HC70A and HC70AL Exit Questionnaire
Professor Bob Goldberg

1. What have you learned about working in a laboratory after completing HC70AL?

   After completing HC70AL, I have learned that working in a lab is requires a lot of patience. One has to be willing to acknowledge their mistakes and then work tirelessly in order to identify what could have gone wrong. Only by doing so can one be able to reach their end results. Thus I have learned that working in a lab requires one to constantly think about every little thing they are doing, such as understand even the most minuscule details in order to achieve a particular goal.

2. Do you want to pursue a career in research science after taking HC70AL? Why or why not?

   No I do not plan to pursue a career in research science. I absolutely loved my experience with HC70AL and I plan to apply the skills I have learned to my own career aspirations. However, as of now I plan to continue on my path toward Public Health Administration.

3. How did your experience in HC70AL impact your future academic decisions?

   HC70AL has impacted my future academic decisions by encouraging me to become more involved in research projects. The class served as a significant reminder of the importance of research and it has motivated me to play an active role. I plan to apply for more research positions in my particular field of interest which is Public Health.

4. How would you compare your HC70A and HC70AL experience to that of other courses you have taken at UCLA?

   Both courses are like nothing I have taken while at UCLA. They both required me to use a different mindset than my other classes by having me constantly use my critical thinking skills and by having me question EVERYTHING. After taking both of these courses I can no longer see things in black and white.

5. Do you think more critically in your other classes and/or in general since taking HC70A and HC70AL?

   Most definitely! I have learned to question everything and to think multiple times before giving a "just" answer.

6. How do you feel that HC70A and HC70AL impacted your academic experience at UCLA?

   I feel prepared to take and excel in any class while at UCLA. I have come to the conclusion that it is not just about the rigor of the course material but more about the dedication applied to the course.

7. Did you decide to change your major and/or career objectives as a result of taking HC70A and HC70AL? Why or why not?

   No. I have attained a greater appreciation for scientists in general, however; I have a great passion towards Political Science and Public Health which I plant to pursue.

8. What have you learned about how science is carried out from taking HC70A and HC70AL?

   Like I said before I have learned that science requires a lot of patience and an in depth understanding of all of the processes. One cannot understand what their results mean if they do not understand what in the world they are doing therefore you must learn to be the expert in everything you do.

9. How did working in the lab affect your appreciation for new discoveries that you read in textbooks, newspapers, magazines and/or view on television?

   I have acquired a greater appreciation for innovations in all fields. I find myself constantly borrowing the medical journals from the neurologists in my offices in order to read about any new breakthroughs.

10. How did taking HC70A and HC70AL impact your decisions on what future classes and/or graduate programs you are consider taking or pursuing?

I plan to take more challenging courses and remain with the Honors program because classes such as HC70A and AL have provided me with academic challenges that I thrive for.

11. Looking back on your laboratory experience in HC70AL, how do you view scientists and the process of scientific discovery?

    I have a deep respect for scientists and their capability to be so patient with the process of making a scientific discovery. Scientists are constantly on the clock and despite the pressure one may fee, a good scientist also understands the need to be patient in order to attain optimal results. A good scientist understands that no matter how exciting possible results may be they must also be valid and repeatable.

12. Looking back, how do you feel now about your 20 week experience in HC70A and HC70AL and what these courses taught you about science, teaching, discovery, and yourself?

    I am so grateful for the opportunity to take both courses. They were both the most challenging and also most rewarding courses I have taken while at UCLA. They taught me the significance of research and the need question everything. The courses also taught me that I can take on anything I set my mind to. This divide that people often set between North and South campus majors is completely unnecessary and if one wants to excel in either than you need to think similarly. That is with critical thinking skills and a desire to be the expert.

13. Please comment on what you will be doing next year. What is your year and major? What courses will you be taking next year? What are your career objectives?

    I will be continuing at UCLA as a 2nd year Political Science Major and seeking a Public Health Minor. I will continue on track to fulfill my Political Science requirements and I have been able to acquire a spot in one of the Public Health courses which is restricted to students in the minor or in graduate school. I am also looking into research positions in the Public Health field. As for career objectives, I am considering going into either Public Policy for Public Health or Hospital Adminsitration.

