School of Chemistry

Course Review: Unit Self-Evaluation 2015/16

Unit title: CHEM30212-40222-61082	
Unit code: Soft Matter Chemistry	
Unit co-ordinator: Rob Dryfe	
No of students taking unit: 166	
Response Rate: 36/166 (21.69%)	
Other teaching staff: Peter Budd, Andrew Horn	
General University Questions	**Mean score**
Overall, I would rate this unit as being excellent	4.4
The feeback that I received on my work was helpful	4.1
This unit was well organised	4.4
The eLearning resources provided in this unit enhanced my learning experience	4.3
I found the tutorials linked to this course useful	4.33

Please summarise the main themes from students' comments:

The feedback was generally very positive.

NOTE: The lecture content had changed this year: AH's surface chemistry material replaced the synthetic polymer content. The exam format has also been changed this year – the questions from each lecturer previously all contained internal choice (answer A **OR** B). The new format has a compulsory part (a), which contains internal choice for the yr3/MSc cohort, followed by a choice between (b) or (c).

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

Some students wanted more "typed up" lectures, we feel that there is a balance to be struck between giving material and expecting students to take their own notes.

Please provide generic feedback on exam performance (eg questions which were particularly well/poorly answered, common mistakes)

Exam performance was acceptable: paper averages were ca. 58% (yr 3), 68% (yr 4) and 53 % (MSc), not a big variation in averages between questions. Some yr3/Msc students ignored the rubric that asked them to answer only four parts out of six from part (A) of each question.

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Course Review: Unit Self-Evaluation 2015/16

Unit title: CHEM30242
Unit code: Electronic Structure Calculation
Unit co-ordinator: Richard Henchman
No of students taking unit: 16
Response Rate: 5/16 (31.25%)
Other teaching staff: Klaus Muller-dethlefs, Paul Popelier

General University Questions	**Mean score**
Overall, I would rate this unit as being excellent	4.2
The feedback that I received on my work was helpful	3.4
This unit was well organised	4
The eLearning resources provided in this unit enhanced my learning experience	4.4

Please summarise the main themes from students' comments:

Students found the course interesting and felt its usefulness to all students justified it being part of core chemistry.

Handouts, workshops, revision questions, connections with core material and recommended reading were very much appreciated to consolidate learning. More clarity, more explanation, more connection with core content, more workshops and less material are suggested improvements.

Please provide feedback to students comments:

In the simulation part of the course, the students did not use well $F = ma$ and $F = -kdx$ as applied to the Verlet algorithm. There was not a good understanding of how the root-mean squared deviation of position relates to the force constant of a harmonic potential I.e. $k\langle x^2\rangle = k_B T$. No questions stand out as being particularly poorly answered in the other two sections.

Please provide generic feedback on exam performance (eg questions which were particularly well/poorly answered, common mistakes)

Student exam performance was good this year, even though the standard of questions was the same to last year. This was probably helped by a small reduction in material from the previous year. The smaller room size was much more conducive to questions and discussions in the lectures. Most students answered most questions well, losing marks for less familiar problem-solving questions, while the few poorly performing students did not know basic concepts.

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Course Review: Unit Self-Evaluation 2015/16

Unit title: CHEM30312-31312-61302	
Unit code: Solid State & Surfaces	
Unit co-ordinator: Martin Attfield	
No of students taking unit: 200	
Response Rate: 43/200 (21.5%)	
Other teaching staff: Robin Pritchard, Sihai Yang	
General University Questions	**Mean score**
Overall, I would rate this unit as being excellent	4.1
The feeback that I received on my work was helpful	4
This unit was well organised	4.4
The eLearning resources provided in this unit enhanced my learning experience	4.3
I found the supporting workshops for this course helpful	4.72
I found the tutorials linked to this course useful	4.4

Please summarise the main themes from students' comments:

Overall the students seem very satisfied with the whole unit as indicated by the scores for the individual questions. The students liked the balance of lectures, pod casts, tutorials and workshops and additional support of the material and quizzes on Blackboard. They also appreciated the different styles of lecture delivery and notes. The main area for improvement covered the presentation and appearance of some of the lecture handouts and slides.

Please provide feedback to students comments:

Overall we are pleased that this course was well received by the students as evidenced by the ratings and feedback provided for all aspects of the content and delivery of the course.

The following concerns that were raised by several students will be addressed:

(i) The lecture handouts will be reviewed addressing issues such as level of detail; better organisation; clarity of figures.

(ii) Additional past paper questions will be made available for section two of the course.

(iii) Distance learning students who struggle with the workshops in the course are reminded that they can contact the lecturers on the course for help on workshop questions by a variety of means (email, telephone, etc)

Additional individual concerns raised by students will be discussed in the annual review of the course and implemented where appropriate.

Please provide generic feedback on exam performance (eg questions which were particularly well/poorly answered, common mistakes)

The exam performance of this year's cohort was improved to that of previous years with average marks for each question in the 57 – 62 % range. Students performed well on exam questions similar to those in tutorials/ workshops or past exams but perform poorly on anything not familiar.

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Course Review: Unit Self-Evaluation 2015/16

Unit title: CHEM30412-40442	
Unit code: Core Organic	
Unit co-ordinator: Sabine Flitsch	
No of students taking unit: 155	
Response Rate: 31/155 (20%)	
Other teaching staff: Daniele Leonori, Roger Whitehead	
General University Questions	**Mean score**
Overall, I would rate this unit as being excellent	4.1
The feeback that I received on my work was helpful	3.8
This unit was well organised	4.4
The eLearning resources provided in this unit enhanced my learning experience	3.9

Please summarise the main themes from students' comments:

Mostly positive, students particularly enjoyed the 'teaser' type questions. We will endeavour to continue these and expand next year.

