Meeting Agenda

Informatics Board of Studies

2pm Wednesday 7 November 2012
Appleton Tower Level 4

Agenda

1. Apologies for Absence
2. Minutes of the Previous Meeting
3. Matters Arising
4. (15 mins) Opening more higher-level courses across years — I. Stark (Proposal)
5. (15 mins) Student access to third-year courses in fourth year — J. Hulme (Proposal, Student survey)
6. (15 mins) Course Proposal: MInf Project (Part 1) and MInf Project (Part 2) — K. Kalorkoti (Case for support and course descriptors)
7. (25 mins) Course Proposals: Design Informatics (Case for Support, Course Descriptors: Case Study 1, Case Study 2, Placement, Dissertation)
8. Notice of items for future meetings
9. AOCB
Meeting Minutes

Informatics Board of Studies

2pm Wednesday 22 August 2012
Appleton Tower Level 4

Minutes

Present: I. Stark (Convenor), M. Rovatsos (Academic Secretary), D. Aspinall, V. Nagarajan, P. Stevens, H. Thompson, A. Simpson, C. Stirling, C. Williams, M. Herrmann, J. Cheney, S. Anderson, N. McGillivray, G. Bell, V. Swann (Secretary)

1. Apologies for Absence: J. Bradfield, J. Longley, J. Hillston, M. Cryan, I. Murray, J. Wright (Maths), A. Maciocia (Maths)

I. Stark explained that this additional Board of Studies meeting was scheduled to consider changes in assessment arrangements for some courses for 2012–2013 in response to specific requests from the Board of Examiners meeting this summer. College have confirmed they are willing to accept these changes provided that they are approved by the Board before the end of August.

2. Minutes of the Previous Meeting

The minutes of the previous meeting were accepted as a true record. Most actions have now been completed, as recorded by notes in the minutes. The following actions remain:

3.2. F. Keller to raise the issue of course workload for IJP and AGTA at Teaching Committee

Teaching Committee have not met since the last Board of Studies, and this action passes to M. Rovatsos as incoming Deputy Director of Teaching

3.5 Opening up Computer Programming to Informatics students

It has since been agreed that CP should not be open to Informatics students except by special permission. Any further discussion should be brought to a later meeting of the Board.

10. Course Update for IVR

Provisional Approval had been granted by the Board on the condition that samples of the proposed assessment. M. Herrmann has recently provided these and they are being considered for approval.

UPDATE Due to a change in circumstances, this proposal has now been withdrawn. No further action is required.

14. Proposal for Amendment to PhD Research Areas

The proposal has been circulated and the approved Programme titles have been updated in EUCLID and the online prospectus.

3. Matters Arising

Nothing further reported.
4. **Course Change**: Computer Security – D. Aspinall (Proposal)

D. Aspinall proposed the reintroduction of credit weighting on the existing coursework, to contribute 25% to students’ final grade. Assessment in this course had been changed a few years ago to exam-only, with the aim of reducing pressure on students from (real or perceived) coursework overloading. Sadly, in practice this has meant students have placed much of their effort elsewhere and Computer Security has had very disappointing tutorial attendance with few students undertaking the assessed coursework. The lecturer feels this has led to poor exam performance and the recent Board of Examiners commented on a very long tail in marks. The proposed change is intended to improve students achievement of the learning outcomes for the course, and also their exam results. The change is to revert to the previous format of the course, making existing assessed exercises contribute to final course grades. In principle this is no change in workload, although in practice the hope is that students will now do the coursework rather than not.

P. Stevens noted that this was one of many observations of students only doing coursework when it directly counts towards their final grade, rather than when it might be helpful for their learning. She pointed out that this is a bad thing which we do not wish to encourage, yet these proposals validate and reinforce the practice.

There was some discussion around the wider issue of making changes to courses so near to the start of the academic year and the impact on students who may already have made their course selection; with a specific proposal from P. Stevens to delay the change until 2013/2014. The Board judged that while some students might be so affected, the proposal was a reasonable one and on balance it would be more detrimental to the class as a whole to delay its implementation.

It was clear that the issues are related to how the whole collection of courses affect each other, and there was a recommendation that Teaching Committee should look again at the issue of overall workload.

**OUTCOME**: Approved.

**ACTION**: Change in EUCLID for 2012/2013. (COMPLETED 2012-08-23)

**ACTION**: M. Rovatsos to raise coursework load at a future Teaching Committee meeting

5. **Course Change**: Language Semantics and Implementation – C. Stirling (Proposal, Sample Exercises)

C. Stirling reported a similar rationale for the change but also highlighted the additional impact that the System Design Project has on exam-only courses in Semester 2. The proposal is to reorganise existing coursework and have it contribute 20% to students' course grade. This coursework will also be more fully integrated with the exercises at tutorials.

M. Rovatsos asked what precautions were in place to identify plagiarism or collaboration in the coursework. C. Stirling stated he did not expect this to be a problem with these exercises.

**OUTCOME**: Approved.

**ACTION**: Change in EUCLID for 2012/13 (COMPLETED 2012-08-23)

6. **Course Change**: Logic Programming – A. Smaill, A Simpson (Proposal, Sample Exercise 1, Sample Exercise 2)

A. Simpson also identified similar issues with the exam-only Logic Programming Course, even though this is a Semester 1 course and therefore not in competition with SDP. He reported that, in contrast to Computer Security, there was good tutorial attendance; but low submission of coursework for assessment and feedback, particularly from the third-year undergraduate
students. The course will be assigned additional marking support in the expectation that more students will do the coursework.

**OUTCOME:** Approved  
**ACTION:** Change in EUCLID for 2012/13 (COMPLETED 2012-08-23)

7. **Course Change:** Probabilistic Modelling and Reasoning – C. Williams (Proposal)

C. Williams proposed reducing the number of assignments from 2 to 1 and the coursework weighting to 20%. The second assignment will remain as this attracted the most interest, whilst the first assignment will be addressed, in less detail, in tutorials. This course already has significant student participation in tutorials, and these changes are intended to reduce the pressure of additional coursework. A. Storkey will take over the course in 2013/14 and supports these changes.

C. Williams also requested that the course be examined in December, as he will be on sabbatical after the New Year. This change will not be relevant the following session as the course will move to Semester 2. I. Stark reported a comment by email from M. Cryan: the original discussion about permitting MSc courses to be examined in December was that these were courses which do not involve “deep learning”, and she felt PMR did not fall into this category. M. Rovatsos also commented that Semester 1 examination adversely affected final-year undergraduates on the course, as they use this period for their project work. C. Williams responded that it is a level 11 course aimed chiefly at postgraduates: this year around 8 of 80 students were undergraduates. Moreover, the Board had taken a policy decision that level 11 MSc courses could use the December diet. Nonetheless, it was emphasised that the December exam must be advertised early and clearly to students so that they can plan accordingly.

**OUTCOME:** Approved subject to providing a study pattern for the descriptor  
**ACTION:** C. Williams to send study pattern to I. Stark and M. Rovatsos for approval. (COMPLETED 2012-08-27)

**ACTION:** Change in EUCLID for 2012/13 (COMPLETED 2012-08-27)

8. **AOCB**

Nothing further reported
Opening Courses Across Years

Summary

At present the School of Informatics offers many courses at more than one SCQF level, usually 10/11 but also 9/10. I suggest simplifying most of these to the higher level only, while expanding routine access for students to the higher-level courses during their honours years. This is a pre-proposal for Board of Studies, which if received positively I will expand into a detailed proposal for a later Board.

