School of Chemistry – Unit Feedback 16/17

Unit title: Core Physical Chemistry		
Unit code: CHEM20212		
Unit co-ordinator: Peter Gorry		
Other teaching staff: Paul Popelier, Neil Burton		
Response Rate:	46/216 (21.3%)	
General University Questions	**Mean score**	**Previous Year**
Overall, I would rate this unit as being excellent	**4.04**	4.10
The feedback that I received on my work was helpful	**3.65**	3.71
This unit was well organised	**4.39**	4.37
The eLearning resources provided in this unit enhanced my learning experience	**4**	4.17
I found the Tutorials linked to this course useful	**4.26**	3.88

Please summarise the main themes from students' comments:

There were positive comments about the teaching staff, the organisation of the course and the examples classes.

There were some negative comments about the quantity of material needed to be learned, with calls for more exact information about what was examinable and which equations needed to be learned.

There were some calls for more online resources to be made available.

Please provide feedback to students comments:

Unfortunately no feedback has been provided by the course team

School of Chemistry – Unit Feedback 16/17

Unit title: Inorganic Chemistry		
Unit code: CHEM20312		
Unit co-ordinator: Mike Ingleson		
Other teaching staff: Eric McInnes, Steve Liddle		
Response Rate:	42/219 (19.18%)	
General University Questions	**Mean score**	**Previous Year**
Overall, I would rate this unit as being excellent	**4.29**	4
The feedback that I received on my work was helpful	**4.21**	4.1
This unit was well organised	**4.45**	4.26
The eLearning resources provided in this unit enhanced my learning experience	**4.21**	3.57
I found the supporting workshops for this course helpful	**4.52**	4.41
I found the Tutorials linked to this course useful	**4.40**	4.51

Please summarise the main themes from students' comments:

Positives: Students are generally very positive about the course and the lecturers (as indicated by the scores above) . Particular points include, multiple positive comments regarding finding workshops useful / multiple examples run through during lectures useful. Students also appreciated that the course material was building on previous concepts / linking to other courses.

Possible modifications to course requested by >1 student:

(i) reduce quantity of material covered

(ii) Lecturers to wear microphones

(iii) More workshops

(iv) MJI to speak slower

(v) Teaching too much new material in week 12 (too close to exams)

Please provide feedback to students comments:

Firstly, we thank the students for their many positive comments about the course, which included the material, organisation, discussion of multiple example questions, and the good lecturing ability of all three lecturers.

Regarding suggested improvements made by >1 student:

(i) While the quantity of material seems large this is due to there being many examples exemplifying core principles. This is to encourage understanding over rote learning.

(ii) Workshops / tutorial / lecture balance is reviewed annually. It is felt that in contrast to group theory (Yr 2 semester 1) that this course requires less workshops. It should be stated though that multiple examples are presented and worked through during lectures (as recognised by the many positive comments to this effect) and past papers and office hours are available for all lecturers. The

latter provides students the ideal opportunity to ask questions on a one to one basis (indeed many students used this facility).

(iii) Regarding microphones, it was not clear initially that the desk microphone pick up was poor in G51, this has been reported. We will consider recommending the use of microphones in the future for all three lecturers.

(iv) MJI will try and speak slower in the future!

(v) The inclusion of new material in week 12 will be reviewed for next year.

School of Chemistry – Unit Feedback 16/17

Unit title: Structure and reactivity of organic molecules		
Unit code: CHEM20412		
Unit co-ordinator: Nathan Owston		
Other teaching staff: Jenny Slaughter, Mike Turner		
Response Rate: 48/217 (22.12%)		
Question Scores	**Mean score**	**Previous Year**
Overall, I would rate this unit as being excellent	**3.42**	3.32
The feedback that I received on my work was helpful	**3.54**	3.44
This unit was well organised	**3.58**	3.4
The eLearning resources provided in this unit enhanced my learning experience	**3.73**	3.58
I found the tutorials linked to this course helpful	**4**	3.56

Please summarise the main themes from students' comments:

A diverse set of comments were offered by the cohort. Workshops and provision of example/specimen material were generally viewed as positive and a useful addition to the course. Students tended to value more complete lecture handouts. Worked examples were generally viewed as positive, but there were some concerns regarding some of the in-course exercises and their suitability for preparation for exams, although performance in the final assessment was very good.

A number of comments suggested that progression with respect to the taught material was not clear to some students in this unit, and content viewed as somewhat discontinuous blocks. Tutorials were praised by some respondents as useful for supporting their learning, whilst others viewed them as less useful in terms of structure and/or content. Some respondents expressed dissatisfaction that tutorial material was not covered in lecture prior to the tutorial.

Please provide feedback to students comments:

The module team thank the cohort for their feedback. Regarding the content/material presented in lecture sessions, your input will be considered by each member of staff delivering the course in the next academic year. Student performance in the final exam was very good (*exam and specific question feedback is available on Blackboard*).

Regarding the delivery of the lectures, the module team note the concerns of the cohort regarding clarity of delivery/organisation/clarity, and we will work to address some of these points moving forward. We invite the cohort to reflect upon the varied teaching activities incorporated into this course, not only with respect to their suitability for exam preparation, but also as they progress into year 3, where there is a greater emphasis on independent working.