HC70AL Exit Questionnaire
Professor Bob Goldberg
September, 2014

1. How did your experience in HC70AL impact your future academic decisions?

Prior to HC70AL I had an interest in doing research but I never had research experience. After working in the lab during the class I can conclude that research is definitely something I have a strong interest in and will continue doing.

2. How would you compare your HC70A and HC70AL experience to that of other courses you took at UCLA?

HC70A and HC70AL are amazing and unique courses. Other classes at UCLA do not compare. Dr. Goldberg offers an inspiring perspective of science and learning that is not found in any other course. These courses are "must-take" courses for students at UCLA.

3. Do you think more critically in your other classes and/or in general since taking HC70A and HC70AL?

Absolutely. In other classes, we are asked to memorize and spit back information. In this class critical thinking is held to the highest standard. Understanding concepts and being able to think about what is going on is what I learned from these courses.

4. How do you feel that HC70A and HC70AL impacted your academic experience at UCLA?

The classes definitely impacted my scientific interest. Research and science now that I understand them more its something I want to persue.

5. Did you decide to change your major and/or career objectives as a result of taking HC70A and HC70AL? Please elaborate why or why not.

No, I was interested in science before taking these classes but now I am even more interested. These classes confirmed my interests.

Now that I have had experience in the lab I am even more drawn to it

6. What have you learned about how science is carried out from taking these classes?

Science takes an enormous amount of time and patience. There are so many people who have spent their lives contributing to science and scientific techniques that I use in lab. I have a lot more appreciation for how science is carried out and the rigor involved.

7. How did working in the lab affect your appreciation for new discoveries that you read in newspapers and magazines and view on television?

Now I understand the amount of work required to make all those discoveries. It takes an enormous amount of work and is probably the most time consuming career. But at the same time its an exciting process. You're actually delving into the unknown and contributing to human knowledge. I have a newfound respect for science.

8. How did taking HC70A and HC70AL impact your decisions on what classes or graduate programs you are pursuing?

HC70A and HC70AL gave me a taste of science research performed at an incredibly high academic level. Now that I have experienced it I can confirm that its for me. Science is something I can see myself doing for a long time. I will definitely get a ph.D.

9. Looking back on your laboratory experience in HC70AL, how do you view scientists and the process of scientific discovery?

Scientific discovery not only takes a lot of time and effort but is exciting and invigorating. It requires you to really be dedicated to learning and understanding the field you choose to research and to think critically about observations as well as be skeptical about conclusions. I have the utmost respect for people who do science.

10. Looking back, how do you feel now about your 20 week experience in HC70A and HC70AL and what these courses taught you about science, teaching, discovery, and yourself?

Looking at all the progress I made, it's amazing how much I learned. Before these courses I didn't know all about genetic engineering or seed and plants – I learned an incredible amount of information about science, discovery, and about myself. Science is fascinating.

11. Please comment on what you will be doing next year. What is your year and major? What courses will you be taking next year? What are your career objectives?

I plan to, from this moment forth, search for a lab in which I can participate in undergraduate research. I plan to take more rigorous science courses and delve deeper into topics taught in the class. I am a 3rd year Biochemistry major, so I'll be taking many more biochemistry courses and learning all about DNA. I want to go to grad school, possibly get a M.D. / Ph.D since I have an interest in both fields.

HC70AL Exit Questionnaire
Professor Bob Goldberg
September, 2014

1. How did your experience in HC70AL impact your future academic decisions?

Yes I will be looking forward to taking more classes that will involve similar real life research experience and classes that involves more challenging materials & critical thinking.

2. How would you compare your HC70A and HC70AL experience to that of other courses you took at UCLA?

They are the most interactive and challenging experience I have ever had at UCLA. You have to learn and know about a lot of the materials, but you are doing this in a friendly, collaborative environment.

3. Do you think more critically in your other classes and/or in general since taking HC70A and HC70AL?

Yes. I would always think about why things happen and try to understand the entire process and not just simply take things in by the way they're presented.

4. How do you feel that HC70A and HC70AL impacted your academic experience at UCLA?

They are the highlight of this past year. perhaps the most fun I've had learning in any class and the most rewarding class.

