



Trinity College Dublin

Coláiste na Tríonóide, Baile Átha Cliath

The University of Dublin

FACULTY OF ENGINEERING, MATHEMATICS AND SCIENCE QUALITY REPORT 2015

Submitted to Quality Committee 30/5/16

Amended 21/9/16



1. EXECUTIVE SUMMARY

The FEMS Quality Report 2015 was compiled using submissions from the Faculty's eight Schools, External Examiner Reports, and the ISSE Report and retention data extracted from the Senior Lecturer Report 14-15.

Each School employs a diverse range of methods to evaluate their undergraduate programmes, including surveys (online and paper), one-to-one interviews or group feedback sessions, feedback from Class Reps and Course Directors. All schools in the Faculty have robust mechanisms for disseminating student feedback to the appropriate staff and committees within the school.

The Faculty has robust quality processes in place, with 93% of undergraduate modules being evaluated in 2014-15. This is slightly down on the 97% evaluated in 2014 however all Schools have agreed to evaluate all their undergraduate modules for 2015/16.

The School of Engineering, School of Computer Science & Statistics, School of Chemistry and School of Physics all have programmes which are subject to evaluations by accrediting bodies in addition to the Quality Review.

Schools place an emphasis on closing the feedback loop by conveying outcomes to the student body and to the external examiners. There are processes in place at School level for the dissemination of information from student evaluations and external examiner reports, including through the School Executive Committees, DUTLs and DPTLs, Student Liaison Committees, and Curriculum Development Committees.

In 2013/14 concerns were expressed that the External Examiners reports were not disseminated to all relevant members of staff. Under clarification in the process other than the defined recipient it is the responsibility of the School Administrator to disseminate the external reports to the relevant people.

The Irish Survey of Student Engagement (ISSE) measures student engagement with higher education, beyond that ascertained through student satisfaction surveys. A summary of the ISSE findings, as they pertain to FEMS is outlined below:

Key findings:

- FEMS increased its score in four indices in 2014/15 from last year, Active Learning from 33.7 to 37.2, Work Integrate Learning from 33.2-35.1, General Development Outcomes from 33.6-39.9 and Career Readiness from 32.2 to 33.6.
- Overall satisfaction for First Year and PGT students although lower was not significantly so with the other faculties in TCD;
- General development outcomes (individual and social development) were lower across FEMS when compared with the same cohorts in the other two faculties;
- A wide variation was seen in scores across FEMS cohorts on the following indices: student-staff interaction, work integrated learning and career readiness;
- Overall, the general satisfaction of students in FEMS improves from first to final year.
- Feedback timeliness and effectiveness of student feedback is a recurring theme raised in student feedback and External Examiner Reports.
- Address transition experience of first year student such as enhancing Open Days and Induction Day and the proposed appointment of a First Year Experience Officer



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- Improving the quality and enhancement of International Students through Erasmus Coordinators and Global Officers in the Schools.

The findings of the ISSE with respect to overall satisfaction in particular for PGT students was discussed at the Faculty Quality Executive Meeting and the Quality Officer committed to providing additional information on this index to the School of Chemistry.

In the Quality Report for 2013/14 it was noted that the Strategic Plan 2014/19 contains a target of increasing course retention rates from 84% to 90%. In 2014/15 FEMS achieved a retention rate of 90.8%.



2. QUALITY REPORT

2.1 Quality of Undergraduate Programme Provision

In the Faculty of Engineering, Mathematics and Science approximately 93% of undergraduate modules across the eight Schools were evaluated. Schools have agreed that all modules will be evaluated for 2016/17. As reported in previous years a variety of methods are used to evaluate modules such as online surveys, paper surveys and meetings with the students. An innovation in 2014/15 by the School of Biochemistry and Immunology was the use of Blackboard to get feedback from students for evaluation purposes.

In terms of response rates not all Schools provided response rates, however in some modules they ranged from 50% to 75%. It was noted by a number of Schools that the response rate to online surveys was very low and that the response rate to paper surveys has improved greatly. It was their opinion that students are more likely to give written comment in a paper based survey than an online survey.

All Schools give feedback to their students although the methods vary from emails, class group meetings, some Directors of Undergraduate Teaching and Learning held meetings with class representatives to discuss feedback.

Quality Office data collected for the Senior Lecturer's annual report indicates that 77% of External Examiner Reports were returned for FEMS Programmes. External Examiners commented on the harmonization rules failing students when they have passed the year overall. Schools noted the comments at their examinations meetings but they do not have the remit to change this regulation. One School noted that the new quality review process around the External Examination process is working and that issues raised by External Examiners were being addressed by the Senior Lecturer and the Schools involved.

