireacht. Is féidir fochuid nó an t-iomlán dá Scoláireacht a bhaint de mhac léinn, (a) mura mbí iompar ceart, oiriúnach air/uirthi, (b) má mbíonn sé/sí faillíoch ag freastal na léachtaí, (c) mura n-éirí leis/léi i bhfo-scrúduithe na dtéarmaí.

11. Is ar scrúdú na hOllscoile nó san Ollscoil a sheasamh don mhacléinn i ndeireadh na bliana atá coinneáil ar aghaidh na Scoláireachta dhó an bhliain dár gcionn, is é sin, mura dtuga an Chomhairle Acadúil toil ar a mhalairt.

12. Ní ghlacfaidh an Coiste le haon fhoirm iarratais nach bhfuil líonta go cúramach agus go hiomlán.

III.

Beidh cead ag Údarás na hOllscoile scoláireachtaí na Gaeltachta a bhronnadh ar Ghaeilgeoirí ó dhúchas ar éirigh leo an Chéad Scrúdú Ollscoile a bhaint amach, má mholann Coiste Scoláireachtaí na Gaeltachta a leitheid seo de dhaoine chuige.

Tá tuilleadh eolas faoi Scoláireachtaí Gaeltachta ar fáil ó Peadar Uas. Mac an Iomaire, Stiúrthóir na Gaeilge Labhartha.

AN ROINN OIDEACHAIS AGUS EOLAÍOCHTA

Scoláireachtaí Ollscoile

Bronnann an Roinn Oideachais agus Eolaíochta Scoláireachtaí Ollscoile atá intsealbhaithe i Ollscoil na hEireann, Gaillimh faoi réir an dá scéim seo a leanas:

Scoláireachtaí Ollscoile do Mhicleinn ón nGaeltacht agus

Scoláireachtaí chun cur ar chumas Macléinn Cúrsaí Ollscoile a dhéanamh trí Ghaeilge.

Is féidir tuilleadh eolais a fháil faoi na Scoláireachtaí seo ó: An Rúnaí, An Roinn Oideachais agus Eolaíochta, Brainse an Iarbhuioideachais, Teach Apollo, Baile Átha Cliath 2.

ALIVE VOLUNTEERING PROGRAMME

The ALIVE Programme at NUI Galway seeks to support and recognise student volunteering through an integrated programme including:

- **volunteer opportunity** matching service,
- series of **volunteer training** workshops,
- **peer support** reflection sessions and social gatherings,
- **recognition** through the ALIVE Certificate

Contact name: Lorraine Tansey, Student Volunteer Coordinator, Community Knowledge Initiative.

Contact Number: 091 49 5346, ext. 5346

Email: studentvolunteering@nuigalway.ie

Web: www.nuigalway.ie/cki