Current Situation

At the moment most degrees in the school have an apparently simple structure for the honours years:

- In the third year, students take courses at SCQF level 9
- In the fourth year, students take courses at SCQF level 10
- In MSc or fifth year, students take courses at SCQF level 11

Exactly which courses are available to students differs with their degree programme: all of our courses are associated with one or more of AI, CogSci, CS and SE programme areas.

However, this apparent simplicity is in practice obscured by the following factors:

- Many courses are offered at more than one level, with identical lectures but some variation in coursework. For 2012/2013 there are 21 such courses.
- Many programmes allow students to take one or two courses from a higher level.
- Students often request a concession to take one or two further courses from a higher level.

I propose that we should reduce or eliminate the first component by expanding and regularising the last two.

Although our structure of level 9 in third year, level 10 in fourth year, and level 11 for fifth/MSc appears conventional, it is in fact not that prescribed by the University, whose “Models for Curricula” title years as follows:

- **Year 3:** SCQF normally at level 10, sometimes level 9.
- **Year 4:** SCQF level 10, sometimes with an opportunity for courses at level 11.

Several schools use higher-level courses than Informatics, in particular Mathematics (level 10 in year 3, levels 10 and 11 in year 4) and PPLS (only level 10 in year 3 and 4).

*Links:* More about SCQF Level Descriptors; Informatics courses with levels and programme areas; The University of Edinburgh Models for Curricula.

Proposal

I propose the following changes to our degree programmes and courses:
1. Year 3 should permit a mixture of level 9 and 10 courses
2. Year 4 should permit a mixture of level 10 and 11 courses
3. Courses should be offered only at a single level

Some existing courses might keep two levels where there is a real and useful distinction, but the default would be to keep only the higher-level version. Variations and refinements are possible, and I list some details below. In particular, we might limit higher-level courses to those contributing to the specific degree programme.

Motivation

While some courses do sincerely differentiate between level 10 and 11 versions, in many cases the variation is minimal and dual-listing is a fig leaf to permit undergraduate students to join in higher-level courses. Even where there is variation, it is only in coursework, and often in magnitude rather than depth or sophistication.

The nominal 9/10/11 strict assignment to years does not reflect practice either in delivery or student course choices; and this mismatch misleads both staff and students, as well as being an administrative headache.

The existing system is based on a presumption that our final-year undergraduate students are uniformly less academically mature and prepared than incoming masters students. Many staff report that for their classes this is false, and sometimes precisely reversed.

This change would make available to our Honours students a broader range of courses at a wider range of levels.

There is significant effort for both teaching and administrative staff for duplicated courses: keeping track of different cohorts, assignments, multiple mailing lists, entry and examination results. It is not clear to me that this is worth the cost.

All student course choices are automatically validated against our stated degree programme. Where the stated programme does not match practice, as in this, many student entries must be individually processed by hand as “non-validated”.

Details and Variations

Third year

The third-year programme for a degree would have the following general form:

120 credit points of courses, comprising
  40 credit points of compulsory level 9 courses
  80 credit points of further courses, chosen from
    level 9 and 10 courses in the degree programme area
    level 9 courses from elsewhere in Informatics
    level 9 courses from outside Informatics

Exact numbers differ between degrees, and combined degrees are more complex. There could be minimum or maximum numbers for the credits from each component: for example at least
60 credit points from within the degree programme area, and no more than 10 from outside the School. The level 10 courses might be from all Informatics, rather than just the degree programme area.

One compulsory course, Professional Issues, would remain at level 10.

**Fourth year**

The fourth-year programme for a degree would have the following general form:

- 120 credit points of courses, comprising
  - 40 credit points Honours project
  - 80 credit points of further courses, chosen from
    - level 10 and 11 courses in the degree programme area
    - level 10 courses from elsewhere in Informatics
    - level 10 courses from outside Informatics

Again, there would be differences between degrees, and some minimum or maximum numbers for the credits from each component.

**Level 9**

Introductory courses directed at honours students. Level 9 courses can only be taken in the third year; for compulsory courses, this is no problem.

**Level 10**

Honours courses which can be taken in either third or fourth year.

Some level 10 courses might perhaps be restricted to fourth-year students only.

**Level 11**

Advanced courses, aimed at students taking a one-year masters or the fourth or fifth year of an undergraduate degree.

Some level 11 courses might perhaps be open only to those in fifth year or postgraduates.

**Benefits**

The principal benefit hoped for is to align the formal description of our undergraduate degrees with current practice.

The proposal would open up even more courses to our undergraduate students, in particular more advanced ones. Students would have more flexibility to trade between breadth and depth in building their programme of courses. Exactly how much is opened up, and how much flexibility, would depend on what limits the final programmes place on the number of credit points taken at higher levels.

Students could trade level 10 courses between third and fourth years, making possible combinations previously prevented by semester imbalance or timetabling.
The proposal would remove unhelpful and sometimes meaningless duplication of courses.

**Some Possible Difficulties**

Although the course list would be 20 lines shorter, degree programmes would be no simpler. Some kinds of extra constraints (no more than X courses at level 11, or Y if in the right subject area) would make them more complex, and should perhaps therefore be avoided.

Students would need more guidance in course choices, as the list of alternatives grows longer. While some students would benefit from the opportunity to take more advanced courses, there is a risk that others might overreach themselves.

Course creep: there could be a tendency to offer only higher and higher-level courses as these would still be notionally available to students. It might be seen as important to maintain a sufficient supply of level 9 courses for those students for whom an all-level-10 programme is not appropriate. However, note that Mathematics have only a handful of level 9 courses, while PPLS have none at all.

Inequity: sometimes different students with the same degree will have taken courses at different levels. This is mitigated by having the list of courses on each student's degree transcript.

**Questions**

- Should we go to a full proposal opening level 10 courses to third year?
- Should we go to a full proposal opening level 11 courses to fourth year?
- Should these be restricted to those matching the given degree programme?
- Should there be a limit to the number of level 10(11) courses taken in third (fourth) year?
- Should we move all our level 9 courses to level 10, like Maths and PPLS?
- What should we do with “normal year taken” in the DRPS, and “year” in our own sortable list?
- Should some level 10 and level 11 courses remain restricted to the higher-year students? Which ones and why?
- Should we avoid Semester 1 examination of level 11 courses open to final-year undergraduates? For these students this period is specifically allocated to their project work.