There were no quality reviews of FEMS Schools in 2014/15. The School of Chemistry and School of Computer Science and Statistics were reviewed during the academic period 2015/16. The School of Chemistry Report has been approved by Quality Committee and the School of Computer Science and Statistics is currently scheduled for submission to Quality Committee. Details from these reviews will be reported in the next FEMS Annual Faculty Quality Report.

2.2 Quality of Postgraduate Programme Provision

Of the 23 Postgraduate Taught (PGT) programmes run in the Faculty in 2014/15, three were evaluated at local level by the School of Computer Science & Statistics. The Faculty Office was due to carry out an evaluation of PGT programmes in 2014/15 however due to a change in administration this information was not communicated. There will be a review of the process involved in evaluation of the PGT programmes in 2015/16, and lines of communication will be enhanced.

The School of Genetics and Microbiology reported that they conduct a panel review with research students every March and September where each student is provided the opportunity to discuss their experience with three staff members who are not Supervisors.



2.3 Summary of best practice/enhancements across the Faculty

- The School of Computer Science and Statistics plans to introduce a pilot scheme for double checking of the Senior Sophister results.
- School of Biochemistry and Immunology have introduced more pre-practical assignments for their students.
- School of Biochemistry and Immunology developing Science Communication and Critical Analysis module. They are also developing an Immunotherapeutic and Product Development module and have built up strategic relationships with Industry that enable students to benefit from their expertise.
- Schools are constantly improving their quality of teaching. The School of Biochemistry & Immunology has introduced flipped teaching, clickers, and the learning assistance programme. The feedback from students is that the introduction of these methods has enhanced the teaching quality and student experience. The Head of School reported an increase of 12% in students passing their exams as a result of the introduction of an online resource in one of their modules.
- The Faculty of Engineering Mathematics and Science (FEMS) is committed to the recruitment of Non-EU students. The Dean of FEMS is working closely with Global Relations, and with the Schools to develop new processes to enhance and develop the recruitment of Non-EU students.
- The School of Computer Science and Statistics have been using the survey application Qualtrics for the past two years as a teaching and feedback mechanism for their students.
- School of Physics have adopted a scheme for marking Senior Sophister projects in the TR071 and TR076 degree courses (which receive a large fraction of the total credit for the Senior Sophister year) to include a poster session and 20 minute student interviews. One external examiner commented in 2015 that, 'The scheme for marking projects is commendable and the system of moderation by convenors is a feature you should retain.'

The Dean of FEMS conveyed that best practices are of the utmost importance for the Faculty and that sharing best practices should lead to an enhancement of quality across the Faculty.

2.4 Summary of issues to be escalated to College Level

All issues within their remit raised were dealt with at School level. Issues beyond the remit of the Schools include:

- Unsuitable lecture venues e.g. Goldsmith staff and students have communicated that this venue is unsuitable for lecturing. The acoustics are not good and students find it difficult to hear lecturers.
- The School of Chemistry has serious issues with overcrowding in laboratories which is an issue for accreditation by the Royal Society of Chemistry who require a set number of laboratory contact hours in the first 3 years of the Chemistry degree programmes.
- An ongoing issue for all Schools is the issue of timetabling. Visiting student in particular find it very difficult to agree a timetable due to clashes. There is a need for a College fixed timetable.
- Schools continue to experience difficulties meeting the timeframes for the return of assessed coursework of students (UG -20 days; PG 30 days).



2.5 Faculty Projects / Initiatives

Thapar Initiative

On 3-6th November 2014, a team of 12 representatives from the Schools of Engineering and Computer Science & Statistics visited Thapar University in India to conduct an academic review exercise. The purpose of the exercise was to act as the basis for high-level discussions about possible future collaboration. This led to the signing of an MOU in November 2014 and the first steps towards an articulation programme for undergraduate Engineering, whereby students spend their first two years at Thapar, and then transfer to Trinity for their final two years.

Trinity Education Project

Arising from the External Review of the TR071 Science Programme in 2014, the Undergraduate Science Education Working Group was established within the framework of Strand 2 of the Trinity Education Project to implement the recommendations of that report as appropriate; to implement the proposals agreed by the TR071 Task Force previously established by Council to review the overall structure of TR071 and associated courses; and to implement any other agreed proposals for changes to undergraduate science education that may arise during the course of the Project. The Working Group will supersede the TR071 Task Force as the venue for defining the future shape of science education in Trinity.

