Abilene Christian University
Goals and Faculty Evaluation
Year 2012 -2013

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Teaching

Teaching Goals for the Year (completed by June 1 by faculty member)

1. Integrate faith and learning in a more meaningful way:

   a. BIOL 101 Human perspectives in biology – In this class, several of the topics may be considered controversial to some students. These are topics such as human evolution, global climate change, and stewardship of resources. I intend to create an environment where there can be much discussion by giving them questions in advance of the discussion so they can think ahead and prepare for class.

   b. BIOL 355/357 Microbiology – Several students enrolled in the Spring 2012 microbiology section asked me outside of class how I personally dealt with reconciling evolution and faith. We had been studying cellular origins of life and oxygenation of the environment by microbes. They told me they understood the science and had a good grasp on evolutionary principles being discussed in class. They were frustrated because they wanted to know how the professors *personally* deal with these issues. They said that none of their professors talk about that. My goal is to share with the entire class (and not just those who are brave enough to ask outside of class) my story of struggle and faith development as it pertains to origins of life. I feel a little apprehensive about this. It means I have to be vulnerable and give personal information that is generally not shared in science classes at universities, but I think that is what the students need. I know this because I had the same questions and desires as a college student.

   c. BIOL 491/493 Human Anatomy – Many of the students enrolled in this class are senior who have been admitted in medical school, optometry school, or dental school. Other students are applying to these schools or to physical therapy school. I am going to introduce the theme of how should Christians who are professionals in these fields live their lives and conduct their medical practices. I intend to ask them tough questions like, "Should a Christian doctor drive a BMW?", "Should a Christian doctor refuse to accept some groups of people as patients, such as those that are on Medicaid?", "How will you be different from other doctors?", "How can you make this medical practice a ministry that leads people to Christ?", etc. These students will certainly not get this type of discussion about the Christ-centered intentionality of their careers in professional schools. This will not be the main theme of the course, human anatomy will. It will be a side conversation that continues throughout the semester and will depend on student interaction and contribution.

2. Redesign BIOL 101 to make it more accessible and meaningful to the students. In the previous section of this class that I taught, I made it a simplified majors class. That didn't

work as well as I expected it would. I am redesigning my approach to include more case studies to be discussed in groups and more anatomical models that they can put their hands on. I am also covering topics that are of interest to the students, like the importance of immunizations, food intolerances and allergies, human biology and diseases, climate change, human evolution, how the brain works, etc. My goal is for them to be able to pick up a newspaper and really understand what the stories dealing with biology mean. I will be compiling parts of different textbooks as the reading material for the class. Half of the class time will be spent on lecture; the other half will be spent on interactive activities that allow the students to learn and think about the lecture material.

3. Engage students in the lecture of BIOL 491/493 in better ways. I will add more assessment slides to the lectures, not to be graded, but so the students can determine if they really are learning the material. I will show more figures of structures that they have previously seen before without labels and ask them to name the parts. I will also try to ask more engaging questions. Previously, I have asked very simple questions that no one really wanted to answer.

Reflections on Goals (completed by March 1 by faculty member)

Chair's Evaluation of Goal Completion (completed by April 1)

Not met	Met	Met with Distinction
		X
		X
		X

1. Integrate faith and learning in a more meaningful way:

a. BIOL 101: These non-major students were given a homework assignment with the following five questions:

1. What are your beliefs or feelings about evolution?
2. How was evolution taught to you in your high school?
3. How do you think about faith in regard to evolution?
4. What does it mean to be made in the image of God?
5. Make any other comments or ask any other questions you have about this topic.

I received a wide range of answers usually falling into one of three categories a) creationist-no evolution has ever occurred, b) some evolution has occurred but not in humans, and c) evolution is the mechanism by which all organisms have come into being. There were roughly equal numbers of students in each category. The students submitted their answers the night before class so that I would have time to look over their answers. During class, I intentionally created an environment where all students would feel comfortable sharing their thoughts to these questions. We were able to have a good conversation where students were not threatened. We also talked about how we show our faith when we disagree with others – especially on sensitive topics like evolution and how we treat people who hold different viewpoints. (It irks me when creationists tell evolutionists they are going to hell. It doesn't seem to me like a good way to show the love of Christ.) They gave very thoughtful answers. Afterward, I talked about how scientists view evolution and why we don't teach creationism as science. We also talked about how accepting evolution does not mean denying that God is the Creator. We talked about how those two could be balanced.