The rationale behind much of the material presented in workshops/tutorials/lectures in this course was to promote independent learning and emphasise application of fundamental principles across sub-topics, and to provide a blend of covered material and supplementary/follow-on problems to support the course. We will examine how we deliver this in future as part of our reflection/ongoing review process.

School of Chemistry – Unit Feedback 16/17

Unit title: Environmental and Green Chemistry		
Unit code: CHEM20712		
Unit co-ordinator: Frank Mair		
Other teaching staff: Alex Pulis, Peter Gorry		
Response Rate:	21/147 (14.29%)	
General University Questions	**Mean score**	**Previous Year**
Overall, I would rate this unit as being excellent	**3.9**	3.59
The feedback that I received on my work was helpful	**3.33**	2.82
This unit was well organised	**4.33**	3.86
The eLearning resources provided in this unit enhanced my learning experience	**3.95**	3.56

Please summarise the main themes from students' comments:

The numbers above, which show an increase in all categories in comparison to the previous year, are gratifiying, and may be ascribed to a change of personnel on process chemistry teaching and co-ordinating, but any analysis is subject to a large degree of uncertainty given the disappointing response rate.

Examination of the responses on individual lecturers shows that the main improvement can be ascribed to very positive feedback for Dr Pulis.

Overall, the students' comments were positive, citing the real-world examples as strengths, but some negative comment (3 people) was focused on Dr Mair's section: lack of clarity on learning objectives, and of difficulty in identifying revision strategy (1) lack of clarity on workshops timetabling (1) There was also a suggestion that the material was over-loaded for FSM's part and PG's part.

It is a concern the lowest score (3.33) relates to feedback, perhaps reflecting on the fact that this option lies outside of the tutorial system. Workshop examples were provided, as was a feed-forward session.

Please provide feedback to students comments:

The majority of respondents made very positive comments, for which they are thanked.

In answer to the criticism from one student of lack of clarity on learning objectives in Dr Mair's part, and of difficulty in identifying revision strategy, it must be pointed out that a detailed list of these is posted on Blackboard, with advice on revision strategies. As an action, this information will be more prominently flagged. Criticism regarding lack of clarity on workshops timetabling is harder to fathom. In L1 a full timetable of the course was shown and posted on BB, showing exactly when the workshops were, and which staff they were co-ordinated by. There was also a suggestion that the material was over-loaded for FSM's part, which is accepted in part, though is in part due to the context, and the need to use several examples to convey breadth of applicability. Students should be re-assured, however, that in earlier runs of the course, there is negligible difference in exam

scores for the different sections, hence, all achieve to similar degrees in preparing students for examination. Dr Mair reserves the right to decide on an appropriate level of detail to apply in mechanisms, which are key in encouraging appropriate levels and modes of thought in professional chemists. One student claimed the handouts were not intelligible without the podcasts. The full online notes, or podcasts, are available to flesh out the bones on the handouts. This is deliberate. It is intended that students build their understanding by consulting all these sources.

Overall, the approval ratings for this course are quite good. The lowest (3.33) relates to feedback. This was available in workshops, and a revision session in the days prior to exam. The option status makes it very difficult to offer tutorials, so more opportunities for feedback will have to mean more workshops, or online tests.

School of Chemistry – Unit Feedback 16/17

Unit title: Transferable Skills for Chemis		
Unit code: CHEM20500		
Unit co-ordinator: Patrick O'Malley		
Response Rate:	43/212 (20.28%)	
General University Questions	**Mean score**	**Previous Year**
Overall, I would rate this unit as being excellent	**3.33**	3.53
The feedback that I received on my work was helpful	**3.28**	3.22
This unit was well organised	**3.44**	3.72
The eLearning resources provided in this unit enhanced my learning experience	**3.7**	4.06
I found the Web of Science exercise to be useful	**3.65**	4.08
I found the Scientific Review exercise to be useful	**3.72**	3.67
I found the Presentation exercise to be useful	**4.21**	3.81
I found the Maths exercises to be useful	**4.16**	4.19
The amount of time given for each exercise was sufficient	**4.09**	3.58

Please summarise the main themes from students' comments

In general the mathematics part of course is generally well received by the students. One or two students suggest a higher level needed whereas others feel it is of too high level so balance is about right. Presentations went better this year and in general students seemed to appreciate this aspect. Some students feel this course should be taught in a more traditional lecture format but this is I believe not universally believed or worthwhile.

Please provide feedback to students comments:

Although students are allowed to inspect their maths scripts this was not fully appreciated this year and will be advertised more next year as it provides valuable feedback on performance .

Some errors which have appeared and noted in the Maths examples will be corrected.