Qualtrics Survey Technology

The Qualtrics survey application has been used by the School of Computer Science and Statistics over the past two years (see Appendix).

Flipping the classroom for a large intake lecture module BY2201 (Cell Structure & Function): 2015 and ongoing (See Appendix).

This is a large scale, on-going, project initiated by the Provost in 2015/16 and involves all lecturing staff on module BY2201. This project is funded by the School of Biochemistry & Immunology, Faculty of Engineering Mathematics & Science and Trinity Online Learning. In the simplest form of a flipped class room the students watch a podcast of the lecture at home in the days before the timetabled session. The timetabled session is then used for a review of the podcast, question and answer sessions and/or activities. Typically teaching assistants are present in the lecture hall to assist the lecturer.

A common theme voiced by the overwhelming majority of students was that they liked the fact that they could watch the podcasts at their own pace, 'rewind' or 'view again' as required. Students commented that the in-class activities kept them awake, involved and focussed. Most students watched the podcast and then attended the lecture. 80% admitted that they would not have revised the material after a traditional lecture. The flipped classroom thus results in students engaging twice with the material, improving their familiarity with the content and thus reinforcing the concepts covered.



Deans Awards

Following on from the Deans Awards in 2013/14 the School of Biochemistry and Immunology have completed two projects:

1. Learning Assistant Programme: 2014-present (See Appendix)

Working in pairs, Junior Sophister students act as Learning Assistants (LAs) to facilitate small-group tutorials for students taking BY2203 Metabolism (2nd half, First Semester). The programme is modelled on the Learning Assistant Programme of the University of Colorado at Boulder and the emphasis is on facilitation of learning rather than teaching.

Feedback from SF students is very positive. A large number of students commented that they felt comfortable in the small group environment, enjoyed the opportunity to discuss the course with a third-year student who had been through the experience and that they found the tutorials very helpful in clarifying confusion arising from lectures.

2. Use of clickers in practical classes: 2014 – present (See Appendix)

The School of Biochemistry purchased 100 personal response system handsets (clickers) for use in the Practical Lab. Clicker questions were integrated into an existing BY2203 practical. Questions were designed to check that everybody had completed particular steps and was ready to move to the next step. This had the effect of directing students' attention to a particular task and alerting the instructor when they are moving too fast (or too slowly). Student responses were anonymous, thus non-threatening, which encouraged participation. Depending on the results, the instructor chose to pause, give more explanation, or direct demonstrators to 'help out more'. In the course of the practical, questions were posed to check understanding of key concepts. At the end of the practical, the results obtained by all students were displayed (anonymously) on screen thus allowing individuals to check that they had 'the right answer'.

Deans Awards recipients for 2014/15 include:

Dr Shane Bergin, School of Physics

Dr Glynis Robinson, School of Biochemistry

Dr Gareth J Bennett & Ms Sarah Bowman, School of Engineering

Prof Colette Murphy, School Education & Dr Shane Bergin, School of Physics,

Dr Dmytro Volin, School of Mathematics

Dr Andrew Jackson & Prof Yvonne Buckley, School of Zoology



2.6 College response to issues outlined in previous years Annual Faculty Quality Report

1. The Faculty raised the Issue of the year-on-year cuts to non-pay budgets as cited by Schools in 2014/15. This remains an issue across College.
2. A lack of space for both students and staff. This is the responsibility of the College Bursar and will be considered in the context of the Estate Strategy and Trinity Education Project which has a strand on learning spaces.
3. The Faculty Executive raised concerns regarding the English skills of some students entering via Foundation Programme. The College standard for English for entry to Trinity is IELTS 6.5. Trinity signed a new Memorandum of Understanding with Marino Institute of Education in May 2016 which should address issues with respect to standards in language competency from previous foundation programme providers.
4. Several external examiners and surveys raised the issue of the full use of marking grades. This will be addressed in the Trinity Education Programme which includes an assessment strand.
5. Numerous problems associated with SITS. Director of the Academic Registry presented to Quality Committee on the SITS enhancement programme which has addressed many of the concerns and business processes continue to be improved.
6. The delay in making offers to students who applied for PGT courses. The Academic Registry Project to address PG admissions has been completed and is undergoing implementation.
7. There is often too much of a time lag in receiving External Examiners reports. For UG, the Quality Office has introduced a ten day turnaround time for dissemination of reports to Schools. For PG, the process is currently under review to align the KPI of 15 days although difficulties have been experienced in 2015/16.



