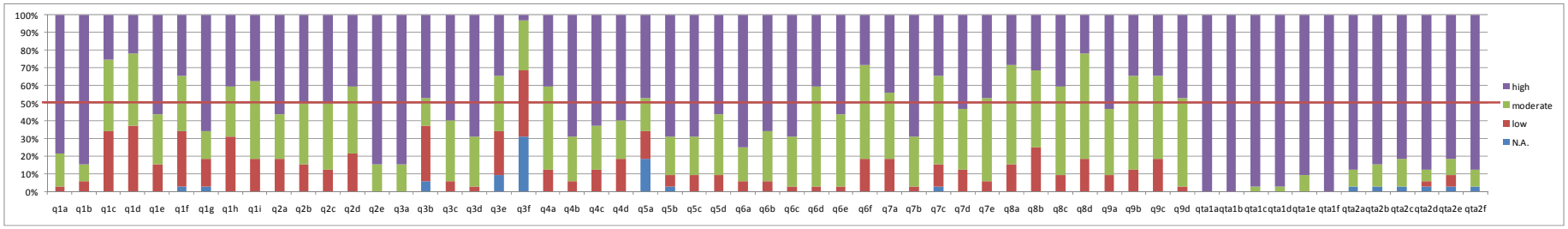
EOSC350, Fall 2007 End of Term Survey: Responses to "scale of 1-5" questions (32 out of 46 students)



Questions with >50% POSITIVE responses:

1. How much did these aspects of class and lab time help your learning?
a. Lecture presentations by the instructor.
b. Visual aids (static and animated) used in class.
e. Discussing as a class, questions that were posed by each team.
g. Working with peers during lab exercises.

2. How much did the following aspects of assessment help your learning?
a. Individual component of RAP quizzes.
e. Having a midterm test.

3. How much did resources help your learning?
a. Having the GPG readings resource online.
c. Having powerpoints delivered as PDFs after lectures.
d. Being able to keep the quizzes.

4. How much did the following information given to you help your learning?
b. The detailed schedule.
c. The study guide handout provided in the last week of classes.
d. The detailed syllabus provided online.

5. How much did these types of individual support help your learning?
b. Answers provided to your own questions asked in class.
c. Support from TAs during lab time.
d. Working on this course with peers outside class.

6. How much do you think this course has helped you understand each of the following?
a. The ways that geophysics can contribute to geoscience problems in your area of interest.
b. How to choose the most appropriate geophysical survey for a particular situation.
c. The types of information obtainable from different geophysical techniques.
d. How to compare strengths and weaknesses of any technique for a given scenario.
e. How physical properties affect each of the four techniques we discussed.

7. How much has this course added to your skills in each of the following?
b. Relating physical measurements to geological or geotechnical information.
d. Making use of simplified models of the earth.

9. How much of the following do you think you will remember and carry with you into other courses or aspects of your life?
a. Confidence in your ability ot consider geophysics as a contributor to addressing geoscience problems.

Questions with >50% NEGATIVE or NEUTRAL responses.

1. How much did these aspects of class and lab time help your learning?
c. Working in teams on team-problems during class time.
d. Discussing within teams, questions that were posed by team members.
f. Demonstrations of field equipment during lab time.
h. Working alone on exercises during lab time.
i. The "capstone" exercise.

2. How much did the following aspects of assessment help your learning?
d. The marking of lab exercises.

3. How much did resources help your learning?
b. Having the GPG readings resource available for download.
e. The choice of journal articles you read for team activities.
f. Any resources you found yourself.

4. How much did the following information given to you help your learning?
a. Overall learning goals expressed for the course.

5. How much did these types of individual support help your learning?
a. Individual contact with the instructor.

6. How much do you think this course has helped you understand each of the following?
d. How to compare strengths and weaknesses of any technique for a given scenario.
f. The essential physics that underlies each of the four techniques we covered.

7. How much has this course added to your skills in each of the following?
a. Using spreadsheets to manipulate and visualize data.
c. Working with contour maps of data.
e. Ability to decide on a course of action based upon "what I want" and "what I need to know".

8. To what extent did you make gains in the following as a result of what you did in this course?
a. Contributing effectively as a member of a team.
b. Learning from work carried out by your team.
c. Applying details learned about a specific survey method to a new geoscience situation.
d. Communicating technical information in a clear and concise manner.

