QAS GEN32EEG - 2004 31.01.05 and extended after staff meeting 21/04/05

Paul Sunnucks - coordinator & lecturer
Yvonne Parsons - lecturer
Jeremy Austin – lecturer
Jodie Young – practical coordinator
Monica Ivanyi – practical assistant

Questions were asked concerning:
Level of help with learning
Assessment – understanding or memory?
Workload
Coherence of theory and practical
Approachability of staff
Over all, how were lectures?
Over all, how were projects?
Over all, how was the whole subject?

Three long answer questions were asked:
What in this subject helped your learning?
How could this subject be improved?
Any other comments about the subject?

Summary of responses

Overall, satisfaction with the subject was high, and our academic goals were met.

42/45 said they got a lot of help with learning at least half the time.
38/44 indicated that memorizing was less important than understanding
25/45 indicated that work loads were not often too high
40/44 said they could see how the pracs and theory fit together half or more of the time
43/44 felt that they could approach lecturers half or more of the time
40/45 put the lectures in the top three brackets
30/43 rated the project as satisfactory or higher
40/44 rated the subject as satisfactory or higher with 36 in the top three brackets.

These results are largely borne out in the written responses (below).

Written responses

What in this subject helped your learning?

Major Project IIIII I
Web information II
Staff took time to help/ encourage IIIII I
Well prepared lectures / notes IIIII IIIII I
Applying knowledge
Training sessions
Tutorials about stats II
Examples IIII
Time allocated for practicals
Prac classes

How could this subject be improved?

More help with practicals I
Not as much work due at the end of semester
Assignments shouldn't be worth so many marks
More help with stats IIIII IIII
Have a couple of smaller assignments not one large one I
Evenly split pracs
Tutorials in using Exel
Change project design/controlling variables
Lecture notes
Reduce choices in major project
Change balance of assessment
More lectures on human evolution & past migration/disease history
Don't repeat material from 31HMG/first year II
Overheads larger & clearer
Less stats I
Condense tutorials/language unit practical classes I
More time for write up of project III
Cover less material
Clarify what is expected & outline in more detail the project itself
More time needed for slater collecting, sorting & cold tolerance

Any other comments about the subject?

Great subject II
Great lecturers III
Most enjoyable
Practicals
Helpful staff
Lots of work II
Hard to find literature & apply to project I
Human section didn't fit in, more suited to HMG
Major project
"How to research assignment" sessions
Lectures

Summary & actions

Lecturers and materials

Overall the lectures were well-received and the lecturers perceived as helpful and approachable. Detailed and web-based notes and a strong written structure to the subject were highly valued. Web-based information was appreciated and useful. Past exams and various training sessions were helpful.

Reduction in material to address student concerns

There was a continuing perception that this unit is rich in content and entails more work than most equivalent third year units. We will address this in two ways:
(1) the review article writing exercise will be deleted.
(2) a block of 5 lectures on the evolution of sex and recombination will be deleted and those lecture slots will allow for more time to be spent on evolution and conservation genetics that currently occupy 15 lectures.

The perception of some overlap of Jeremy Austin's teaching with the human genetics element in first semester of third year was surprising, since there were curriculum development discussions on that topic. Nonetheless, this will not be an issue in 2005 because that (emergency) material will not be presented again.

Educational value of major project

The major project was regarded by many as fairly arduous but very educational. It makes a very direct and personal link between theory and practical, and imparts skills that are of general use to a scientist and indeed member of the public. Most students have little idea about how research is conducted, and in particular the stronger students who want to carry on in research get a great deal from these projects.

The projects were initiated in 2000 and have since been pared back several times as we learned what was possible and again when class sizes doubled in 2003. Many students find some of the basic concepts of science sufficiently difficult that we need to spend more time on them. For example the majority of the class would not know

what a statistical P value means. There was a 2.5 hour training session on this and related basic statistics, with written documents and open invitations for further explanations one-on-one, yet many did not feel that the issues were adequately addressed.

Increased training in statistics and population genetics

In 2004, more time and effort was expended on statistics and population genetic training. Nonetheless, the perception has remained that the students were not sufficiently trained in these aspects. Consequently in 2005, we plan to greatly extend this material to fill a whole week of practicals in which the students will conduct computer analyses on data sets generated by their predecessors in 2004. This is possible now only because of the new computer facilities, and we are excited about the educational opportunity that this presents. David Edwards who will be teaching in this unit for the first time, has tertiary qualifications in IT (Graduate Diploma of Information Systems**,** University of Melbourne, 2003).

One serious impediment to the implementation of suitable training in statistics has been the lack of a provision of a straightforward statistics package available to students to use at University and at home. We have discovered that *The R Package* is used in a similar role at Monash, and we will investigate whether this can be used for our unit.

Other issues not covered in the QAS

Marking

The workloads associated with this subject can be overwhelming at least for many weeks at a time. With 4 practical afternoons a week, interactions with 64+ students, and two major assignments (one essay, one project) then a large exam marking load, it can become impossible to dedicate appropriate time to student needs.

The situation is compounded by the fact that several staff teach in 22EEG at the same time. Marking exams occurs in a very compressed timescale, and is followed shortly after by Genetics / CBE / other Honours theses.

In 2005 we will change the structure of assessment: the review article (2500 words x 65 students) has been deleted. This will also address a student perception that the major project carries to few marks for the amount of work it represents, because it will increase from 30% of the final mark to 40%. The project and everything associated with it will represent sufficient assessment to meet academic recommendations. The removal of the review article will also free up one more practical session that is currently dedicated to a scientific writing training workshop.