3. APPENDICES -FACULTY AT A GLANCE

3.1 Course and Module Evaluation

Table 3.1a UG Evaluations

No. of UG Modules in School			No of UG Modules evaluated			RR%
School of Biochemistry and Immunology	51	100%	Number of UG Modules	16	31%	75%
School of Chemistry	40	100%	Number of UG Modules	40	100%	31%
School of Computer Science and Statistics	112	100%	Number of UG students	112	100%	
School of Engineering	130	100%	Number of UG Modules	130	100%	
School of Genetics & Microbiology	23	100%	Number of UG Modules	21	90%	100%
School of Mathematics	57	100%	Number of UG Modules	57	100%	50%/70%
School of Natural Sciences	77	100%	Number of UG Modules	77	100%	
School of Physics	44	100%	Number of UG Modules	44	110%*	60%
Total	534		Total	497	93%	

***The School of Physics modules are surveyed more than once due to two or more lecturers teaching them.**

Escalations, repeat issues, positive aspects and enhancements arising from UG course and module evaluations on quality of UG Programmes

- The Goldsmith Hall is an unsuitable venue for lecturing as it is very difficult to hear lecturers due to the acoustics. Escalated the issue to the School of Engineering and the Science Course Office, as the classes affected were Engineering and SF Chemistry
- The School of Chemistry has reported issues with overcrowding in Physic Chemistry Lab
- Schools continue to exhort staff to return continuous assessment marks and feedback within the required College timeframe (20 days UG and 30 days PG)
- Schools have noted that due to scheduling imbalances in student timetables there is a need for fixed timetabling. Schools cannot resolve this issue unless fixed timetables are introduced, which is being considered under the Trinity Education Project.



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- School of Genetics and Microbiology students cited lack of easy access to notes. It was noted that in most cases notes are readily available for modules and students were informed that notes would be provided and lecturers were advised to use Blackboard but not necessarily prior to lectures.

Feedback to students:

- School of Chemistry informed students that there is no alternative venues available.
- School of Chemistry have rescheduled/reorganized the labs to deal with the issue of potential overcrowding.
- The School of Engineering give students feedback through Student Liaison Committees
- Some Schools encourage students to submit items for the Agenda for the committee meetings and they receive feedback when actions have been taken. Class reps are advised of actions in response to queries raised. Meetings of all students in a moderatorship course are organised as needed.

Repeat Issues

- The School continues to exhort staff to return continuous assessment marks and feedback within the required College timeframe.
- School of Engineering reported module enrolment issues, access to library issues, lack of computer laboratory facilities.
- School of Biochemistry and Immunology more support and feedback required for post practical assignments

Feedback

- Some Schools are facilitating end of semester examinations where possible, but they are aware that this will be considered under the Trinity Education Project (TEP).
- Schools provide feedback to the students via the Student Liaison Committee meetings and via email communications
- School of Biochemistry and Immunology class groups were addressed at practical's and feedback discussed



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Positive aspects and enhancements

- Schools are addressing student feedback by giving realistic time frames for self-study practical reports. Workload was also reduced for the affected practicals due to heavy workloads.
- Schools making changes to the examination/continuous assessment balance, bringing laboratory experiments in line with taught material.
- The School of Chemistry is aligning lab experiments with taught material for all years; further improvement is limited by timetable and infrastructure considerations.
- The School of Biochemistry and Immunology have introduced more pre-practical assignments.
- School of Engineering have increased library access and borrowing rights for year 5 MAI students;
- School of Engineering have been given access to computer laboratories in other Schools
- The School of Physics conduct exit interviews for the whole Senior Sophister class each year when Moderatorship examinations are completed. This is particularly valuable feedback as the students then have a much better perspective than when they have just completed any particular module. Student comments are usually very positive in these interviews and feedback to individual students on their comments is immediate.

Feedback:

- The School of Chemistry informed class reps at Teaching Committee meetings and a formal feedback response on individual modules was provided to students where the survey response rate was >33%
- Feedback was provided to the students at the Student Liaison Committee meetings and via email communications
- School of Physics have adopted a scheme for marking Senior Sophister projects in the TR071 and TR076 degree courses (which receive a large fraction of the total credit for the Senior Sophister year) to include a poster session and 20 minute student interviews. One external examiner commented in 2015 that, 'The scheme for marking projects is commendable and the system of moderation by convenors is a feature you should retain.'



Table 3.1b

PGT Evaluations

No. of PG Programmes		No. of PG Programmes evaluated by the Faculty/School		
School of Biochemistry and Immunology	1		0	
School of Chemistry	0		0	
School of Computer Science and Statistics	9		3	
School of Engineering	12		0	
School of Genetics & Microbiology	N/A		N/A	
School of Mathematics	1		0	
School of Natural Sciences	0		0	
School of Physics	N/A		0	
Total	23		3	13%

The School of Chemistry does not have any taught postgraduate courses.

