

Abilene Christian University

Goals and Faculty Evaluation

Year: 2014-2015

Name Jennifer Huddleston

Department Biology

Date 5/26/14

Teaching

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

1. Participate in a teaching and learning group formed by Jennifer Shewmaker and the Adams Center. This group is an invitation-only teaching and learning community for the 2014-2015 academic year. The goal is for the members of the group to be empowered and supported in using our gifts and talents, living into God's calling for us as teachers. This group will meet four times over the course of the Fall 2014 semester and three times over the course of the Spring 2015 semester. The first semester will focus on reading and processing the book, *How Learning Works*, which is very practical teaching resource. The second semester will focus on using these strategies within our classrooms.

Reflection: In the Fall of 2104 I participated in Jennifer Shewmaker's teaching and learning group. It was a beneficial experience for me. We read and discussed *How Learning Works*. The conversations about this book were very insightful. The teaching strategies presented in the book were research-based. I used some of the approaches in the planning of my spring classes. I was unable to participate in the Spring of 2015 because the meetings were on Fridays from 11:30 until 1:00. Unfortunately, my microbiology lab conflicted with all of the meetings. Although I was unable to finish the program, I am still in contact with Jennifer Shewmaker about implementing different teaching strategies in my classes.

2. Improve the quality of BIOL 493: Human Anatomy Lab by switching the lab manual and adding more interactive activities. I have not been happy with the anatomy lab organization since I started teaching it in Spring 2012. I copied the labs that had been done before using TAs as the primary instructors. I would give the TAs guidance, but I have not taught the lab myself. I have made minor modifications, but have not completely reworked it as I have had in mind. I have spent other semesters reworking some of my other classes and labs that were in more desperate need of attention. In the Fall semester, I plan to teach the one lab section myself and in the Spring semester I plan to teach both lab sections with the aid of a TA.

Reflection: The restructuring of the BIOL 493: Human Anatomy Lab was successful. I adopted a different lab manual and implemented teaching strategies I learned in Jennifer Shewmaker's teaching and learning group. In the fall, I did not have any teaching assistants helping me. I wanted to set a new tone for the new lab. During previous years, the students would take the quiz, quickly snap pictures of the models, rush through any dissections and turn in last week's homework. They were not really learning anything in lab. It occurred to me that students love to snap pictures with their phones to study, so I made it part of a requirement – the digital lab atlas. The students are required to take pictures, label them, and insert them into the atlas. This forces the students to spend time looking at the model while they are in lab and finding all of the structures. The feedback that I have received from the students is that the

digital lab atlas takes a lot of time to complete each week, but as they are working through it, they feel like they learn the structures better. There were two anatomy labs at the same time during the spring semester. I had a teaching assistant in each lab while I rotated between both labs. This worked out very well for several different reasons. The first reason was that the TAs were excellent anatomy students from the previous semester. During our weekly lab meetings, I asked them which learning exercises worked well from last semester and which ones were a waste of time. We worked as a team and further honed the exercises to maximize student learning.

3. Implement online lab notebooks as part of BIOL 357: Microbiology Lab. I believe that this will be a good way to use the technology that the students already have in order to maximize their learning in the lab. They will be able to take pictures of slides and Petri dishes with their electronic devices and integrate them into the lab notebook where they can label, make charts and tables, and manipulate data. These notebooks will be stored on Google Drive so that they can be continuously updated and I can evaluate them (informally) periodically to assess how the students are doing in lab.

Reflection: I have implemented the online lab notebooks as part of BIOL 357: Microbiology Lab. I set up a Google Doc template that the students then personalized and shared with me. I was able to check these notebooks at any time to monitor the students' progress. They were able to write up their experiments and include digital images easily. Previously, I had students fill out paper notebooks and turn them in. I was convinced that the students would respond better to the digital format rather than the paper since these are technologically savvy students. After two semesters of trying this with students, I am finding this is not the case. Previously most students would record their results immediately, in lab, as a good scientist should. With the digital format, students would wait until they were home or in the library to record results. With the passage of time came the loss in data. Next semester, I will probably go back to the paper system. However, I do not see this experiment in a digital lab notebook as a failure. It worked fine. The images and tables in the notebook were excellent and clear. I could read their writing! In a few semesters I will reconsider the digital notebook, especially after I have pondered how to improve the process where more learning occurs.

