Question 8: Does the total LDEO experience provide the best training for a wide range of careers? How could DEES better prepare its students for the post Ph.D. world?

1) blank

2) this comment might be strongly guided by my personal interest, but i think lots could be done in terms of a general knowledge of environmental issues. i feel we are totally lacking in this, even though the department's changed its name a few years ago already.

3) I'm sorry to say that I don't think I'm getting the best training. It's a hit-or-miss as far as getting the right classes is concerned. At times I've even considered taking time off to take classes at a school that offers courses I can't get at Lamont.

4) Several of my peers at Stanford have been successful at obtaining tenure-track teaching positions straight out of graduate school at places like Amherst, Bryn Mawr, Dartmouth, and Idaho State. Though we are well prepared for the research track, it seems many of Lamont's graduates struggle to get good teaching jobs at first. There are several obvious reasons why Stanford's students are more successful at first. Stanford's graduate students take a course on Methods of teaching earth science, they develop a portfolio of teaching materials, and many of them author education publications while still in graduate school. In addition, The Geoscience department there gives an annual award to graduate students for good teaching- something we could easily and should do.

5) depends on what one has made of the ldeo offerings....

6) You mean there's a post-PhD world? Damn!
Don't know as I've never been in the real world.

7) I don't know.

8) This would be better to ask of recent alumni/ae-- I can only guess that it's probably dependent on what careers are sought, and how well each individual spends their time pursuing the skills needed for that career. It's probably not something that can be completely fulfilled with requirements, only good advising.

9) No. Knowledge on computer is needed to most position opening

(e.g. seismology). It would be better to let students take more computer courses, e.g. programming languages. Even to open some Lamont short term course on how to use some important softwares for research, e.g. UNIX, shell programming, etc.

10) Blank.

11) The LDEO experience is very focused on production of research academics. I'm not ready to say that this is inappropriate. I'm well aware that there are many other roads for people with advanced degrees. But I would not want to move away from the particularity of this focus hastily. There is little justification for pursuing the Ph.D. if one is not interested in doing research or teaching at the university level.
If one wants to work in science policy, or environmental activism, or project management in the commercial world, than it would be more efficient to spend a couple of years in a good masters' program, and then get to work.
My main complaint is, as stated above, that it is made inconvenient to take advantage of the resources outside of DEES. I think if there was more cross-pollination with other Columbia departments, we would get a more stimulating intellectual life going here at Lamont. (I am struck by the narrow nature of the discussions on campus. It seems to me that for a group of professional intellectuals, we suffer from an awful case of tunnel vision, even in casual conversation with colleagues.)

12) best? compared to what? courses that teach technical skills would be useful

13) a) hope so, that's why I'm here
b) ask again in 2-4 years

14) Hard to say, I came in with a Master's, but I think LDEO is pretty good.

15) NO! DEES should provide more teaching opportunities to those who plan to teach. Also, DEES should emphasize more computing and technological skills.

16) I think this depends on what you make of it. If you take a wide range of courses and focus on a broad area, or an area with broad applications, I think so. If you choose to study a more narrow discipline, than probably your career options wouldn't be as wide ranging.

17) My experience is that LDEO has provided me with a much larger picture of how my research fits in than most students have in my

field. Where I fall short is in the details.

18) The current system is geared towards producing Ph.D.'s for the academic world. While this suits my interests, I feel that others that wish to pursue non-academic careers should not be slighted.

19) Somewhat. We could REALLY use a class addressing: 1) technical writing and speaking 2) basic computer science (not for a programming language but rather on the theory of computation and algorithms). These trades/skills are always useful in the post Ph.D. world especially if that is also a post academic world.

20) I AM CONCERNED THAT SOME GRADUATES ARE NOT PREPARED FOR MANY TEACHING JOBS ADVERTISED BY THE MAJORITY OF COLLEGES AND UNIVERSITIES. FOR EXAMPLE, SOME COLLEGES WANT A HARD-
ROCK PETROLOGIST WHO CAN TEACH IGNEOUS AND METAMORPHIC
PETROLOGY. THOSE TEACHING SED/ STRAT SHOULD KNOW SEQ. STRAT. AND INVERTEBRATE PALEONTOLOGY. WE SHOULDN'T HAVE TO PLAY CATCH UP ON SOME BASICS ON THE JOB. PEOPLE WITH TOO
NARROW A FOCUS MAY ONLY BE SUITABLE FOR THE FEWER PURE RESEARCH POSITIONS.