*Ian Stark*

*2012-11-05*
Proposal to allow students access to third-year courses in fourth year

James Hulme

For 3rd-year and 4th-year students, there are currently too many constraints on which courses to take in which year. These derive from the requirements for degree programmes (which impose limits on different subjects/subject areas per year, not per programme), course pre-requisites, Semester 1/Semester 2 course delivery and balance of offerings across the year as well as across both years. Students would like to be able to take any of the courses permitted for their degree across both 3rd, 4th, and, where relevant, 5th year (subject to fulfillment of prerequisites, although some of these could be relaxed to co-requisites). Specifically, there are a number of L9 courses for which there is fairly high demand in 4th year (IAML, OS, ADS, CS). Students would not mind 4th year versions of these courses to have higher requirements, as is the case currently, for example, in ABS. Many of them comment also on a lack of guidance with regard to the impact of course choices on later years, more flexibility would imply that this becomes less critical.
### Survey results on availability of level 9/10 courses across UG3, UG4, and UG5

**1. Which courses currently on offer at level 9 would you like to see offered at level 10 as well?**

<table>
<thead>
<tr>
<th>Course</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algorithms and Data Structures</td>
<td>65.7%</td>
<td>23</td>
</tr>
<tr>
<td>Compiling Techniques</td>
<td>22.9%</td>
<td>8</td>
</tr>
<tr>
<td>Computability and Intractability</td>
<td>28.8%</td>
<td>10</td>
</tr>
<tr>
<td>Computational Cognitive Science</td>
<td>25.7%</td>
<td>9</td>
</tr>
<tr>
<td>Computer Architecture</td>
<td>28.8%</td>
<td>10</td>
</tr>
<tr>
<td>Computer Communications and Networks</td>
<td>28.8%</td>
<td>10</td>
</tr>
<tr>
<td>Computer Design</td>
<td>20.0%</td>
<td>7</td>
</tr>
<tr>
<td>Computer Security</td>
<td>45.7%</td>
<td>16</td>
</tr>
<tr>
<td>Database Systems</td>
<td>34.3%</td>
<td>12</td>
</tr>
<tr>
<td>Foundations of Natural Language Processing</td>
<td>40.0%</td>
<td>14</td>
</tr>
<tr>
<td>Introduction to Vision and Robotics</td>
<td>42.9%</td>
<td>15</td>
</tr>
<tr>
<td>Introductory Applied Machine Learning</td>
<td>62.9%</td>
<td>22</td>
</tr>
<tr>
<td>Language Semantics and Implementation</td>
<td>31.4%</td>
<td>11</td>
</tr>
<tr>
<td>Logic Programming</td>
<td>25.7%</td>
<td>9</td>
</tr>
<tr>
<td>Operating Systems</td>
<td>45.7%</td>
<td>16</td>
</tr>
<tr>
<td>Software Engineering with Objects and Components</td>
<td>28.8%</td>
<td>10</td>
</tr>
<tr>
<td>Software Testing</td>
<td>31.4%</td>
<td>11</td>
</tr>
</tbody>
</table>

answered question 35

skipped question 4
3. Do you think that by making third and fourth year more uniform you would be more pressured into planning the courses you want to take for the next two years rather than just the next year?

No, not really. It would probably reduce the pressure, since you would know that even if you don't make the perfect choice in 3rd year, you can always take the courses you missed in 4th year.

No. You have to think about 4th year prerequisites when you choose 3rd year courses anyway.

yes

yes

No

Just because there are more courses offered it doesn't necessarily make things any more difficult. In fact I would say it makes things easier as you can take more classes you are interested in and not worry that they aren't what is best for you.

I think the existing system doesn't do enough to explain the consequences of third-year course choices, nor the impossibility of taking level 9 courses in third year. In other words, there is not enough information currently about planning for third and fourth years. Making
third and fourth years more uniform would relieve pressure in my opinion.

If doing this how I suggested it in 2, I think most of the people would either do just level 10 courses in UG4, or at most do two level 9 courses insted of a level 10. This way, the student will take additional level 9 only if very determined to pursue this topics, having the extra difficulty, and would have to miss just one potential level 10 course.

On the contrary, the pressure would be lowered, because you could take all the courses you want and you would not have to "fill" some credits with courses that are not of interest.

Yes

Potentially, yes. But as it is today, the courses you pick in third year still strongly affect the choices you make in fourth year, partially due to prerequisites and simply familiarity with the topic. If the choices were more flexible both years (pre-requisites becoming co-requisites?) then maybe there will be less feeling of commitment when picking third year courses (which I see as a good thing).

No

No

Probably but I don't think this would be a bad thing. As long as people understand that their plans can change and strongly recommending that they stick to in-year courses only then the greater flexibility can be taken advantage of by those who could value from it.

Yes, because you would be left with a more limited set of options for the subsequent year. Not necessarily a bad thing, but not necessarily good either.

Why is that a bad thing?

Yes

No

It blurs the teaching path. University should teach each year more advanced courses what drives a student to become an expert in his area of interest.

Yes. A clear roadmap of prerequisites would be nice.
No.

Not really, it would just be more flexible. Either way I don't think it would be harmful to anyone

no

Yes.

I think it should be up to the student to decide his/her courses and the tutor should just help with the choices (e.g. "I want to do research in AI. Which courses should I choose?"; "I want to be a back-end developer for unix servers. Which courses would suit me?" etc. )

No

No, exactly the opposite. I would know that if I didn't take some course in 3rd year, I would still have a chance to take it the following year if I found it useful.

Actually it is the other way around

I don't think students would need to plan ahead any more than we currently do.

4. Any other comments

I feel pressured in the current system. From the get go I had to plan which courses to take in which years to ensure I could get on to courses I wanted later on. Having said that, come my fifth year I've found that there are many areas that I'm unable to touch due to not taking foundation courses in 3rd year. I would have taken these courses, if I had enough credits! I guess this only really applies to people like myself who wish to gain a broader understanding of Informatics, and less to those who wish to specialise.

Also, it would be useful for MInf students. For example I missed to take some courses in 3rd year which are prerequisites for Level 10 courses which I wanted to take in 4th year. However, if I was able to take the Level 9 courses in 4th year, I would have been able to take the Level 10/11 courses I was interested in in Year 5.
It would be a huge help for people who decide they want to take a 4th year course but they've missed the 3rd year prerequisites and for those that find 3rd year courses generally more interesting

If this does not go ahead, please try and get certain courses as requirements for the masters. Currently we have a free reign on what courses we take (except CCS) and it can have detrimental effects on our 4th and 5th years due to not taking classes which are exceptionally useful.

I am extremely curious why all the UG3 exams are at the end of the year, instead of being split into two chunks.

Fourth year students should be allowed to take more than 10 credits (20 with permission) at level 11, because the difference in difficulty is much smaller between level 10 and 11 than between level 9 and level 10.

This is especially a problem for students who do their third year abroad. Some courses aren't offered abroad in the exact incarnation they are at Edinburgh, so you reach the fourth year in the awkward position of not having certain prerequisites for level 10/11 courses and not being allowed to take them either.

I took advantage of the option to take level 11 courses during the fourth year (4 of them) but never wished I could take third year courses in the fourth year. However, I guess somebody who knows what they want to do in their honours project at the start of the third year may have greater flexibility for choosing courses relevant to their project early and go back to the not so relevant courses later.

I suppose level 9 courses should be easier than level 10 courses so to be fair the only way this would work is if students are allowed to take extra credits with level 9 courses in their fourth year. Otherwise, either 3rd year courses have to be made more difficult or someone might graduate with more level 9 courses than others which is unfair.

Stop making university worse, start putting a pressure on students to learn and advance, add more advanced courses, involvement possibilities inside the School, and beyond, e.g. encourage students to take part in computer science conferences etc. For example, I do not know how much money it cost the university to generate the idea of personal tutor and implement a whole side system. But, it is totally useless, my personal tutor (prior director of study) still is an absolute moron, waste of time, and has no answer at all for my questions. Maybe, more beneficial would be thinking about mentoring schemas
inside the School, where more acknowledged members of the School advise students on their goals, development path, and give the know-how which cost years for student to learn on his / her own fails. We do not need handicaps, but the people who will be able to shape the future generation.