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

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

1. Teaching and Learning group
2. Anatomy Lab restructuring
3. Microbiology Lab digital notebook

Not met	Met	Met with Distinction
		X
		X
		X

Additional teaching activities not

Not met	Met	Met with Distinction

included in goals:

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1. College of Arts and Sciences Classroom Teaching Award

2.

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

Student Satisfaction

Classroom Effectiveness

Syllabi

Integration of Faith/Learning

Class/Course Enhancement

Student Advising/Mentoring

Unsatisfactory Needs Improvement Effective Excellent

			X
			X
			X
			X
			X
			X

Unsatisfactory Needs Improvement Effective Excellent

Teaching (Overall rating by chair)

			X
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Comments:

Jennifer recently won the best teacher award in the college of Arts and Sciences. This was a much deserved award for such an innovative teacher.

Scholarship

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

1. Mentor two students under a ACU Pursuit Grant for 2014-2015. Christina Lee and Jacob Woods will be working on undergraduate research projects and funded by this grant. Christina Lee is working on knocking out *tapYI* from the wild-type *Aeromonas* genome. Jacob Woods is working on knocking out *recA*. The goal is for these two students to make progress on knocking out the genes.

Reflection: Christina Lee and Jacob Woods did work on projects funded by the ACU Pursuit Grant. Grace McNair also joined Jacob Woods' project. They made progress and presented at various local, state, and national meetings. See below for conference presentations.

2. Mentor two McNair students for at least the summer. Kristen Clemons is working on knocking out *clpA* from the wild-type *Aeromonas* genome. Katie Preston is evaluating some of the bacterial constituents of rainwater. She is trying to determine if *Aeromonas* can be cultured from the rainwater.

Reflection: I mentored both Kristen and Katie through the summer and through both the fall and spring semesters. The both made progress on their projects and gave multiple presentations over their research (see below). Kristen, especially, has grown as a scholar. She has decided she wants to go to graduate school and pursue a life of research.

3. Have students present research in the spring at the ACU Undergraduate Research Festival, at the least, and hopefully at the Texas Branch ASM Meeting.

Reflection:

Abilene Christian University Undergraduate Research Festival Presentations:

Clemons, K. N. & Huddleston, J. R. (2015, March 31). Determining the effect of *clpA* in the natural transformation ability of *Aeromonas salmonicida*. Oral presentation presented at the 2015 Abilene Christian University Undergraduate Research Festival, Abilene, TX.

(Outstanding Oral Presentation in STEM)

Preston, K. & Huddleston, J. R. (2015, March 31). Isolating *Aeromonas* from Rainwater and the Atmosphere. Oral presentation presented at the 2015 Abilene Christian University Undergraduate Research Festival, Abilene, TX.

Sanderson, D. & Huddleston, J. R. (2015, March 31). Microbial Diversity and Antibiotic Production in Sorcerer's Cave. Oral presentation presented at the 2015 Abilene Christian University Undergraduate Research Festival, Abilene, TX.

(Outstanding Oral Presentation in STEM)

Texas Branch ASM Meeting:

Clemons, K. N. & Huddleston, J. R. (2015, March 27). Determining the effect of *clpA* in the natural transformation ability of *Aeromonas salmonicida*. Poster presentation presented at the Spring 2015 Meeting of the Texas Branch of the American Society for Microbiology, New Braunfels, TX.

Preston, K. & Huddleston, J. R. (2015, March 27). Isolating *Aeromonas* from Rainwater and the Atmosphere. Poster presentation presented at the Spring 2015 Meeting of the Texas Branch of the American Society for Microbiology, New Braunfels, TX.

Sanderson, D. & Huddleston, J. R. (2015, March 27). Microbial Diversity and Antibiotic Production in Sorcerer's Cave. Poster presentation presented at the Spring 2015 Meeting of the Texas Branch of the American Society for Microbiology, New Braunfels, TX.