This is the best example of how faith was integrated in this class. Faith was integrated in smaller ways in one to two sentences interspersed in most classes.

b. BIOL 355/357: In this class, again, we had a discussion about evolution as outlined in the goal in 1b above. We did talk about evolution and faith. At the time I thought it was a good conversation. However, I do not think I shared enough about the struggles of faith. A couple of weeks ago I was speaking with one of the students who had taken the class in the fall. He told me that he did not believe in God and he was struggling. I asked him if I ever told him about the period of time in my life I struggled with my faith in the same way and he seemed shocked – and comforted. I should have made this more apparent in class somehow. I think I need to be more vulnerable.

c. BIOL 491/493: The students shared their thoughts on Christ-centered intentionality in both semesters of Anatomy. The fall semester had a much smaller student enrollment (16). They shared about how they would be different, but a few of them shared about their personal conversions to Christ while they have been at ACU and how that will affect their health care practices. These stories, in particular, were powerful. I received an email from one of those students thanking me for the conversations that we were having and telling me how those had impacted in him so much. The spring semester has been different. There are 32 students in that class. The reflections that the students have shared have been good, but they are missing important elements that those in the fall semester naturally had. Most of them say something to the effect of "I will really care about my patients and pray with them." I want this to go deeper, so I may have to pull it out of them somehow. I also have a handful of students who say privately to me they do not know if they believe in God or not. I have told them they can talk about how they will be intentionally different than their co-workers. That has also caused me to think about how to integrate faith and science when the students do not have faith. I have not come up with an answer to that one yet.

2. Redesign BIOL 101 to make it more accessible and meaningful to the students. I spent a lot of time in the fall semester redesigning this course. I selected a different textbook. I also asked the students at the beginning of the semester what topics in biology they were interested in learning more about. I integrated most of those topics into my lecture. In this way, the students felt they had some control over a class they did not really want to initially be a part of. I found that it was most engaging for the students when I lectured for 15 to 20 minutes and then had an activity for them to work with their neighbors on for 5 to 10 minutes. This kept them engaged. They also knew that at any moment I might call on them for an answer. I also assigned more meaningful assignments, such as keeping a food diary for three days and determining the amount of calories and nutrients they received. This included a personal reflection on the assignment where many of them said they realized they had to change their eating habits! I felt like the students were much more engaged this semester than the first time I taught this course. Several of them told me they enjoyed it. My student evaluations were much better this time. It is odd to me because the same proportion of students earned As, Bs, Cs, etc as the first semester. They were just happier about it. I only covered about half the amount of the material this semester as opposed to the first. I intentionally sacrificed quantity for quality.

3. Engage students in the lecture of BIOL 491/493 in better ways. I did add more assessment slides to the lectures, not to be graded, but so the students can determine if they really are learning the material. They seem to be engaged in this activity. This includes showing more figures of cadavers in which they have to identify the different parts. I have also added more short case studies from a medical website that they answer in class. This is still a work in progress. I still do not have this class where I want it, but it is much better than it has been in the past.

Additional teaching activities not included in goals:

Not met	Met	Met with Distinction
	X	

1. Attended Anatomy in Clay Professional Development September 28-29, 2012, in New Orleans, LA.

Areas of Competence: Faculty are expected to develop competence in each of these areas (completed by April 1 by chair)

	Unsatis-factory	Needs Improve-ment	Effective	Excellent
Student Satisfaction			X	
Classroom Effectiveness			X	
Syllabi			X	
Integration of Faith/Learning				X
Class/Course Enhancement				X
Student Advising/Mentoring			X	

Teaching (Overall rating by chair)

Unsatis-factory	Needs Improve-ment	Effective	Excellent
		X	

Comments: **These are finely developed goals, reasonable and attainable. They are followed by thoughtful reflection and detail as to how each was approached. I appreciate the care with which the goals were developed and approached. Clear growth and effective classroom result is evident.**

Scholarship

Scholarship/Creativity Goals for the Year (completed by June 1 by faculty member)

1. Publish the *Aeromonas* transformation manuscript. I have submitted this manuscript to several different journals and it has been rejected each time. My goal is to finally find the proper journal for this paper.

2. Start research with funds from ACU Math/Science Grant, Pursuit, and Summer 2012 student research stipend from the ACU Undergraduate Research Council that I was awarded this past Spring 2012 semester. I have several undergraduates that are willing to work with me on my research over the summer and the fall and spring semesters. My goal is to start my research at ACU and maintain it.

3. Have students present our research at the ACU undergraduate research festival and/or Texas Academy of Sciences annual meeting.

Reflections on Goals (completed by March 1 by faculty member)

Chair's Evaluation of Goal Completion (completed by April 1)

Not met	Met	Met with Distinction
		X
		X
		X

1. The Aeromonas transformation manuscript was finally accepted for publication. In August, I received an "accept with minor revisions" from *Systematic and Applied Microbiology*. However, these revisions were not really minor. The kind of revisions that the reviewer and editor were asking for required that all of the phylogenetic trees and some of the data be re-analyzed. I needed help from a systematicist. The co-author who had initially done the phylogenetic tree was unavailable to help anymore, so I asked Josh Brokaw to help. Even though he is not a microbiologist, he was able to quickly understand the manuscript and what was needed. He added valuable insights and crucial data analysis that I could not do on my own. In January, we resubmitted the paper with the revisions and it was finally accepted. This paper is the foundational paper of my research. Since this paper will be published, I can now progress through the next phase of my research and it can also be published.