Having been on exchange this would have been very useful as I did lots of level 10 equivalents in third year but wasn't able to do a course in compilers nor operating systems when away.

I think it's a great idea to level the courses up, so that a student can freely choose what to do. For example, in my third year I'd like to take most of fourth year AI courses so that for my final year I'll be able to get a quasi-postgrad academic experience and be better prepared for research in a given field.

No

In the School of Mathematics, most 3rd and 4th year courses are level 10. I know from experience that this offers much greater flexibility in course selection, and I believe this system would work for Informatics as well. I don't really think making 3rd year courses level 10 would require any major changes to the syllabus. I think our courses are very demanding even for level 10 standards.

The levels of the courses does not necessarily correspond to their level of difficulty anyway, so they may do whatever they want
Proposed change to MIInf4 project courses
Kyriakos Kalorkoti
(October 31, 2012)

Introduction
Currently students entering MIInf4 are required to choose a suitable project from the list of proposed UG4 projects. During their fourth year they must take the following two courses, the descriptions are from the official course pages:

MIInf Project Planning (20 points): MIInf Project Planning is the first of three courses which comprise the MIInf Project process. Collectively, these courses involve the student in a substantial piece of practical work, conducted individually under the supervision of a member of teaching staff. They allow students to demonstrate their ability to devise, organise and carry out a substantial investigation into a problem in Informatics, according to sound scientific and engineering principles, and to deepen the student’s competence in a particular area of Informatics. The project will normally involve the construction of an artifact, whether software, hardware, a robotic device, some other artifact incorporating computation, or some combination of these.

During the MIInf Project Planning course, the student will critically evaluate the relevant literature and develop a structured project proposal of around 8 pages. This will use the surveyed literature to justify experimental design choices, will explain key hypotheses and methodological approaches and will outline project management issues. A good plan will provide a convincing case for the high quality of the proposed project. It will show an awareness of relevant prior work and include a clear statement of the problems and hypotheses to be addressed and why they are important. It must also make clear exactly how the methods used to investigate those hypotheses will yield interesting results.

MIInf Project Phase 1 (20 points): MIInf Project Phase 1 is the second of three courses which comprise the MIInf Project process. [Rest of paragraph as above.]

In MIInf Project Phase 1, the student begins execution of the project plan and writes a short interim progress report, describing work conducted so far and any resulting changes to the original plan.

In fifth year they complete this with:

MIInf Project Phase 2 (60 points): MIInf Project Phase 2 is the third of three courses which comprise the MIInf project process. [Rest of paragraph as above.]

In MIInf Project Phase 2, the student completes execution of the project plan and writes a comprehensive project report. The plan may evolve as the project proceeds, in response to changing opportunities, insights and experimental progress. At a number of points during this phase, the student is required to make a short oral presentation of their work. These presentations, though compulsory, are not assessed.

The fourth year structure is problematic in various ways:

1. If a student in MIInf4 is unable to continue into MIInf5 for some unavoidable good reason the only degree we can award is an Ordinary, no matter how well the student has performed.

2. There is evidence from supervisors that fourth year MIInf students are finding it difficult to engage with the process as it is.
3. Transfer into the MInf degree from any honours degree during UG4 is quite problematic especially once the year is well under way.

4. The exceptional structure creates extra administrative overheads, with some tasks being carried out by the MInf Project coordinator and others by the UG4 project organizer.

5. There is good evidence (from student feedback) that in some cases supervisors do not appreciate the different nature of this fourth year structure and make inappropriate demands.

6. Marking the various parts of the MInf project process requires staff to switch context from the familiar undergraduate project marking one. It seems unwise and unnecessary to create yet another process.

The first of these is the most serious problem. The MInf degree is designed as a 5 year course and anybody entering it is signing up to that; there is no proposal to change this. In particular it is not proposed that students can elect to leave at fourth year as a matter of right. However there are bound to be cases where a student has to leave due to circumstances beyond his/her control (e.g., financial or family reasons). All our honours degrees require students to undertake a 40 point project so that MInf students are automatically ruled out from such a degree. Note that in the case of some joint degrees, e.g. Computer Science and Physics, the partner department organizes its 40 points worth of project work as two 20 point courses. It is a University requirement that final year honours students undertake 40 points work on a project or dissertation (see The Curriculum Framework – Models for Degree Types).

The second problem is also very serious.

The third problem is of some significance. It would clearly be good to be able to welcome transfers into the MInf degree from excellent students, at the moment we are hampered by the non-standard fourth year structure of the MInf degree.

The administrative and supervision problems are not on the same scale but it seems unwise to create problems that are easily avoided.

The point about marking is also fairly serious. The MInf project is an undergraduate one and it seems sensible to keep the process within the familiar one for UG4 projects. This proposal aims to achieve that.

**Regulations on projects work**

In The Curriculum Framework – Models for Degree Types the requirements for an Integrated Masters with Honours in a single discipline state:

> Years 4 & 5 (SCQF level 10/11)
> 240 points at levels 10/11 consisting of:
> At least 200 points in A of which at least 120 points must be at level 11 and at least 60 must be in the form of dissertations or projects or other pieces of work (e.g. synoptic papers) that demonstrate that the student can show proficiency in research and/or analytical skills relevant to advanced work in the Discipline.
> For the remaining 40 points there should wherever possible be the opportunity for appropriately qualified students to take at least 20 points at levels from other Disciplines or Subject Groups of their choice from an approved list of courses or with the approval of the Head of School.

This document is dated 30 March 2006, I have been unable to find anything more recent. The General Undergraduate Degree Regulations do not help here.
Our degree exceeds this by 40 points, since ‘MInf Project Planning’ and ‘MInf Project Phase 1’ fit into the requirement of dissertation or project type work.

The SCQF credits guide simply states

At least 180 credits of which a minimum of 150 is at level 11. For integrated Masters, at least 600 credits of which a minimum of 120 is at level 11. (Credit definitions do not normally apply to the MPhil — see Doctoral Degrees)

The proposed change

All the drawbacks mentioned above can be avoided by a simple change: replace ‘MInf Project Planning’ and ‘MInf Project Phase 1’ with a single 40 point course ‘MInf Project (Part 1)’ and, for consistency, rename ‘MInf Project Phase 2’ to be ‘MInf Project (Part 2)’.

The new course would be undertaken in exactly the same way as other UG4 projects without the need for special administrative arrangements. Calculation of marks would follow the standard UG4 approach. Students who enter fifth year would continue working on the project going deeper and producing new work. In their fifth year report they would be instructed to give a brief (no more than 10 pages) description of what was achieved in fourth year, otherwise they must report on the new work.

Currently when choosing a project MInf students are asked to discuss it with the relevant supervisor to ensure its suitability for MInf. Naturally this requirement would not change. It is worth noting that many UG4 project reports conclude with a list of work that would have been carried out had there been time; MInf4 students can say ‘will’ rather than ‘would’.

It is also proposed that the MInf Project (Part 2) is made into a 40 point course with the remaining 20 points being made up of appropriate courses. In theory it could be reduced to 20 points but there would then be an odd imbalance between the amount of project work undertaken in fifth year as opposed to fourth year. It would also mean that either the amount of project work (e.g., implementation) would be seriously truncated or the write up would be perfunctory.