21) Offer more opportunities for students to give talks at Lamont. Where I did my master's we were required to give one seminar (20 minutes) each semester, and the feedback and public speaking experience were extremely valuable.

22) Obviously, students here are not taught how to teach. Indeed, some faculty don't really know what teaching is all about. I know that there is nothing like experience, but still, some basic principles can be taught easily. Things like how to stand before an audience, how to speak, how to use viographs and slides, how to ask questions, how to "read" your audience, are things that can be taught, and I believe will greatly improve the teaching skills of a student (or a faculty member). This of course only relates to the "technical" aspects of teaching - there are other issues that are to do with morals, ethics and philosophy of teaching that seem important to me, and can be presented (maybe in a weekly seminar).

23) Blank

24) I think DEES students should be required/encouraged to take at least one

course dealing with the role of science in policy-making, economics and society at large. As Earth and Environmental science is expected to grow explosively in the next century infiltrating all aspects of economic and social structure, it is, in my mind, utterly important to be aware of how our science affects and is affected by societal issues.

25) Blank

26) I don't think it is possible that any one place could best prepare one for a wide range of careers. What LDEO does do is offer a top-notch perspective and access to the most current and exciting areas of research in the earth sciences (not all areas but many). Combined with the necessity to learn to think rigorously and work independently, a graduate of LDEO is armed with skills that are invaluable for any number of careers. This could be stressed more to students and to the Lamont community as a whole.
DEES/LDEO could better prepare its students by encouraging more exposure to and dialogue on the many possibilities that are available to one with a PhD. In a world where there are far fewer positions in academia and research than qualified applicants, it is only logical that LDEO encourage its students to consider the alternatives.
This might be accomplished by providing students with more opportunities to interact with Ph.D.'s outside of academia: invite them to Lamont to visit and speak, encourage students to seek out summer or semester-long internships that will give them more experience and exposure, encourage students to visit other academic/research institutions to acquire training that they cannot find at Lamont or to simply gain a fresh perspective. (For example, in France, graduate students are required to spend one semester in a different lab, Sidney Hemming had a French student in her lab who was doing just that).
Finally, I think that there already are encouraging movements afoot at Lamont -- this survey and the discussion it is sure to provoke is one; the symposium on Women in Earth Sciences and Mentoring; and the increased activity and visibility of Career Services (efforts by Steve Goldstein and Candace Major).

27) I really don't know.

28) Ask me in 5 years.

29) I'm not sure. It seems to me that most advisors are so research focused, that they frown on their students taking classes outside the department in such things as policy and other social applications of science research. (And some advisors frown on their students taking any classes at all.) Those classes certainly are not promoted. I would love to make public policy one of my minors -- I think it is far more relevant to what I'll be doing once I leave here -- but that option is not open to me.

30) I am not sure.

31) No. In my opinion we are being groomed for a career in academics, and even more specifically academics at a big, research university. Jobs outside of academia are seldom discussed and frankly, looked down upon. As a graduate student nearing the end of my graduate student years, I increasingly aware of there are very few jobs available in academics. I feel poorly equipped for a job outside of academics. Perhaps I am just ignorant of other opportunities. Often I am told that completing a Ph.D. provides you with valuable skills that are widely applicable to many fields. What fields are those? DEES should take more of an active role in promoting jobs outside of academia.

32) No, a lot of classes are simply not well taught because the teachers care about their research first and then the students. Shift emphasis on teaching (e.g. include more of the research facilities in the education: e.g. short stays on the research vessel Ewing to get an idea about research performed on a ship)

33) I think by having a more hands off sort of attitude toward the curriculum (let students and their advisors decide what is needed to prepare the student for a career) that the students will find the people and courses they need to prepare themselves. I think that DEES is doing a good job by having a wide range of course offerings. Personally many of the course I feel I need to take are offered in other departments and I appreciate that it is not difficult to take these courses.