Note that the format of this course is due to change in 2017/18

School of Chemistry – Unit Feedback 16/17

Unit title: Practical Chemistry		
Unit code: CHEM22600		
Unit co-ordinator: Nathan Owston/Richard Henchman		
Response Rate: 57/214 (26.64%)		
General University Questions	**Mean score**	**Previous Year**
Overall, I would rate this unit as being excellent	**3.33**	3.45
The feedback that I received on my work was helpful	**3.09**	3.45
This unit was well organised	**3.63**	3
The eLearning resources provided in this unit enhanced my learning experience	**3.53**	3.07
The lab has helped me develop technical skills (such as synthetic or analytical skills etc.)	**4.35**	
The lab has helped me develop professional skills (such as safety awareness etc.)	**4.40**	
The lab has helped me develop confidence in practical chemistry	**4.05**	
I found lab work to be interesting and rewarding	**3.81**	
The experiments helped me consolidate theory	**4.02**	
The floor 1 lab is an environment where I can ask questions and discuss chemistry	**3.51**	
The floor 2 lab is an environment where I can ask questions and discuss chemistry	**4.04**	
Floor 1 pre-lab work helped me prepare for the lab	**3.42**	
Floor 2 pre-lab work helped me prepare for the lab	**3.90**	
Feedback I received from floor 1 experiments has aided my progression through the year	**2.96**	
Feedback I received from floor 2 experiments has aided my progression through the year	**3.12**	
Feedback I received from floor 1 reports has aided my progression through the year	**2.88**	
Feedback I received from floor 2 reports has aided my progression through the year	**2.92**	
The floor 1 lab was well resourced with the kit and apparatus I needed	**4.08**	
The floor 2 lab was well resourced with the kit and apparatus I needed	**4.06**	
The GTAs (demonstrators) in the floor 1 lab were professional and provided support	**3.80**	
The GTAs (demonstrators) in the floor 2 lab were professional and provided support	**3.94**	
The technical staff were professional and provided support	**4.28**	

The academic staff were professional and provided support	**4.26**	

Please summarise the main themes from students' comments:

A diverse set of comments were offered by the cohort. As reflected in the scores above, students valued the opportunities provided in CHEM22600 to develop technical and professional skills (mean score = 4.35-4.40). Many people commented positively on the fact the lab gave an opportunity to practice and master experimental technique (4.05). There were some additional comments that the experiments performed afforded greater independence and built upon work carried out in the first year.

Many students also commented positively regarding the linking of theory and practice, and that the laboratory program had allowed them both to develop understanding of material presented in lecture courses, and also to appreciate the utility of this material through application. Some students however commented that required material/theory was not covered for some experiments during the second year.

The majority of students acknowledged that GTAs, academic and technical staff were professional and provided support (3.80-4.28). Criticism of individuals was minimal; nonetheless (and in contrast with the mean scores), many students expressed dissatisfaction with consistency between demonstrators, particularly with respect to expectations and marking/assessment).

There was a common view that the report writing was onerous, both in the number of reports required and their length, and that more guidance on report-writing could be given. Report marking and feedback was not always felt to be consistent and it was suggested that more feedback could be given. These points will be addressed below in detail.

Please provide feedback to students comments: (this will be published on the intranet and Blackboard):

The module team thank the students for their comments. We are pleased that the vast majority of students felt that they gained/developed new skills and knowledge from the course, which is the primary purpose of the lab. We feel that the marks achieved by the students are well-deserved, with an average mark of 70%, a normal distribution of marks and standard deviation of 10%.

Marking consistency & progression through the lab

We do listen to comments regarding the consistency of marking; as of yet, we have found no data evidence in support of inconsistency in marking between markers or across experiments. The majority of comments referred to perceived "fairness" (*i.e.* timing/position of an experiment for given group, inconsistency of marking by GTAs, or a single element of an experiment being marked lower); it is important to note that the lab course is designed to allow failure in some components.

Related to the above, the teaching laboratories team and Laboratory Review Group continue to work hard to ensure consistency of marking at every level, whether between demonstrators and experiments, or floors and years. Marking is done as objectively as possible using specific rubrics which take into account prior experience, skills, and student progression. As every experiment is different and is designed to develop a different set of skills, there will be subtle differences on how these assessments are carried out. The module team invite the students to reflect on this as they progress into year 3.

Practical work is a skill which is improved through experience – this is why we assess the labs over a long time period, so that your progression and improvements can be rewarded. As noted above, the overall performance for CHEM22600 was very good.

Reports and feedback on reports

The majority of comments regarding reports referred to the feedback not being detailed or unhelpful with regard to progression. Reports are marked by experiment GTAs or a Marking College, consisting of a team of GTAs, early career researchers and lab conveners. Training is provided with a focus on marking which provides both constructive, actionable feedback and is consistent. As part of this process, we moderate report marking throughout the year and, as a result of this process, our Marking College/GTAs receive regular input into the standards of their work. We are therefore confident that the marking is consistent and reflects the quality of the work submitted.

Feedback can only be of use where an individual choses to engage with it. Through TurnItIn, we are able to monitor the number of people who have revisited their report to look at the feedback; on average only 70% of students have revisited their report, once marked, to view the feedback and comments. Furthermore, on average, 16% of the cohort have not submitted written work for one or more report submissions.

Report writing is key to your success as a chemist and is the main way that you will be assessed during your third and final years. Finding ways to increase student engagement with feedback and ensuring all students take the opportunity to practice their report writing in the early years of their degree remains a priority for the Teaching Laboratory Team.