A possible objection to the proposed change is that students would now face the possibility of failing a 40 point course rather than 20 points. This is not a serious concern since if they fail either of the 20 point courses in fourth year they cannot progress and cannot be awarded an Honours degree.

The proposed change is a fairly minimal one that resolves a potentially difficult situation. The alternative is to change our Honours degree regulations to allow the project to be made up of two 20 point courses. However this would go against a long established and highly successful study pattern and would, in my view, be a serious error. Moreover such a change would not address student concerns at the fourth year level.

In terms of the marking process, the marking form should make it clear to staff that MInf students do a two part project (but each part is a 40 point project). Thus for Part 1 a student could quite reasonably argue that a certain aspect is best left for Part 2; the markers will decide if the work actually carried out still amounts to a 40 point project.

Comparison with other schools

In Engineering for the Electronics and Computer Science (MEng Hons) degree fourth students must take ‘MEng Electronics and Informatics Project Phase One’ which is worth 20 points and is level 11. In fifth year students must take ‘MEng Electronics and Informatics Project Phase Two’ which is worth 60 points and is level 11.
In Mathematics for the Mathematics (MMath Hons) degree fourth year students can take ‘Mathematics Project’ which is worth 20 points and is level 10 (this is not compulsory). In fifth year students must take ‘Mathematics Dissertation’ which is worth 40 points and is level 11.

In Physics and Astronomy there is no compulsory project course in fourth year, just as in Mathematics. In fifth year students must take the ‘MPhys Project’ which is worth 40 points and is level 11. They must also take the ‘MPhys Project Presentation’ which is worth 10 points and is level 11.

Thus some schools only require 40 point projects but it is unclear if they classify other compulsory courses as being ‘in the form of dissertations or projects or other pieces of work’.

Nature of the exit degree awarded

Students on the MInf degree take a fairly balanced set of courses across Informatics up to third year and have a freer choice in fourth and fifth years. The most likely existing degree suitable for fourth year exit is the AI/CS one. However the nature of the degree offered should be left up to the Board of Examiners since the exact balance of courses cannot be known in advance.

An alternative would be to create a new MInf (Hons) degree but this would be a bad idea for the following reasons:

• The distinctive nature of the MInf degree is that it is our only five year offering and this proposal does not seek to change that. It follows that, assuming the case is accepted, we would not recruit into the MInf (Hons) degree.

• We already have a large number of Honours degrees many of which have a low intake, adding one more would just dilute the offering as well as complicate organization.

• We are seeking to address a rare exceptional circumstance and no matter what curriculum a student undertakes there will be a degree with reasonably close requirements.

1 Calendar changes

The administrative aspects of the various entries are not given below in order to save space. All entries that are not shown are the same as for the UG4 project page or the existing MInf Project Phase 2 page as appropriate.

The changes must be rolled out over two years so each one is preceded with the appropriate academic year.

1.1 Course entry changes

MInf Project (Part 1)

WEF: 2013/14. Delete the entries for MInf Project Planning and MInf Project Phase 1. Insert entry

Undergraduate Course: MInf Project (Part 1) (INFR100??)

Credit level SCQF Level 10 (Year 4 Undergraduate)

Credits 40
Course description This is the first half a major project that runs over the fourth and fifth years. It is intended to allow students to demonstrate their ability to organise and carry out a substantial piece of work. The project involves both the application of skills learnt in the past and the acquisition of new skills. Typical areas of activity will be: gathering and understanding background information; solving conceptual problems; design; implementation; experimentation and evaluation; writing up.

The project is conducted individually by the student under the supervision of a member of teaching staff. The project specification is usually provided by a member of staff, but students are also free to specify their own project. All project specifications must be approved by the Project Coordinator.

The project will normally involve the construction of an artifact, whether software, hardware, a robotic device, some other artifact incorporating computation, or some combination of these.

This first half consists of a project that is self contained but it should be planned in such a way as to allow for expansion and greater depth for the following year.

Summary of Intended Learning Outcomes

1. Structure and summarise a body of knowledge relating to a substantial project topic in Informatics.
2. Critically evaluate previous work in the area.
3. Conduct a programme of work in further investigation of issues related to the topic.
4. Discuss and solve conceptual problems which arise during the investigation.
5. Justify design decisions made during the investigation.
6. Critically evaluate the investigation.
7. Present work orally and visually, with demonstration of working artifacts where appropriate.

Assessment Information The project is assessed on the basis of a written report which should typically contain:

- Title page with abstract (a one or two paragraph summary of the contents). The title page must include a prominent line stating ‘MInf Project (Part 1)’.
- Introduction and synopsis, in which the project topic is described and set in the context of published literature, and the main results are briefly summarised.
- Discussion of the work undertaken, in which the various sub-problems, solutions and difficulties are examined.
- If appropriate, a description of experiments undertaken, a presentation of the data gleaned from them, and an interpretation of that data.
- Conclusion, in which the main achievements are reviewed. In addition unaddressed problems and directions for the MInf Project (Part 2) are presented.
- Bibliography.

After submission the student makes a presentation to the two markers. This presentation does not make an explicit contribution to the overall mark, but it does inform the markers’ assessment of the report.
MInf Project (Part 2)

**WEF: 2014/15.** *Delete* the entry for MInf Project Phase 2. *Insert* entry

**Undergraduate Course:** MInf Project (Part 2) (INFR110??)

**Credit level** SCQF Level 11 (Year 5 Undergraduate)

**Credits** 40

**Course description** This is the second half a major project that runs over the fourth and fifth years. It is intended to allow students to demonstrate their ability to organise and carry out a substantial piece of work. The project involves both the application of skills learnt in the past and the acquisition of new skills. Typical areas of activity will be: gathering and understanding background information; solving conceptual problems; design; implementation; experimentation and evaluation; writing up.

The project is conducted individually by the student under the supervision of a member of teaching staff. The project specification is usually provided by a member of staff, but students are also free to specify their own project. All project specifications must be approved by the Project Coordinator.

The project will normally involve the construction of an artifact, whether software, hardware, a robotic device, some other artifact incorporating computation, or some combination of these.

This second half continues from MInf Project (Part 1) starting with work identified in the Conclusion section of the report for MInf Project (Part 1). It is expected that work here will go into greater depth, the work carried out is not necessarily limited to that which was identified in MInf Project (Part 1).

**Summary of Intended Learning Outcomes**

1. Structure and summarise a body of knowledge relating to a substantial project topic in Informatics.
2. Critically evaluate previous work in the area.
3. Conduct a programme of work in further investigation of issues related to the topic.
4. Discuss and solve conceptual problems which arise during the investigation.
5. Justify design decisions made during the investigation.
6. Critically evaluate the investigation.
7. Present work orally and visually, with demonstration of working artifacts where appropriate.

**Assessment Information** The project is assessed on the basis of a written report which should typically contain:

- Title page with abstract (a one or two paragraph summary of the contents). The title page must include a prominent line stating ‘MInf Project (Part 2)’.
- Introduction and synopsis, in which the project topic is described and the achievements of MInf Project (Part 1) are briefly of summarised (no more than 10 pages).
- Discussion of the work undertaken, in which the various sub-problems, solutions and difficulties are examined.
• If appropriate, a description of experiments undertaken, a presentation of the data gleaned from them, and an interpretation of that data.

• Conclusion, in which the main achievements are reviewed, and unsolved problems and directions for further work are presented. References to MInf Project (Part 1) would be relevant here.