34) No--- because LDEO, philosphically , doesn't want to address the reality that most students face in terms of looking for jobs, in and out of academia, after they finish. There seems to be stagnant # of academic job openings, few traditional technical jobs like the oil industry, and even limited consulting jobs which are increasingly more engineer oriented. But, I think the obvious reason for the lack of preparation for the post-phd world is that most of the faculty/staff have themselves never made the choice to do anything else but academic research and can't provide either the advice or support for their students to do otherwise.
Obvious things, like teaching experience, are completely ignored even though we have abundant opportunities because of NYC and Teachers College, etc..... Helping people get MBA's or master's in environmental engineering, possibly at same time, if they want to go into environmental consulting are other possible avenues. Maybe having a minor in policy or a joint masters program with SIPA for students interested in pursuing environmental policy or law careers.
The view taken at Lamont towards the earth sciences is just too narrow

despite its amazing breadth. Outside of our unique campus , many of us are not going to be in traditional academic careers whether by choice or just sheer #'s.

35) Teaching people _how_ to teach, above and beyond just throwing random TA duties at them, would be a good start. Have some forums on what is available, or bring in alums and have them talk about what they went and did, and how (I think it's cute to bring them all here and have them get wasted, but not of much use to us alums-to-be). Provide some incentive for profs and post-docs hrere to get together to discuss these things with students.
Is LDEO good training and experience? I think so, or I wouldn't be here.
Is it the best? I have no idea.

36) Not sure yet, but I'll let you know in a few years.

37) I BELIEVE LAMONT DOES A PARTICULARLY GOOD JOB OF EDUCATING STUDENTS IN A WIDE VARIETY OF DISCIPLINES. BREADTH IS ESSENTIAL! A WELL-ORGANIZED, INTENSE BUT BROAD, INTRO SEQUENCE IS IN KEEPING WITH THIS PHILOSOPHY.

38) No answer

39) No answer

40) Sorry, I don't have a answer for this.

41) Again, I'm in a specific program -- based on past students it prepares well for science journalism... but we'll see.

42) No answer

43) Yes and no.
Yes - because it is broad, and students decide for themselves what they need to learn.
No - the absence of sequences of courses, complementing and/or expanding on the previous, means that the education does not have depth.

44) No answer

45) No answer

46) No answer

47) Lamont does a good job of preparing its students for the future. However, one thing I would change is the class requirement. I think that the number of hours required is quite high (especially compared to other schools). This could at least in part be fixed by combining some courses. By requiring students to take fewer courses, this will allow more time for research (and allow one to begin earlier), which is the primary reason people go to graduate school. I don't think that anyone should have to take classes in their FOURTH year. At this point one should be focused solely on research.

48) No answer

49) I can't read the end of the question, but I think I addressed this earlier. it does not really in general (perhaps for some students it does) but it has the potential to. it's more of a question of what the DEES goal is.

50) No. LDEO trains it's students to be researchers, that's it. The TA experience students get in the program is mostly doing the busy work the professor doesn't want to do i.e. copying and grading.

51) Because LDEO is a research institution, I think the students' training is also geared toward research rather than a broader variety of careers. Based upon my observations, though, I'd say that even that training is highly variable; some students have the experience of writing small grant proposals or contributing to larger proposals, while others are shielded by their advisor's past success and/or view of the student's responsibilities. I know that in the past DEES required every student to apply for some sort of outside funding at least once a year (particularly if DEES was supporting that student), but I don't get the impression that anyone is paying attention to that requirement these days.
Emphasis on training for teaching-oriented careers (as opposed to research positions that require some teaching) is sorely lacking. TA activities are also highly variable in quality, with some TA's required to handle all aspects of a lab and others simply having to photocopy once in a while. Emphasis on practical skills is also generally lacking, except in those disciplines (i.e., marine geology, seismology) where the techniques needed to complete the thesis project are the same as those employed in industry. Somewhat disturbing to me is the tendency I have noted, on the part of some faculty/research scientists, to express disdain for students' career choices that are not academic- or research-oriented. I think that disdainful attitude is really unfortunate, because there are simply not enough academic and research positions available to accommodate every

Lamont student, especially given the current tight funding environment.

52) No. There could be more emphasis on opportunities in other departments downtown such as SIPA, Political Science, Environmental/Public health. To emphasize non-academia we could arrange for speakers from (or trips to) the United Nations Environmental Program, the Environmental Defense Fund, USGS, EPA, private environmental consultants, industry representatives.

53) No answer

54) I would suggest more methods courses (e.g., Data analysis, Mark's myths and methods in modeling). These courses teach techniques that can be applied not only in just about any area of earth sciences, but also in LOTS of other jobs arenas. Not that we want all of our alumni working in computer modeling on Wall Street, but to have the options and SKILLS makes us, as students, more at ease in the face of a difficult job market and more capable within our chosen field.