5. Did you decide to change your major and/or career objectives as a result of taking HC70A and HC70AL? Please elaborate why or why not.

No. I will most likely stay as a biochem major, but I may consider venturing deeper into the field of molecular biology. In the past I've thought that biology was just memorizing details, but the classes have shown that there's much more than that and much more fun, interesting discoveries that can be made with the knowledge.

Name_____

6. What have you learned about how science is carried out from taking these classes?

Science takes a lot time, effort, patience, and discipline. Sometimes you're just exploring and not really knowing what to expect. You may not always get what you expect, and when you don't, you need to be able to figure out what could have possibly went wrong, and find ways to continue on with your quest for the knowledge.

7. How did working in the lab affect your appreciation for new discoveries that you read in newspapers and magazines and view on television?

Every single discovery, scientific publication etc. is the produce of lots of scientists hard work. Years of research can be behind even one simple, seemingly unimportant discovery. Besides, researches and discoveries are always built on past discoveries, and together they add up to a lot of time and work. We should appreciate the discoveries and not just dismiss them as just another new finding.

8. How did taking HC70A and HC70AL impact your decisions on what classes or graduate programs you are pursuing?

I will definitely consider taking more classes that gives hands-on research experience that's as close to the real life as possible. I am still debating between med school or grad school, but I think that I would most likely take the availability of in the sciences research into serious consideration.

Name_____

9. Looking back on your laboratory experience in HC70AL, how do you view scientists and the process of scientific discovery?

Scientists have a lot of patience & self-discipline, and they must really love the subject they are working with. They have to make science a big part of their lives. Scientific discovery is the result of the collaborative effort of many scientists with countless time and effort put behind it. It's not as simple as a straight, flat road, but a road that may be filled with bumps & curves.

10. Looking back, how do you feel now about your 20 week experience in HC70A and HC70AL and what these courses taught you about science, teaching, discovery, and yourself?

Sometimes we (including myself) focus too much on the little details and lose sight of the big picture, and end up confused. Teaching is ~~the~~ a process of guiding whoever your teaching and helping discover the new knowledge from existing knowledge. For myself, I sometimes get caught up in expectations and ~~practice~~ gets impatient when going through the process, and this is definitely something that I can improve on.

11. Please comment on what you will be doing next year. What is your year and major? What courses will you be taking next year? What are your career objectives?

I'm going to be a 3rd year biochem major. I will be starting my upper division Chem classes, finish up my lower division life sciences courses and general education courses. I'm also looking into taking some upper division electives. My career objectives fall somewhere in the medical field, and I'm looking into perhaps becoming a physician or perhaps some other health-related profession.

HC70AL Exit Questionnaire
Professor Bob Goldberg
September, 2014

1. How did your experience in HC70AL impact your future academic decisions?
It has encouraged me to take classes that I am actually interested in, not just fulfill requirements.

2. How would you compare your HC70A and HC70AL experience to that of other courses you took at UCLA?
I feel like a much higher quality of learning was achieved in this class. By constantly asking us questions, encouraging us to collaborate, and being available, the instructors helped us learn the material inside & out.

3. Do you think more critically in your other classes and/or in general since taking HC70A and HC70AL?
These classes have taught me that passive learning is for chumps. Truly innovation and progress are driven by critical thinking. I can't learn by spitting back what professors say during lectures. Each piece of information is a piece of a puzzle. I need to learn how it all fits together

4. How do you feel that HC70A and HC70AL impacted your academic experience at UCLA?
They established a really solid foundation for knowing how to study and how to learn that is invaluable not just for science classes but life in general

5. Did you decide to change your major and/or career objectives as a result of taking HC70A and HC70AL? Please elaborate why or why not.
Taking this class, I saw people who were truly interested in and passionate about what they were doing. I think I also need to find my academic muse. I don't think it's psychology. I am planning to change; I just don't know what yet.

Name_____

6. What have you learned about how science is carried out from taking these classes?
Every single process we take for granted is the fruit of someone else's Herculean labors. It has taught me how much sacrifice and patience scientists went through, and made me appreciate it more.

7. How did working in the lab affect your appreciation for new discoveries that you read in newspapers and magazines and view on television?
It has made me want ~~to~~ not just to marvel out but also understand the way they do these amazing things.