Woods, J., McNair, G., & Huddleston J.R. (2015, March 27). The role of *recA* in the natural transformation of *Aeromonas salmonicida*. Poster presentation presented at the Spring 2015 Meeting of the Texas Branch of the American Society for Microbiology, New Braunfels, TX.

Reflection:

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

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

1. Pursuit grant and mentoring
2. McNair research and mentoring
3. Presentations at local and state level

Not met	Met	Met with Distinction
		X
		X
		X

Additional scholarly/creative activities not included in goals:

1. Two of my students and I presented our research at national conferences.

Not met	Met	Met with Distinction
		X
		X

National Meetings:

Clemons, K., Huddleston, J.R. (2014, October 17). Determining the Effect of *clpA* in the Natural Transformation Ability of *Aeromonas salmonicida*. Oral presentation presented at Florida International University McNairs Conference, Miami, FL.

Woods, J., McNair, G., & Huddleston J.R. (2015, March 19). The Role of *recA* in the Natural Transformation of *Aeromonas salmonicida*. Poster presentation presented at Alpha Chi National Convention, Chicago, IL.

2. My review article was published in the summer of 2014.

Huddleston JR. Horizontal gene transfer in the human gastrointestinal tract: potential spread of antibiotic resistance genes. *Infect Drug Resist.* 2014;7:167-176. doi:10.2147/IDR.S48820.

3. The provisional patent that I started while at the University of Georgia was granted as a US utility patent in February.

US Utility Patent Serial Number 8,962,333, titled Restriction/Modification Polypeptides, Polynucleotides and Methods issued on 2/24/2015 Inventors: Westpheling, J.; Chung, D.; Huddleston, J.; Farkas, J. Assigned to University of Georgia Research Foundation, Inc.

**Scholarship/Creativity
(Overall rating by chair)**

Unsatisfactory	Needs Improvement	Effective	Excellent
			X

Comments:

Many of Jennifer's students have won awards at professional meeting this both a testament to her mentoring as well as her research that is on the cutting edge of her field.

Service

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

1. Serve on the Undergraduate Research Festival Committee (University/College)
2. Undergraduate Readmissions Committee (University/College)
3. Lead a STEM for Girls station in the Spring with Rebecca Hunter (Profession, Community/Church)
4. UCC 1st and 2nd grade summer Sunday School teacher (Community/Church)
5. UCC Impressions committee – greeting people at the door four times per year (Community/Church)
6. Biology Research Club Sponsor (Department)
7. Biology Department Library Liason (Department)

Reflection:

I served on all of the above committees, as a club sponsor, and taught children's Sunday School classes.

Girls in Stem Event

Huddleston, J. R., & Hunter, R. (2015, January 26). The Skeleton Inside You. Presented at the Grow with STEM, ATEMS High School., Abilene, TX. This event is for middle school girls to allow them to have exposure to science and female scientists.

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

1. Committee memberships
2. Club sponsor
3. Sunday School teaching

Not met	Met	Exceeded
		X
		X
		X

Additional service activities not included
in goals:

1. I also became a sponsor of Alpha Chi National Honor Society. I accompanied the students on a trip to Chicago.

Not met	Met	Exceeded

2. Manuscript Reviewer for

PLOS ONE. February 2015. PONE-D-15-01194. Enhanced horizontal transfer of antibiotic resistance genes in freshwater microcosms induced by an ionic liquid.

Scientific Reports. April 2015. SREP-15-01592-T. The commensal infant gut mobilome as a reservoir for persistent multidrug resistance integrons.

NOTE: Activities should reflect service in at least two of the following categories:
Profession, University/College, Department, Community/Church.

Unsatisfactory Needs Improvement Effective Excellent

Service (Overall rating by chair)

			X
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Comments:

Dr. Huddleston is a fantastic team player. She is always willing to help with projects in the department, the university and her community.

Summary Assessment by Department Chair

Written Comments:

1. Collegiality

She is very collegial

2. Progress toward tenure

She has just completed her pre-tenure review with flying colors.

3. Progress toward promotion

I see no reason for any concern on her promotion

4. Constraints on performance

None

5. Comment on church membership

She is a member at University Church of Christ

6. Other

Jennifer Huddleston
Faculty
Thomas E. Bell
Department Chair

4/20/2015
Date
20 April 2015
Date