Escalations, repeat issues, positive aspects and enhancements arising from PGT course and module evaluations on quality of PGT Programmes

- School Engineering: Matters were raised at the Postgraduate committees of which there are two. The matter of PG Diploma students to having borrowing rights in the library. Also exams on successive Saturdays is not popular – these students are all P/T

Repeat Issues

- School of Engineering: The issue library has been raised on numerous occasions. This matter has been escalated at the Quality Committee and is being addressed by the Library and Information Policy Committee.
- School of Engineering: The College does not support room hire on alternate Saturdays.



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Positive aspects and enhancements:

- In the School of Computer Science & Statistics the Course Director for the MSc in Health Informatics worked with the module coordinators to improve relevance of material.
- The School of Biochemistry have developed the Science Communication and Critical Analysis module (IM7103) to include weekly presentations, discussion workshops and continual assessment
- The School of Biochemistry have developed the Immunotherapeutic and Product Development module (IM7111) to include workshops from a Pharmaceutical Marketing expert (-) and business development expert (- [Trimod & HS life sciences]). Also built up a number of strategic relationships that enable students to benefit from the expertise of both academic and external professionals including: Molecular Medicine Ireland, which enables our entire M.Sc. in Immunology class to attend “MMI/Pfizer Course: Molecules to Medicines - How Biopharma Delivers”. The director of the Science Gallery, Lynn Scarf, who provides a lecture on “Communicating to the public” and a tour of the Science Gallery each year. Dr. Claire O’Connell from the Irish Times who gives a workshop on “Communicating science via the media

Feedback:

- School of Computer Science & Statistics note as most students are on a one-year programme there is limited feedback with appropriate revisions only apparent in subsequent years.
- The success of this combined approach to course improvement is evident in the increased numbers, quality and diversity of applicants.



3.2 External Examiner Reports

Table 3.2a

Number of UG Programmes externally examined

Number and % of UG External Examiner Reports returned

School of Biochemistry and Immunology	4		1	
School of Chemistry	6		5	
School of Computer Science and Statistics	5		4	
School of Engineering	6		5	
School of Genetics & Microbiology	3		2	
School of Mathematics	2		2	
School of Natural Sciences	8		8	
School of Physics	1		0	
	35		27	77%

***These figures are based on Quality Office data for 2014/15.**

1. Escalations, repeat issues, positive aspects and enhancements arising from External Examiner Reports or Courts of Examiner meetings on the quality of UG Programme provision

- The School of Chemistry noted a number of external examiners commented upon the harmonization rules that can lead to students who have passed a year overall being deemed to have failed based on the harmonization rules. The examiners were informed that this was College policy.
- The School of Genetics and Microbiology had issues relating to the nature and content of module taught to Human Genetics students. This was highlighted by the external examiner and was discussed by the Head of School and Senior Lecturer.

Actions to address

- A new School policy regarding moderation of sophister grades was developed, approved and put in place. The external examiners were written to inform them of these changes.
- The School of Engineering introduced second tallying of marks and informed the external examiner of this.



- The School of Genetics and Microbiology issues was resolved by establishing a subgroup to discuss the issues of the External Examiners report and decide the appropriate action. The subgroup adapted the course material and introduced a new module 'Principles in Human Genetics' to resolve this issue. The actions taken have been reported back to the External Examiner.

Repeat Issues:

- School of Chemistry: Some examiners commented that, while most model answers were satisfactory, some did not have an adequate marking scheme
- School of Chemistry the rubric on some exam papers is quite complicated as some JS & SS exam papers are drafted for students on different courses but with one shared module and one other module per course
- In the School of Engineering the coherence of the biomedical stream was raised by the external examiner
- The School of Physics the issue is that external examiners ask for marking schemes rather than model answers. I.e. they ask to see what is required for full marks for a particular part of a question rather than what the lecturer views as an ideal or model answer.

Actions

- The School of Chemistry asked academics to provide a detailed marking scheme for their model answers in future exam sessions.
- School of Chemistry: We did try to provide an exam paper that was specific for a given course (2 modules rather than 3) but the Examinations Office was not able to cater for a shared module on different exam papers. From 2016/17 the School will move to a system whereby each module is examined separately
- The School of Engineering have introduced and rearranged module offerings in the biomedical stream of engineering
- School of Biochemistry & Immunology a greater element of teaching on chronic metabolic disease was introduced to link – topics and details of new course content sent to External Examiner.
- School of Physics the Examiners give comments on matters such as this when they review papers before returning them to lecturers for alteration, as deemed necessary by the external examiner.