• Bibliography.

After submission the student makes a presentation to the two markers. This presentation does not make an explicit contribution to the overall mark, but it does inform the markers’ assessment of the report.

1.2 DRPS changes

• WEF: 2013/14. In ‘Year 4 compulsory courses’ delete ‘INFR10037 MInf Project Planning’ and ‘INFR10038 MInf Project Phase 1’. Replace with ‘INFR100?? MInf Project (Part 1)’. Under ‘Credits’ insert 40.

• WEF: 2014/15. In ‘Year 5 compulsory courses’ delete ‘INFR11063 MInf Project Phase 2’. Replace with ‘INFR110?? MInf Project (Part 2)’. Under ‘Credits’ delete 60 and replace with 40.

• WEF: 2014/15. In ‘Year 5 course options’ delete ‘Select exactly 50 credits’. Replace with ‘Select exactly 70 credits’.

1.3 Other changes

The MInf web pages (especially those relating to projects) must be updated. This is a matter of reflecting the changes described above and will be carried out by the MInf Project Coordinator. In particular the delayed changes to the fifth year should be described here to avoid misunderstanding; this is particularly important for the time when students are choosing projects since, as mentioned above, they are asked to discuss with potential supervisors if a project is suitable for the MInf process. It is thus critical to signal the changes on the MInf web pages before third year students are invited to choose projects.

The UG4 project marking form needs to have a note added drawing attention to the two part nature of the MInf project. The notes for guidance likewise need to add a short explanation, with care taken over the transitional period. These changes are best carried out by the UG4 Projects Organizer.
Informatics Board of Studies
Design Informatics Course Proposals

Case for Support 5/10/12 (revised 5/11/12)

We propose the addition of 4 new courses to be undertaken by students registered in Informatics. We *no longer* propose the addition of 1 new course to be undertaken by students registered in ECA. Note also that Design for Informatics is now Design Informatics: Histories & Futures, offered by ECA. This requires a change to the DPT.

The new Informatics-offered courses are:

- Case Studies in Design Informatics 1
- Case Studies in Design Informatics 2
- Design Informatics Placement
- Masters Dissertation (Design Informatics)
  - Note new title, with “Masters” in place of “MSc”
  - Note that the study pattern for this is designated primarily in terms of private study/other, rather than non-timetabled assessed assignments. This parallels the existing MSc Dissertation in Informatics.

One distinctive feature is that learning is strongly oriented around project work – both individual work, and small group-work, and so all assessment is via coursework, with no exams associated with new courses. Note, however, that Informatics students would be taking at least 40 points worth of existing courses which typically do use exams for assessment.

It should also be noted that the course descriptors attached abstract away from details of projects or case studies that may vary from year to year. Therefore, after a diagram showing the final structure of the degrees, this document provides an exemplar for a specific course which relies on varying projects or case studies. Given the close link between CSDI1 and CSDI2, this should help give a flavour for both courses.
Structures of degrees in Design Informatics

MA - 1 year

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<th>Stage 2</th>
<th>Stage 3</th>
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<td>(ECA) Design Elective 2 (ending) = 20</td>
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<td>ECA Courses</td>
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<td>MFA - 2 year</td>
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<th>Stage 7</th>
<th>Stage 8</th>
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</thead>
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<td>Delivered to MSc and MA-MFA</td>
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<tr>
<td>(ECA) Design Informatics History &amp; Futures (weeks) = 20</td>
<td>(IN) Informatics Elective (ending) = 20</td>
<td>(IN) Design Informatics Elective (ending) = 20</td>
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<tr>
<td>MSc - 1 year</td>
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<th>Stage 6</th>
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<tr>
<td>110 credits</td>
<td>SCOF 11</td>
<td>ECA Courses</td>
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<tr>
<td>(ECA) Design Informatics History &amp; Futures (weeks) = 20</td>
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<td>MSc - 2 year</td>
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<th>Stage 6</th>
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<th>Stage 8</th>
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<tbody>
<tr>
<td>120 credits</td>
<td>SCOF 11</td>
<td>ECA Courses</td>
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<tr>
<td>(ECA) Design Informatics History &amp; Futures (weeks) = 20</td>
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<td>(IN) Case Study Design Informatics 2 (weeks) = 30</td>
<td>(IN) Design Informatics Project (weeks) = 30</td>
</tr>
</tbody>
</table>
Case Studies in Design Informatics 1

Exemplar:

In the first part of the course, the class is split into small groups. A first, core case study is introduced via lectures, and focuses on a recent informatics project where a product or service is an important deliverable. One case study arises from the work around the internet of things, specifically the work of Speed and collaborators on “The Internet of Old Things”, which arose from the Tales of Things project, and has been exploited by Oxfam in their new Shelflife project. The key idea is that donations of physical objects to a charity can have written or spoken memories attached to them by their donor, and these memories can be made available to potential purchasers of the physical objects. Presentations are normally given by members of the relevant project team. Groups then work to identify important features of the project, and analyse decision decisions to identify possible extensions or improvements, and to identify possible new applications of the core techniques. Documentation on possible extensions are assessed by academic staff.

In the second part of the course, each group works on its own, new case study. The case study varies from year to year, but is normally derived from an active or recent design informatics project - conducted by, or known to, the second year student leader - where a product or service is an important deliverable. One case study arises from the idea of characterful synthetic speech, taking advantage of work from CSTR on human-quality speech synthesis, and from ILCC on textual agents with personality. Under the guidance of its leader, each group works to identify important features of their project, and analyse decision decisions to identify possible extensions or improvements, and to identify possible new applications of the core techniques. The group is encouraged to anchor their exploration by first investigating how the new techniques might bear on the ideas explored in the first core study. So, in this instance, the question would be how to harness characterful synthetic speech in the context of the internet of old things, either to enrich the original application, or to port the core techniques to a completely new domain. Selecting a specific extension, scoping it, and developing a plan for implementing and testing it constitute the main documentation to be assessed by academic staff.

In the final part of the course, each individual reflects on what they have learned so far, and on how well the group functioned, specifying which aspects of its activity were successful, and which less so. Each individual writes a term paper synthesising their reflections and identifying which skills and strategies they need to develop further.

The core aims of this course mean that the examples used on an annual basis have to be re-assessed for current relevancy. However, the primary focus is on projects relating to groups of humans interacting with, and via, networks of objects.

Reading list:

http://www.springerlink.com/content/v8405w81p2j35451/


http://www.tandfonline.com/doi/abs/10.1080/14626268.2010.555915

Tales of Things: www.talesofthings.com/

Oxfam Shelflife: http://shelflife.oxfam.org.uk/
Course Title: Case Studies in Design Informatics 1

SCQF Credit Points: 20
SCQF Credit Level: 11
Normal Year Taken: PG
Availability: Not available to visiting students

School Acronym: CSDI1

Short Course Description:

This course introduces students to real examples in the emerging field of Design Informatics. A key component of the course is the detailed evaluation of and rationale behind multiple current research projects that highlight the limitations of the state of the art, or novel use of the latest theories and technologies. The primary learning outcome is the development of specialist critical evaluation skills that can then be applied to future industrial application or academic research into Design Informatics.

Students work in groups of 5-6, under the direction of a senior student (normally, one who is enrolled in CSDI2), with a member of academic staff as mentor.