9. How much of the following do you think you will remember and carry with you into other courses or aspects of your life?
b. Confidence at making effective use of geophysical information.
c. Improved ability to contribute within a team setting.
d. Improved ability to incorporate all aspects of a complex problem.

REMARKS:

- “Self assessment” of how much has been learned using questions 6 through 9 is not likely to be useful. It would be better to clearly articulate such goals and then assess them explicitly.
- Use of the “help your learning” model for asking questions is not optimal because students seem to equate “help your learning” with succeeding at grading exercises. This is normal, but suggests ales ambiguous style for the Likart (5-part) scale is needed.
- More time needs to be spent summarizing results – to be done prior to offering the course with a new instructor next term.

ALL QUESTIONS

1. How much did these aspects of class and lab time help your learning?
a. Lecture presentations by the instructor.
b. Visual aids (static and animated) used in class.
c. Working in teams on team-problems during class time.
d. Discussing within teams, questions that were posed by team members.
e. Discussing as a class, questions that were posed by each team.
f. Demonstrations of field equipment during lab time.
g. Working with peers during lab exercises.
h. Working alone on exercises during lab time.
i. The "capstone" exercise.

2. How much did the following aspects of assessment help your learning?
a. Individual component of RAP quizzes.
b. Group component of RAP quizzes.
c. The number and spacing of quizzes.
d. The marking of lab exercises.
e. Having a midterm test.

3. How much did resources help your learning?
a. Having the GPG readings resource online.
b. Having the GPG readings resource available for download.
c. Having powerpoints delivered as PDFs after lectures.
d. Being able to keep the quizzes.
e. The choice of journal articles you read for team activities.
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4. How much did the following information given to you help your learning?
a. Overall learning goals expressed for the course.
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c. The types of information obtainable from different geophysical techniques.
d. How to compare strengths and weaknesses of any technique for a given scenario.
e. How physical properties affect each of the four techniques we discussed.
f. The essential physics that underlies each of the four techniques we covered.

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a. Using spreadsheets to manipulate and visualize data.
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c. Working with contour maps of data.
d. Making use of simplified models of the earth.
e. Ability to decide on a course of action based upon "what I want" and "what I need to know".

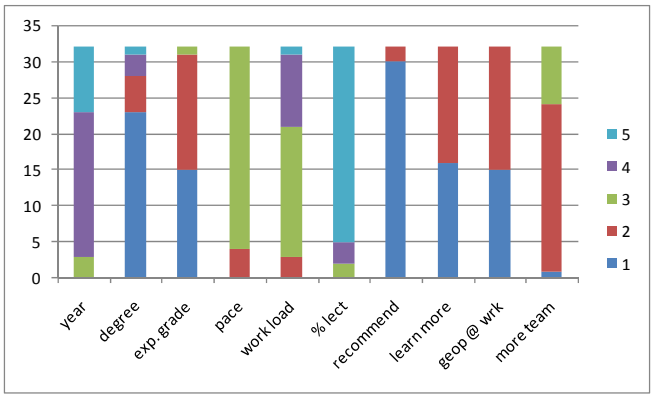
8. To what extent did you make gains in the following as a result of what you did in this course?
a. Contributing effectively as a member of a team.
b. Learning from work carried out by your team.
c. Applying details learned about a specific survey method to a new geoscience situation.
d. Communicating technical information in a clear and concise manner.

9. How much of the following do you think you will remember and carry with you into other courses or aspects of your life?
a. Confidence in your ability ot consider geophysics as a contributor to addressing geoscience problems.
b. Confidence at making effective use of geophysical information.
c. Improved ability to contribute within a team setting.
d. Improved ability to incorporate all aspects of a complex problem.

10. Assessment of teaching assistants.

Results from questions about demographics and other general issues (32 out of 46 students responded):

1. 29 are in 3rd or 4th year of studies
2. 23 are geological engineering, 5 are geology, 4 are other.
3. 31 expect grade to be either A or B.
4. For 28, pace was about right, 4 felt it a bit too slow.
5. 18 felt work load was similar, 10 felt it a little more, compared to other courses.
6. 27attended over 80% of lectures
7. 30 would recommend the course to peers.
8. Half are likely to try learning more about applied geophysics
9. Half will try to be involved in geophysics in future work settings
10. 24 considered balance between team work and lecture about right, while 8 would prefer to eliminate team work in favour of lecturing.