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Course Review: Unit Self-Evaluation 2015/16

Unit title: CHEM30432	
Unit code: Bioorganic and Medicinal Chemi	
Unit co-ordinator: John Gardiner	
No of students taking unit: 86	
Response Rate: 19/86 (22.09%)	
Other teaching staff: Sabine Flitsch, Cliff Jones	
General University Questions	**Mean score**
Overall, I would rate this unit as being excellent	3.5
The feeback that I received on my work was helpful	3.2
This unit was well organised	3.9
The eLearning resources provided in this unit enhanced my learning experience	3.6

Please summarise the main themes from students' comments:

Positive comments in respect to double lecture format, range of content, topics and notes.

Several comments asked for more workshop /exam question /tutorial content. A couple comments asked for more text on slides in addition to graphics, however there is limited scope to provide written descriptions of many areas which are best shown graphically. These additional comments are supported at present note-taking and podcasts.

Whilst some students indicated too much content it is noted that the survey was completed before the course ends and revision sessions completed and the high overall average in the exam suggests that post-revision understanding of the material was quite good.

Please provide feedback to students comments:

Additional tutorial/problem type work to introduce in support of the course.

Will consider augmented slides with additional notes and/or spaces for student additions and annotations.

Content will be reviewed with respect to other medicinal year 3 material for 2015/16, however noting that 50% of the cohort are not medicinal chemists and so do not have prior knowledge.

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Course Review: Unit Self-Evaluation 2015/16

Unit title: CHEM30442	
Unit code: Synthesis for Drug Discovery and Development	
Unit co-ordinator: David Procter	
No of students taking unit: 21	
Response Rate: 5/21 (23.81%)	
Other teaching staff: Matthew Ball, Leon Aarons	
General University Questions	**Mean score**
Overall, I would rate this unit as being excellent	4.2
The feedback that I received on my work was helpful	3.2
This unit was well organised	4
The eLearning resources provided in this unit enhanced my learning experience	3.8

Summary and response to students' comments:

There were no issues with the first two sections taught by David Procter and Matt Ball, from AstraZeneca. The main points that were raised related to the Drug Development workshop – part 3 of the unit. Particular concerns included:

• too pharmacy based (should only be for chemists) • groups too large

• too close to exam period • information about the workshop came late

We will certainly make sure that information regarding the workshops is circulated well before the start of the first workshop. We will also have discussions with Pharmacy to see if there is scope to develop a bespoke Drug Development workshop for chemists that addresses the points raised.

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Course Review: Unit Self-Evaluation 2015/16

Unit title: CHEM30600	
Unit code: BSc ChemProject and Labs	
Unit co-ordinator: Lu Shin Wong/Peter Gorry	
No of students taking unit: 41	
Response Rate: 11/41 (26.83%)	
Other teaching staff:	
General University Questions	**Mean score**
Overall, I would rate this unit as being excellent	3.27
The feeback that I received on my work was helpful	3.73
This unit was well organised	3.91
The eLearning resources provided in this unit enhanced my learning experience	3.45
Project S1 (TADDOL) was well designed and interesting	2.75
Project S1 (Photochemistry) was well designed and interesting	3.71
Project C1 (Nanoporous Crystal Growth) was well designed and interesting	4.25
Project C2 (Properties of Greenhouse Gasses) was well designed and interesting	3.43
Project M1 (X-Ray) was well designed and interesting	4.29
Project M2 (Vanadyl) was well designed and interesting	3.80
The literature project was a useful exercise	3.91

Please summarise the main themes from students' comments

(a) Poor English proficiency of demonstrators.

(b) Convener of S-Lab (i.e. LSW) having to split his time between multiple experiments means that the BSc students received less attention.

(c) Differences in difficulty between experiments (BS1 and BS2, BM1 and BM2)

(d) Marking on BS1 (TADDOL) harsh and students not given enough guidance on how to write up Y3 lab reports.

(e) Very little actual lab work. I only had 6 weeks in labs for 15 week course, due to having a total of 9 weeks on computational work.

Please provide feedback to students comments:

The total return for the survey was only 11 students – so statistical variation is large, indeed some of the individual mini-projects have as few as 4/5 students contributing. Replies to comments are given below

(a) and (b): We will be implementing a new lab demonstrator programme this coming year to ensure that they are all proficient with the experiments that they are supervising. They will

this be able to give more detailed support to the students with less need for the lab convener to intervene.

(c) The marks indicate that there is in fact no statistical difference in the marks between BS1 and BS2 at 63 ± 16 % and 59 ± 10 %, respectively. Students should however realise that the emphasis of the two experiments is somewhat different. BS1 has an emphasis on synthetic manupulations and analysis of regio- and stereochemistry. BS2 emphasises accurate measurements and analysis of reaction kinetics.

(d) Very detailed guidance on how to write concise scientific reports is already given in the Appendix of the handouts (in the S-Lab). It should be noted that as a Level 3 unit, students are expected not to simply rely solely on handouts, but also perform further reading of scientific papers to get a sense of the style expected of professional scientific reporting. This point is in fact unambiguously stated in the guidance information for writing-up.

(e) The course is actually 20 weeks (4 x 5 week projects) – measurement, synthesis, computation and literature. Each student is allocated one BS (synthesis), one BM (measurement) and one BC (computational) project. I have examined the rotation allocations and no student has two BC projects – so I don't see how a student can have 9 weeks on computation. My guess is one was BM1 (X-ray diffraction) which uses computer analysis to determine the structure.