Feedback:

- School of Chemistry: In 2014/15 the external examiners raised a concern that they had not received any official response to their corrections of the exam scripts. This year an official report and letter will be sent to the external examiners in advance of the exams, giving detailed feedback of the response to their suggested changes. It will outline where changes were made and also attempt to give an explanation as to why certain changes were not made.



- The School of Engineering reported the changes to the external examiner of biomedical engineering

Positive aspects and enhancements:

- The School of Computer Science & Statistics plans to introduce double checking of Senior Sophister Computer Science results on a pilot basis shortly.
- In the School of Chemistry detailed course content is reviewed and modified following comments from External Examiners.
- In the School of Natural Science the external examiner for Zoology recommended stretching our use of the marking scheme for projects in particular in order to reward high achievement. We have encouraged markers to use the marking criteria which include guidance on high achievement.
- The School of Engineering find the process of second tallying of marks is beneficial
- The School of Engineering have introduced processes whereby the external examiner can now meet undergraduate students is beneficial
- The external examiner for the Nanoscience course commented in his report for the 2014/15 year that, 'In general, the standard of the examination papers was very high. The questions were wide-ranging and quite challenging
- The external examiner for Physics and Physics and Astrophysics commented in 2013/14 that 'The standards of the examination papers are at the right level. The questions are a good mix of both bookwork and some more challenging topics and are set with considerable care and attention to detail.
- School of Biochemistry a number of questions was reduced from a choice from 5 to a choice from 3. In addition the questions/assessments were restructured to provide greater discrimination between students resulting a more normal distribution grades
- All core modules for junior Sophister Biochemistry, Immunology and Molecular Medicine students were reorganized into 4 ten credit modules where the assessment is 70% end of year examination, 30% in course assessed. Overall the junior sophister year is now 50% in course assessed and 50% end of year examination.
- The School of Genetics and Microbiology developed new modules and course material for the Senior Sophister Human Genetics to insure that the modules were more targeted towards Human Genetics.
- The School of Genetics and Microbiology gave direct feedback in writing to the External Examiner regarding the proposed changes to be implemented



blackboard's plagiarism software. This increases student knowledge and awareness of plagiarism and provides a forum for general discussion of plagiarism in today's electronic environment.

Feedback

- School of Computer Science in the MSc in Management of Information Systems: some curriculum improvements were made. Also the dissertation marking sheets were redesigned to include more detail.
- School of Biochemistry & Immunology a summary of improvements and adjustments were given to the external examiner each year and they have an opportunity to comment on whether their feedback was implemented and what they thought of our subsequent response.

3.3 Accreditation Cycle

Table 3.3

Accreditation body	Name of Programme accredited	UG/PG	Last Accreditation Visit	Outcome achieved	Next Visit Due
Engineers Ireland	B.A.I x 6*	UG	March 2013	Accredited	November 2016
	B.Sc. in Engineering with Management	UG	March 2013	Accredited	November 2016
	M.Sc.	PG	March 2013	Accredited	2018/19tbc
Engineers Ireland	Integrated Computer Science		May 2012	Accredited	November 2016
	BAI/MAI Computer Engineering		March 2013	Accredited	November 2016
Institute Of Chemistry of Ireland	B.A. Moderatorship	UG			
Royal Society of Chemistry Ireland*	Chemistry TR071, Medicinal Chemistry & Chemistry with Molecular Modelling	UG			Proposed date to be confirmed
Institute of Physics	B.A. Moderatorship x 4*	UG	2011		2017 tbc



Escalations, repeat issues, positive aspects and enhancements relating to Programme and School Accreditation Reviews

- School of Chemistry Issues with the accumulated number of laboratory contact hours in the first 3 years of the Chemistry degree programmes were raised by the accrediting body. Current courses fall short of the 300 hours (excluding project) that are a stipulated irreducible minimum requirement of the Royal Society of Chemistry

Actions:

- School of Chemistry a RSC accreditation representative met with the School in Feb 2015. Email contact has been maintained between RSC and TCD Chemistry in order to relay changes made to the laboratory content in 2015/16 that were necessary to address the issue of over-crowding in the labs. A representative from the RSC is due to visit the School again in May 2016 to review the situation.