Some conclusions:

- Remark: comparing preferences to what is best for learning is somewhat risky. Active learning is always better so long as assessments show adequate mastery of course goals.
- Pace could be picked up a little.
- Most seem to come away "liking" the course and discipline. This is good.
- 24 of 32 feel amount of team work is about right. This despite "negative" responses to questions 1c & 1d.
- Attendance is excellent – implying class time is considered time well spent.

Open ended Comments:

1. Negative
   a. No team work
   b. I didn't find the team based learning very effective with the exception of the final capstone activity.

2. Positive
   a. Because team based learning is peer driven there is a sense of peer pressure to be prepared. Team based learning works well when there is a good balance between members of the team, and where there is not the ability for one or two members, due to their own hard work in preparing for the discussion, to dominate the discussion. The discussions may be more balanced if they can take place around a round table. I appreciate the effort that goes into creating this course, and that can only be said for a minority of courses in EOS in particular or at UBC in general.

b. I really liked how this course was more structured as an overview of the main geophysical surveys, techniques and analysis. This course gave me enough knowledge to help seek out the appropriate help if I ever encounter a problem which geophysics could help solve.
c. I thought that this (the capstone activity) was a very useful activity in tying everything together that we have learned throughout the year.
d. I think that Francis Jones puts a great deal of effort into this class. He is constantly changing the class and looking to improve it and I think that this was noticed by almost all of the students. I think this is great! I often feel in some of my other UBC courses that the professors are putting little effort into teaching and to have a professor that puts in a great deal of effort is motivating. I also like that you can just come by his office whenever you'd like instead of having office hours.
e. The energy and amount of work you put into this course is appreciated by all.
f. ... the TA's are really helpful.
g. Dr Jones, We were all impressed with your enthusiasm towards geophysics, and that made it much easier to come to class and be interested in a subject which previously seemed rather dull. Thanks again for all your efforts!
h. I agree with how the course is teaching concepts instead of being an indepth course on physics and math.
i. It was a good class and the instructor seemed genuinely interested in teaching the students, that is what made the class the most interesting.
j. I appreciate the effort you put into this course. It is refreshing to have a prof that actually seems to enjoy and to care about teaching.
k. I never knew how useful Geophysics was to environmental problems...i now know how useful geophysics can be to these projects

3. Good advice
   a. I found the scheduling was kind of tight as team components used up a great deal of lecture time. If instead, one or more labs sessions were dedicated to the team based learning part, more time would have be left for the lectures and it would be easier to catch up for students- especially ones like mew ho had a conflict in schedule.
   b. For question j, I think that there should be less team work. I do think that teamwork should remain a part of this class, I just think that there should be less in-class team work. On many occasions one or two team members had read the reading for the team exercise and as a result those people filled out the team exercises. I understand that this is unavoidable as the teams are chosen at random. These team exercises would have been more effective if every team member did the readings so that there could be more discussion before the team exercises were done. I got the impression that this was happening in some of the teams and I feel that the people in those teams benefited more from the team exercises than people in teams where this was not happening. I do not think that team work should be taken out of this class.
   c. It would be helpful if lecture slides were available for download prior to the lecture
   d. Lecture PDFs to be put online a day in advance of the lectures would be greatly appreciated. Some more guidance in team based learning would be helpful. It felt like we were thrown into a situation that we didn't have enough background information to adequately complete or even understand the goals and task.
   e. Sometimes the labs got realy busy and it was very hard for the TA to give individual help to all the students. Maybe, it would be better to have two TA's present per lab session. That way, the students dont have to wait a really long time to get help from the TA. This is important since the TA's are really helpful.
   f. I think that perhaps having more RAT would be useful but only do the group portion for some as it takes up a lot of time. The quizzes where highly useful and were a good study tool after the fact.
   g. It would be really good if this course were offered online as a UBC distance education course. I've done others and the format of this class matches well, especially if the all the GPG download were available on a CD Rom. I"m sure many others who are looking to fill APEG requirements would be happy for another option.