I used to think, Harry, you're just too young; these things are just too complicated to understand.

However, now I am beginning to realize that great, complex ideas are built on simpler, easier to digest concepts, and that I can learn almost anything that I want as long as I stop being so lazy.

8. How did taking HC70A and HC70AL impact your decisions on what classes or graduate programs you are pursuing?
I'm still not sure what I have planned for my future, but whatever I'm doing, I want it to be challenging, interesting, and fun enough to do for the rest of my life

Name_____

9. Looking back on your laboratory experience in HC70AL, how do you view scientists and the process of scientific discovery?
I have a lot of respect for the sacrifice and commitment they make

10. Looking back, how do you feel now about your 20 week experience in HC70A and HC70AL and what these courses taught you about science, teaching, discovery, and yourself?
I learned that I definitely need to work harder. I have what it takes to think critically and learn cool things; I just need to discipline myself mentally and push myself to get what I want.

11. Please comment on what you will be doing next year. What is your year and major? What courses will you be taking next year? What are your career objectives?
Next year I will be a second year student with a major other than psyche-biology. I will be listening to my heart and figure out what I want to do with my life.

HC70AL Exit Questionnaire
Professor Bob Goldberg
September, 2014

1. How did your experience in HC70AL impact your future academic decisions?

I like research. There's something about leaving the lab after so many hours that just feels like you did something. Like every day in the lab, I accomplish something new. I don't know if it's what I want for the rest of my life, but right now, I definitely want to explore it

2. How would you compare your HC70A and HC70AL experience to that of other courses you took at UCLA?

HC70AL is completely new and different to anything I've ever done. So there isn't even a comparison.

HC70A was better than the huge lectures and definitely made me excited to learn. It also highlighted the best parts of interdisciplinary study. I would compare it to my English writing classes — they're about what you learn, not a grade.

3. Do you think more critically in your other classes and/or in general since taking HC70A and HC70AL?

Definitely. I've always liked making connections between different subjects and HC70A really showed me to what extent that is not only possible, but necessary. HC70AL taught me to "think like a scientist": work hard, see "failure" as an opportunity, ask questions, explore the many ways to approach a problem or idea.

4. How do you feel that HC70A and HC70AL impacted your academic experience at UCLA?

I found some semblance of direction. And that was amazing and exciting.

5. Did you decide to change your major and/or career objectives as a result of taking HC70A and HC70AL? Please elaborate why or why not.

YES! science and I also realized that I really really love history (and science history) from talking about the discovery of DNA and the history of eugenics etc.

6. What have you learned about how science is carried out from taking these classes?

It's a lot like archaeology. The general public hears only about the really big game-changing discoveries. But those don't happen every day. It's a lot of digging, and strategizing, and problem-solving. Fewer explosions, too. For some reason I feel like all scientists are constantly exploding things... that part

7. How did working in the lab affect your appreciation for new discoveries that you read in newspapers and magazines and view on television?

Much like what I said above, you understand that all these discoveries didn't happen in a week. Again, like archaeologists, it's day-in and day-out. It can be demoralizing at times, but I think that just makes the discoveries all the more special.

8. How did taking HC70A and HC70AL impact your decisions on what classes or graduate programs you are pursuing?

I decided to, at least for now, dive into a science major. I'm trying to take things one step at a time and see where I want to go from there. But, yes. Definitely nudged me into science.

9. Looking back on your laboratory experience in HC70AL, how do you view scientists and the process of scientific discovery?

I've always had a great appreciation for research because of my dad. But I never fully understood — and still don't entirely — the implications of making a discovery.

I've definitely gained an appreciation and even admiration for the patience and perseverence and passion required to make scientific discoveries.

10. Looking back, how do you feel now about your 20 week experience in HC70A and HC70AL and what these courses taught you about science, teaching, discovery, and yourself?

I feel very grateful to have stumbled upon HC70A and HC70AL. This is not enough space for me to even begin to discuss what I've learned, but I will say this: for a hopelessly undeclared first year, these two classes have been completely invaluable. I cannot say thank you enough.

11. Please comment on what you will be doing next year. What is your year and major? What courses will you be taking next year? What are your career objectives?