3.4 Quality Review Cycle

Table 3.4

Quality Reviews in Academic Year	Type of Quality Review (S, P, R)*	Current Status (RR, IP, PR)**
2014/15 Nil		
School of Chemistry 16-18 November 2015	S	Review report approved awaiting implementation plan
School of Computer Science and Statistics 15-17 Feb 2016	S	Review report due to Quality Committee on 1 st June 2016
Quality Reviews due next Academic Year		
Faculty of Engineering Mathematics & Science	Nil	

*School (S); Programme (P); Research (R). ** Review Report (RR); Implementation Plan (IP); Progress Report (PR)

1. College level issues/recommendations raised in Quality Review Reports for escalation to Quality Committee and Council

Not applicable in 2014/15.



3.5. Progression, Retention and Completion Statistics

Table 3.5.1: UG New Entrants (available from Senior Lecturers Annual Report)

		School of Chemistry	86%%
Faculty achievement 2015 (UG-refer SLAR)		School of Computer Science and Statistics	87%
Faculty achievement 2014 (UG-refer SLAR)	90.8%	School of Genetics and Microbiology	100%
		School Natural Sciences	93%
		School of Physics	97%
		Science TR071*	94%

Note: Strategic Plan target of 90% retention (A1.1) for transition from first year to second year.

3.6 Irish Survey of Student Engagement (Refer Faculty ISSE Report for data and tables)

Table 3.6.1: Key stats from Faculty ISSE Report

Faculty Response	Total
First Year	284
Final Year	145
PGT	94
Male	250
Female	273
Fulltime	456
Part-time	67
Irish Domicile	476
Non-Irish Domicile	47



1. Faculty Performance on ISSE indices

Figure 1: Faculties performance on Engagement Indices in 2014/15

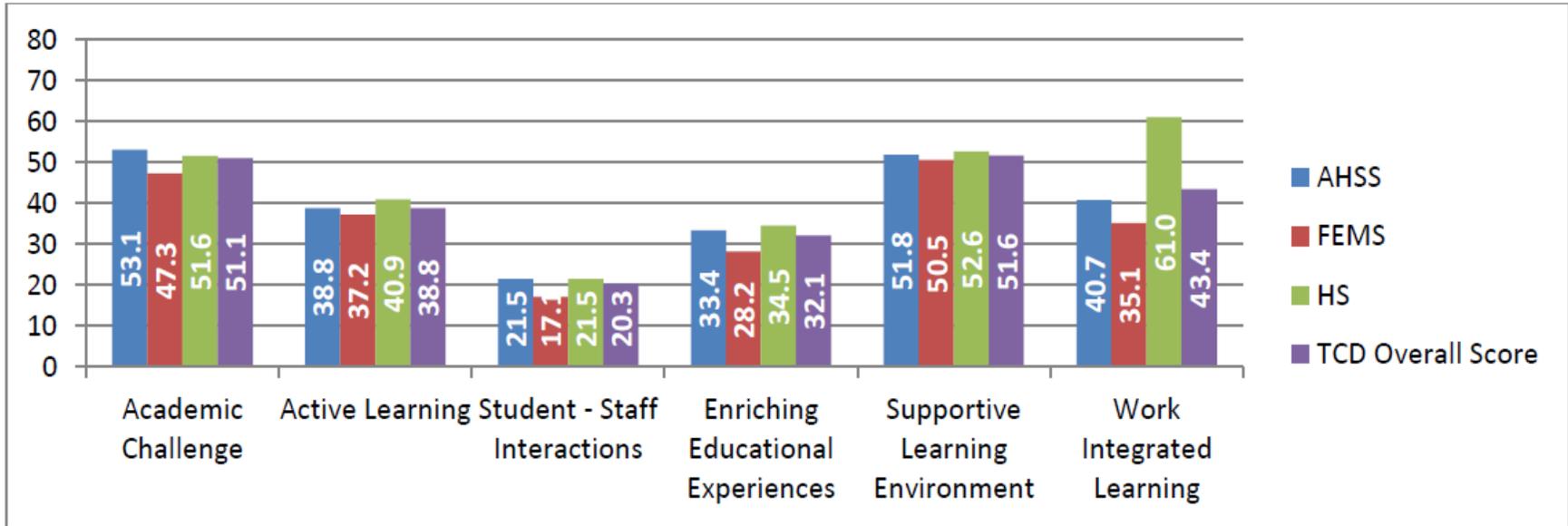
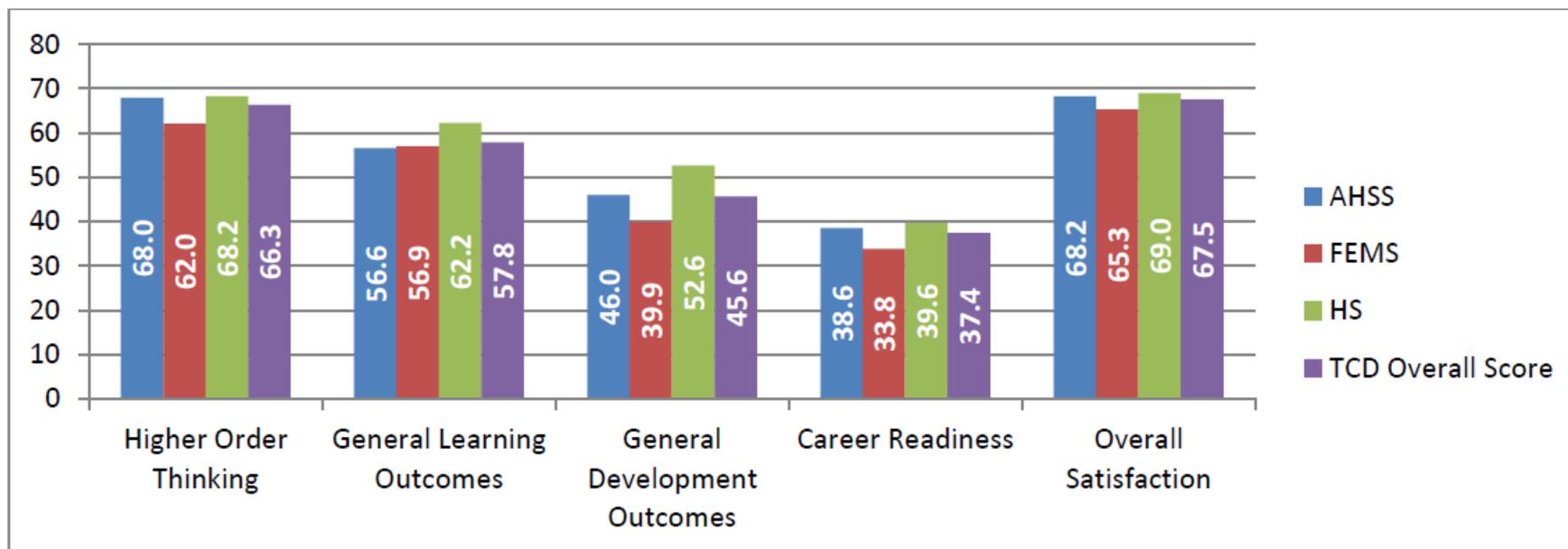