Entry requirements

- Pre-Requisite Courses:

- Co-Requisite Courses:
Design Informatics: Histories and Futures

- Prohibited Combinations:

- Other Requirements:

- Additional costs:

Course delivery information:

Delivery period: Sem 1

Summary of Intended Learning Outcomes:

A student who has successfully completed this course should be able to:

1 - Discuss the research and design processes behind a small set of design informatics projects.
2 - Describe, with examples, the practical limits of current technologies and theories.
3 – Analyse in groups problems and suggest potential solutions, which can or should combine computational and design thinking
4 - Extend, through engineering and/or design methods, specific features or applications identified in one real example
5 - Critically evaluate research literature in the field

Assessment Information:

Written Examination 0
Assessment

- 30% of assessment is for the team’s multimodal documentation of their response to the core case study.
- 40% is for the team’s multimodal documentation of a new case study.
- 30% is for the individual’s written term paper (3000 words) describing an appropriate design informatics case not covered in the course.

Special arrangements:

Additional Information:

- Academic description:
- Syllabus:

The syllabus divides into three phases, with the middle phase being the longest. Only the first phase is associated with lectures.

- In the first part of the course, the class is split into small groups. A first, core case study is introduced via lectures. The case study varies from year to year, but is normally derived from an active or recent informatics research project where a product or service is an important deliverable. Presentations are normally given by members of the relevant project team. Groups then work to identify important features of the project, and analyse decision decisions to identify possible extensions or improvements, and to identify possible new applications of the core techniques. Documentation is assessed by academic staff.

- In the second part of the course, each group works on its own, new case study. The case study varies from year to year, but is normally be derived from an active or recent design informatics project conducted by, or known to, the second year student leader where a product or service is an important deliverable. Under the guidance of its leader, each group works to identify important features of their project, and analyse decision decisions to identify possible extensions or improvements, and to identify possible new applications of the core techniques. Selecting a specific extension, scoping it, and developing a plan for implementing and testing it constitute the main documentation to be assessed by academic staff.

- In the final part of the course, each individual reflects on what they have learned so far, and on how well the group functioned, specifying which aspects of its activity were successful, and which less so. Each individual writes a term paper synthesising their reflections and identifying which skills and strategies they need to develop further.

The core aims of this course mean that the examples used on an annual basis have to be re-assessed for current relevancy. However, the primary focus is on projects relating to groups of humans interacting with, and via, networks of objects.

- Transskills:
- Reading list:
Readings are provided by teachers. Each week students are asked to read one or more papers. The list varies from year to year.

- Study Pattern:
Lectures       6
Tutorials      20
Timetabled Laboratories 0
Coursework Assessed for Credit  70
Other Coursework / Private Study 104
Total          200

Relevant QAA Computing Curriculum Sections:
Course Title: Case Studies in Design Informatics 2

SCQF Credit Points: 20  
SCQF Credit Level: 11  
Normal Year Taken: PG  
Availability: Not available to visiting students

School Acronym: CSDI2

Short Course Description:

This course extends students' engagement with real examples in the emerging field of Design Informatics. A key component of the course is the detailed evaluation and rationale behind several current research projects that highlight the limitations of the state of the art, or novel use of the latest theories and technologies. The primary learning outcome is the development of specialist reflective and leadership skills that can then be exploited in future industrial application or academic research into Design Informatics.

The senior students following this course as part of a two-year masters work with junior students (normally, who are enrolled in CSDI1) in groups of 5-6, under the direction of the senior student, with a member of academic staff as mentor.

Entry requirements

- Pre-Requisite Courses:  
  CSDI1

- Co-Requisite Courses:

- Prohibited Combinations:

- Other Requirements:

- Additional costs:

Course delivery information:

Delivery period: Sem 1

Summary of Intended Learning Outcomes:

A student who has successfully completed this course should be able to:

1 - Manage and lead the activities of a small group of talented individuals  
2 - Critically evaluate personal experience in addressing problems and suggesting potential solutions  
3 - Introduce selected problems as potential new case studies  
4 - Lead discussion in analysing problems and scoping solutions  
5 - Mentor colleagues who extend, through engineering and/or design methods, specific features or applications identified in one real example

Assessment Information:
Written Examination 0
Assessed Assignments 100
Oral Presentations 0

Assessment
- 30% of assessment is for the team’s multimodal documentation of their response to the core case study.
- 40% is for the individual’s proposal for new content for future delivery on the course.
- 30% is for the individual’s written critical evaluation of the successes and failures of the team, and reflective analysis of learning points for team leadership.

Special arrangements:

Additional Information:
- Academic description:
- Syllabus:

The syllabus divides into three phases, with the middle phase being the longest. Only the first phase is associated with lectures.

- In the first part of the course, the class is split into small groups; A first, core case study is introduced via lectures. The case study varies from year to year, but is normally derived from an active or recent informatics research project where a product or service is an important deliverable. Presentations are normally given by members of the relevant project team. Groups then work to identify important features of the project, and analyse decision decisions to identify possible extensions or improvements, and to identify possible new applications of the core techniques. Documentation is assessed by academic staff.

- In the second part of the course, each group works on its own, new case study. The case study varies from year to year, but is normally derived from an active or recent design informatics project - conducted by, or known to, the second year student leader - where a product or service is an important deliverable. Under the guidance of its leader, each group works to identify important features of their project, and analyses decision decisions to identify possible extensions or improvements, and to identify possible new applications of the core techniques. Selecting and scoping a new project, and developing a proposal for using it in future course delivery constitute the main documentation assessed by academic staff; the team leader’s proposal can be based on, but is not confined to, their group’s exploration of a new case study.

- In the final part of the course, each individual reflects on what they have learned so far, and on how well the group functioned, specifying which aspects of its activity were successful, and which less so. Each individual writes a term paper synthesising their reflections and identifying which skills and strategies they need to develop further. The team leader’s report focuses especially on issues to do with project management and team leadership.

The core aims of this course mean that the examples used on an annual basis have to be re-assessed for current relevancy. However, the primary focus is on projects relating to groups of humans interacting with, and via, networks of objects.

- Transskills:

Throughout the course, there are peer support labs for the students on this course, who function as team leaders for students pursuing CSDI1.

- Reading list:
Readings are provided by teachers. Each week students are asked to read one or more papers. The list varies from year to year.

- Study Pattern:

Lectures  6  
Tutorials  20  
Timetabled Laboratories 10  
Coursework Assessed for Credit  70  
Other Coursework / Private Study  94  
Total  200  

Relevant QAA Computing Curriculum Sections:
Course Title: Design Informatics Placement

SCQF Credit Points: 0
SCQF Credit Level: 11
Normal Year Taken: PG
Availability: Not available to visiting students

School Acronym: PLACE

Short Course Description:

The Design Informatics Placement gives students practical experience of (a) working on design informatics problems in the commercial or public sector; and (b) working as members of a team. The placement involves applying and combining material from several courses to act as a competent member of a team, whose size and purpose will vary depending on the organization supporting the placement.

Placements are industrially/academically co-supervised projects with start-ups and established companies (SMEs or larger), and public sector bodies, including research organisations. The smaller hosts are typically local; the larger can be elsewhere in the UK. Length of placement varies between one and three months.

Entry requirements

- Pre-Requisite Courses:
  DWD, DIP

- Co-Requisite Courses:

- Prohibited Combinations:

- Other Requirements:

- Additional costs:
  No additional costs of the School. Host organisations must agree in advance to meet any relevant travel/accommodation/subsistence costs.