I'll be in my 2nd year. I'm taking the lower division science core classes, and a few English and history classes as well (i'm looking into a history of science minor).

Career objectives? All I know right now is that I want to graduate and hopefully teach for Teach for America for a few years! And after that, I'll figure it out! ☺

HC70AL Exit Questionnaire
Professor Bob Goldberg
September, 2014

1. How did your experience in HC70AL impact your future academic decisions?

It has made me more open to taking life science classes, which I was previously unenthusiastic about due to lackluster experience in the past, which HC70AL has far surpassed. Furthermore, this research experience has kindled my interest in similar efforts in other fields of science.

2. How would you compare your HC70A and HC70AL experience to that of other courses you took at UCLA?

HC70A and HC70AL are absolutely unique classes for which I have found no equal at UCLA: other classes are rather dull and unengaging whilst HC70A at HC70AL manage to keep my attention for far longer periods of time and also teach me matters I would not have found accessible without them. The lab experience in HC70AL is unique in the way that it engaged me in research tools and methods to which I would never have been exposed, and showed me how research really happens; it has also taught me many things.

3. Do you think more critically in your other classes and/or in general since taking HC70A and HC70AL?

I have become more critical and engaged in my other classes, taking a more active role during discussion sections and truly creating discussions, which I daresay has not only improved the classes for myself but also my peers. Generally, I have gained a better understanding of molecular biology when reading related articles and have also begun to ask more questions of lecturers and professors when covering any media, especially those related to science.

4. How do you feel that HC70A and HC70AL impacted your academic experience at UCLA?

They have absolutely been a positive experience in my time at UCLA, without which I would feel that college ~~lefted~~ did let differ significantly from high school. I never expected to have a foray into the life sciences again, but I am extremely glad that I did, as I would have been extremely dissatisfied with my experience at UCLA without these classes.

5. Did you decide to change your major and/or career objectives as a result of taking HC70A and HC70AL? Please elaborate why or why not.

No, though I have always been interested in the sciences, I do not feel that the lab lifestyle is suited to me; at the very least, not a biology lab, as I prefer to deal with the workings of society rather than of organisms.

6. What have you learned about how science is carried out from taking these classes?

I have learned that science takes a very long time, and that mistakes happening along the way will lengthen the process; we need to take steps to anticipate and solve problems, as well as troubleshoot if they still occur. Besides that, a solid foundation in the subject matter is necessary to understand what is happening, and is vital to supplement the inevitably needed critical thinking. Yet even if one follows these ideals, one may not know everything or interpret everything correctly, which is why collaboration is absolutely essential in science.

7. How did working in the lab affect your appreciation for new discoveries that you read in newspapers and magazines and view on television?

It has given me a new appreciation for scientists and their discoveries: previously, I would simply accept that a discovery had been made, and hastily wonder when they would be implemented and why it was taking so long. Now, I appreciate all the hard work and effort that it took to even reach that step, and that any discoveries will have to be fully or more thoroughly explored, which will take even more time, before being available for practical applications. Moreover, I appreciate scientists even more now from the perspective of the thought that goes behind everything done as I have experienced firsthand how difficult it can be, though often in hindsight, might seem it was obvious or simple

8. How did taking HC70A and HC70AL impact your decisions on what classes or graduate programs you are pursuing?

They have made me interested in taking classes done in a similar fashion, which challenge students and give students a taste of the real thing, rather than simply teach matter directly from textbooks without any interaction in the class, denial for students to think, or grounding in reality. I am still undecided on graduate programs to take, as it is a long way off for me being a freshman/sophomore, though I do not believe it would change my plans heavily given that I can unlikely to change majors, though it may make me lean towards firmly institutions which teach like I was taught in HC70A and HC70AL.

9. Looking back on your laboratory experience in HC70AL, how do you view scientists and the process of scientific discovery?

I think scientists are noble, selfless and passionate. Most people don't appreciate how many hours and how much effort goes into science, and HC70AL has opened my eyes to that. I have also seen that the process of scientific discovery is full of uncertainties and unknowns, and it takes a very long time to overcome these problems. Scientific discovery is a process which is essential to the advancement of society, and I feel that scientists have been unfairly marginalized and even demonized because of a lack of understanding both theoretically and practically.