In press: **J.R. Huddleston**, **J.M. Brokaw**, J.C. Zak, and R.M. Jeter, Natural transformation as a mechanism of horizontal gene transfer among environmental *Aeromonas* species, Syst. Appl. Microbiol. (2013), http://dx.doi.org/10.1016/j.syapm.2013.01.004

2. I received an ACU Math/Science Grant, Pursuit, and Summer 2012 student research stipend from the ACU Undergraduate Research Council. With these funds, I established and am continuing to establish my lab at ACU. I was able to buy supplies and reagents as well as fund two research students through the summer. The first thing I did was to retrieve samples of my 300+ frozen Aeromonas strains from Texas Tech University so that I could continue my

research on aeromonad transformation. This task alone took several weeks. I now have the strains in a frozen culture collection here at ACU. I also started trouble-shooting protocols that worked at TTU, but I needed to start working here. This is, for the most part, done. I had three research students this past summer. I paid two. They worked to amplify genes using PCR and make many solutions and different types of media important to the research. They also progressed through the research goals. I did not get as far on my research as I had originally intended because I underestimated the time it would take to accomplish some of my goals. Nevertheless, I believe I have a good start to my research here at ACU.

3. My three research students, Zack Morgan, Kristin Goodwin, and Kathryn Davis will be presenting posters at the ACU Undergraduate Research Festival in April 2013. They also presented the lab's research at an ACU Biology Research lunch in October 2012. I did not believe that there was enough progress made in the research in order to justify traveling to the Texas Academy of Sciences conference this year.

Additional scholarly/creative activities not included in goals:

Not met	Met	Met with Distinction
		X
		X

1. The last paper from my post-doctoral research at the University of Georgia was published. While at ACU, I did revising and final literature searches for this manuscript.

Chung D, Farkas J, **Huddleston JR**, Olivar E, Westpheling J.Methylation by a Unique α-class N4-Cytosine Methyltransferase Is Required for DNA Transformation of *Caldicellulosiruptor bescii* DSM6725. PLoS One. 2012;7(8):e43844. Epub 2012 Aug 22.

2. A U.S. Utility Patent Application was filed with collaborators from the University of Georgia for the work that was done in the PLoS One paper. While at ACU, I revised parts of the application and manuscript and filled out the many required forms for the patent.

U.S. Patent Application Serial No. 13/439,069, Restriction/Modification Polypeptides, Polynucleotides, and Methods. (filing date July 2012) (Inventors: Westpheling J, Chung D, **Huddleston JR**, and Farkas J)

3. In January I applied for internal grants at ACU and received Pursuit funding in the amount of $7,500 for FY2014 which includes summer 2013 research.

Scholarship/Creativity (Overall rating by chair)

Unsatis-factory	Needs Improve-ment	Effective	Excellent

			X

Comments: This research effort is significant and appropriate. Dr. Huddleston shows good imagination in foreseeing problems and solving them. She has been effective at incorporating students workers along with her and is developing a research program that is a very good fit for ACU. She is especially effective at collaborating with colleagues both here at ACU and elsewhere.

Service

Service Goals for the Year (completed by June 1 by faculty member)

1. Serve on the Undergraduate Research Festival Committee. (University/College)

2. Set up a microbiology demonstration station for GROW with STEM Project to encourage girls in to pursue their interest in science. (University/College, Community)

3. Serve with my husband as a small group leader in the 20s and 30s ministry at University Church of Christ. (Community/Church)

Reflections on Goals (completed by March 1 by faculty member)

Not met	Met	Exceeded
	X	
	X	
	X	

1. I am currently serving on the Undergraduate Research Festival Committee. I am a member of the Prizes & Judging Committee. Most of our work is done all day and evening on the day of the festival, organizing judges, filling in for missing judges, tabulating points, and awarding prizes. It will occur on April 4. (University/College)

2. The GROW with STEM Project will occur at ATEMS High School on the morning of April 20. Rebecca Hunter and I will do this together. We have stations planned about "The Unseen World Around You". There will be microscopes set up where the students can view microbes in pond water, their own cheek cells, mold on fruit, and pollen grains. (Community/Church)

3. My husband and I are still serving as leaders in our 20s and 30s ministry at UCC. I organize weekly women's lunches. We help visitors feel welcome and open our home for small groups on a regular basis.