Figure 2: Faculties performance on Outcomes Indices in 2014/15



2. Key findings arising from ISSE Report

- FEMS increased its scores in four indices in 2014/15 from last year; *Active Learning* from 33.7 to 37.2 in 2014/15, *Work Integrate Learning* from 33.2 to 35.1, *General Development Outcomes* from 33.6 to 39.9 and *Career Readiness* from 32.2 to 33.6 in 2014/15.
- The *Overall Satisfaction* score across the faculties for first year students was lowest in FEMS (AHSS 69.6, FEMS 66.1, HS 70.3, TCD 68.5).
- Student and Staff Interaction continues to be the weakest performing index for this cohort (AHSS 24.6, FEMS 23.8, HS 24.0, TCD 24.3).



3.7. Collaborative and Transnational Education Provision

Table 3.7

Name and Location of Partner Institution (please insert hyperlink)	Partnership Status Initiation phase (I) Approval phase (A) Operational (O)	Programme Title ^[1] or Award type and NFQ level (Bachelor's degree, Master's degree, PhD, or other)	Type of Partnership: Linked Domestic/validated) Collaborative Other	Awarded Trinity Joint(J) Dual (D)	Brief description of agreement (please include date the MOU Agreement signed, date Contact signed, Student intake start date)
Thapar	Operational	NFQ Level 8 BAI in Engineering BAI in Computer Science	Articulation Agreement	Trinity	Large multifactorial partnership involving Schools of Engineering and Computer Science & Statistics
National des Sciences Appliquées (INSA) de Lyon	Operational			Dual	TCD Engineering and Engineering with Management students complete JS year in Trinity and are admitted to the 3 rd year in INSA for one year (which is taken as equivalent to 4 th year here). Students return to Trinity to do 5 th year and then subsequent to this do 5 th year in INSA. Currently are awarded BA BAI MAI and Diplôme d'Ingénieur de l'INSA de Lyon. (6 yrs in total)
Masters in Development Practice	Operational	UCD	Collaborative	Joint	Collaborative provision and joint award School of Natural Science.