10. Looking back, how do you feel now about your 20 week experience in HC70A and HC70AL and what these courses taught you about science, teaching, discovery, and yourself?

I feel that these 20 weeks has been the best and most educational experiences of my life. It has taught me how difficult science is, and how much better teaching could be if more professors taught classes like Professor Goldberg does. It has also shown me how much more can be discovered, and how hard that can be; ~~in the past, I had believed that we had~~ our understanding of everything is far less than I had previously assumed, and yet it excites me, since there is so much more we can do if we only learn more.

As for myself, I have learned that though I enjoy the science, though I was previously unenthusiastic about it as compared to other fields of science.

11. Please comment on what you will be doing next year. What is your year and major? What courses will you be taking next year? What are your career objectives?

I will be taking my second year of university classes here at UCLA. I am a Math/Economics premajor now, though I may switch to a double major in Economics with Math or Statistics. I will be taking upper division Math and Economics classes next quarter, and a GE in astrobiology or some other life science class, as my schedule may change though I believe I will be taking that class. I am yet uncertain about my career objectives, though I am not a believer in setting things in stone, preferring to keep doors open; however, I am currently attempting to begin a career in business and finance related fields. I will be attempting to get an internship for the summer of 2015, in a business, technology, entertainment or perhaps a biotechnology firm.

HC70AL Exit Questionnaire
Professor Bob Goldberg
September, 2014

1. How did your experience in HC70AL impact your future academic decisions?

It convinced me that I do not want to work in a lab but I may reconsider persuing a career in science, something I had otherwise disregarded

2. How would you compare your HC70A and HC70AL experience to that of other courses you took at UCLA?

For one I actually had to work hard day in day out which isn't that common north campus. In addition I had to actually apply what we learned in more open ended scenarios, something that is uncommon at UCLA in general

3. Do you think more critically in your other classes and/or in general since taking HC70A and HC70AL?

No, I have a tendency to stoop to the level required to get an A.

4. How do you feel that HC70A and HC70AL impacted your academic experience at UCLA?

Its is really one of the only classes where I had to actively problem solve without having a set list of knowledge. Its also fasilitated me meeting very interesting and driven people.

5. Did you decide to change your major and/or career objectives as a result of taking HC70A and HC70AL? Please elaborate why or why not.

Not my major but I do want to participate in biotech from a commercial or legal stand point as this class has convinced me its the only relevant field of growth

Name_____

6. What have you learned about how science is carried out from taking these classes?

It takes a lot of hard work and patience. You never know what you are going to discover, if anything, and you have be cognizant of numerous variables to actually make sense of your findings.

7. How did working in the lab affect your appreciation for new discoveries that you read in newspapers and magazines and view on television?

It takes a long time and a lot of trouble shooting by people who are not like me. My respect for the beach scientist has certainly grown.

8. How did taking HC70A and HC70AL impact your decisions on what classes or graduate programs you are pursuing?

It has certainly made me want to participate in biotech. As I am unsure about what graduate route I will take, I do note know exactly the capacity in which I will do this.

Name_____

9. Looking back on your laboratory experience in HC70AL, how do you view scientists and the process of scientific discovery?

with a great deal of respect, humility, and perhaps a bit of pity for the labor and tedium all scientific discoveries require

10. Looking back, how do you feel now about your 20 week experience in HC70A and HC70AL and what these courses taught you about science, teaching, discovery, and yourself?

That science is not a text book or a protocol. It is a confluence of knowledge, experience, long hours, and creative thinking to produce any of what we take forgranted. Although it is important to memorize terms and structures, these are just the building blocks, the vocabularly required to make sense of the big picture. But one was look beyond and understand the interactions between these various moving parts to truely understand and learn in life.

11. Please comment on what you will be doing next year. What is your year and major? What courses will you be taking next year? What are your career objectives?

I'm going into my 3rd year as a poli sci econ double major and will continue to take nessesary classes in these fields. I hope to participate in a CIA, Brookings or CSIS internship next summer. I plan on pursuing a career in law, finance, or national security. Unless pursuing that latter, I hope to gain a large amount of wealth and I wish to acrue great power and influence regardless