Course delivery information:

Delivery period: Block 5 (Sem 2) and beyond

Summary of Intended Learning Outcomes:

A student who has successfully completed this course should be able to:

1 – Demonstrate that they can contribute to the activities of a small group, usually in the commercial sector
2 - Critically evaluate personal experience in addressing problems and suggesting potential solutions
3 - Construct a multimodal presentation communicating these critical reflections

Assessment Information:

Written Examination 0
Assessed Assignments 100
Oral Presentations 0

Assessment:
100% of assessment is for the multimodal presentation created by the student to capture their reflective analysis.

Special arrangements:

Placements involve students spending from 1-3 months onsite with a host company or organisation. Since the Design Informatics Community of Interest is the source of host companies, many of these are local to Central Scotland, but any interested UK-based company in our Community can be considered as a host. Host companies may pay the student a salary or stipend at their own discretion, but must agree to cover travel/accommodation/subsistence costs for students as required, depending on their location. In the case of non home/EU students, any discretionary salary arrangements must be compatible with regulations of the UK Borders Agency.

Additional Information:

- Academic description:

- Syllabus:

Placements are project based and the tasks to be carried out are defined in advance, in consultation between a member of the host organisation and an academic member of staff, who act as co-supervisors. Supervisors are briefed to ensure that each project has sufficient academic content to be assessable, and sufficient relevance to the host to have potential for follow-up. Supervisors must also ensure that projects avoid any ‘mission-critical’ involvement with the host’s operations and otherwise manage any potential conflict between the host’s commercial/operational interests and student’s academic interests. Students and supervisors meet regularly (face to face or virtually), normally weekly, throughout the placement.

The placement has a variable term, with a length of up to three months.

- Immediately prior to the placement, the student works through a catalogue of types of experience they wish to gain, and identifies those they wish to prioritise.
- During the placement, they keep a diary recording examples of activities which increase experience in the selected areas, and their progress through the project.
- Following the placement, an accessible personal reflection is compiled, and made available for academic assessment before the beginning of the next academic year.

This form of assessment recognises that placement projects with external hosts may not succeed as planned, for reasons beyond the student’s control. A reflective analysis provides the means for all students to submit a report whose assessment is not tied to the success or failure of the placement projects themselves.

- Transkills:

- Reading list:

- Study Pattern:

Lectures 3
Tutorials 0
Timetabled Laboratories 0
Coursework Assessed for Credit 35
Other Coursework / Private Study 62
Total 100

Relevant QAA Computing Curriculum Sections:
Course Title: Masters Dissertation (Design Informatics)

SCQF Credit Points: 60  
SCQF Credit Level: 11  
Normal Year Taken: PG  
Availability: Not available to visiting students  
School Acronym: DISSDI

Short Course Description:

This is a major piece of full-time independent work which occupies the final months of the MSc course. If taken as part of a one-year masters, it accounts for all of a student's time following their course exams. If taken as part of a two-year masters, it accounts for 1/3 of student time during Semester 1 of Year 2, and 2/3 of student time in Semester 2 of Year 2. It allows students to demonstrate their ability to organise and carry out a substantial investigation into a problem in Design Informatics, according to sound scientific, engineering and design principles. The project involves both the application of skills learnt in the past and the acquisition of new skills. The project often involves the construction of an artefact, whether software, hardware, a robotic device, some other artefact incorporating computation, or some combination of these.

The types of activity involved in each project vary but include most of the following:

* Researching the literature and gathering background information.  
* Analysing requirements, comparing alternatives and specifying a solution.  
* Analysing and exploiting relevant theory in novel ways.  
* Designing and implementing the solution.  
* Experimenting with and evaluating the solution.  
* Exploring the solution as part of a product or service.  
* Discussing existing results and presenting new research.  
* Developing written and oral presentation skills.  

The project is conducted individually by the student under the supervision of a member of teaching staff. Students are formed into groups for the purpose of Review Meetings.

Entry requirements:

- Pre-Requisite Courses: CSDI1, DIP  
- Co-Requisite Courses:  
- Prohibited Combinations:  
- Other Requirements:  

For Informatics and ECA PG students only, or by special permission of the School. There is also a possibility of further project dependent pre-requisites.

- Additional costs:

Course delivery information:

Delivery period: Flexible - S1 and S2, or Block 5 (Sem 2) and beyond.
Summary of Intended Learning Outcomes:

A student who has successfully completed this course should be able to:

1 - Structure and summarise a body of knowledge relating to a substantial project topic in Design Informatics.
2 - Critically evaluate previous work in the area.
3 - Conduct a programme of work in further investigation of issues related to the topic.
4 - Discuss and solve conceptual problems which arise during the investigation.
5 - Justify design decisions made during the investigation.
6 - Critically evaluate the investigation.
7 - Present their work, with demonstration of working products or services where appropriate.

Assessment Information:

The project is assessed on the basis of a written dissertation which should typically contain:

- Title page with abstract (a one or two paragraph summary of the contents).
- Introduction: background, previous work, exposition of relevant literature, setting of the work in the proper context.
- Description of the work undertaken: this may be divided into chapters describing the conceptual design work and the actual implementation separately. Any problems or difficulties and the suggested solutions should be mentioned. Alternative solutions and their evaluation should also be included. A focus on the associated product or service is expected.
- Analysis: results and their critical analysis should be reported, whether the results conform to expectations or otherwise and how they compare with other related work.
- Conclusion: concluding remarks and observations, unsolved problems, suggestions for further work.
- Bibliography.

Students may be required by their project markers to demonstrate any system that arose from the project. If the project’s focus is the production of an artefact of some kind, then evaluation of that artefact supports the evaluation of the dissertation.

Special arrangements:

Additional Information:

- Academic description:

- Syllabus:
  Project dependent. During the period of study, all students are expected to participate in two instances of a week-long dissertation ‘symposium’, combining intensive individual work with group work exploring the context within which individual projects are being pursued.

Indicative timetable for 1-week symposium (4 hours per day); this time is categorised as timetabled labs, in the study pattern below.
- Monday: Research updates, students present work to date on their research to all staff and all students.

- Tuesday: Tutorials with personal tutors (project supervisors), plus group Research methods workshop. Individuals begin to prepare for micro-conference/exhibition on Thursday based upon feedback from research update.

- Wednesday: Tutorials with personal tutors. Individuals continue to prepare for micro-conference on Thursday based upon feedback from research update.

- Thursday: All day micro-conference/exhibition, all students presenting or exhibiting.

- Friday: Round table closing remarks. Students and staff prepare responses to each other and selves.

- Transkills:

- Reading list:
  Project dependent. Initial readings are provided by teachers; students are expected to supplement these lists themselves.

- Study Pattern:

  Lectures       0  
  Tutorials      0  
  Timetabled Laboratories  40  
  Non-timetabled assessed assignments  0  
  Private Study/Other  560  
  Total       600

Relevant QAA Computing Curriculum Sections:
Notice of Items for Future Meetings

The following course proposals are expected to arrive at a future meeting of the Board:

- Quantum Computing and Cryptography — Elham Kashefi
- Revision of courses in Artificial Intelligence — Alan Smaill
- MSc course prerequisites — Iain Murray

Please contact the proposers if you wish to comment or be involved.