First-Year Review

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In the following sections, I have attempted to follow the suggested format for review of first-year faculty. Throughout, I have created hyperlinks to relevant documents both online and on this CD. Therefore, this document is best viewed on a Windows-based PC with Word and Adobe Acrobat Reader installed and a browser connected to the internet. This is the standard UD installation. Some of the presentations are executable files that may trigger a Windows message about potential viruses. Having used UD's virus checker throughout, you may safely ignore the warning messages. To terminate the presentations, simply push the ESC key.

Contents

1 Teaching

In the spring of 2005, I taught *RES 104 Research Writing* and *ESC 115 Physical Geology* plus its labs, for a total of 10 contact hours. A third course, *EVS 375 Watershed Dynamics*, had no students, as it was added to the course bulletin after students had registered for classes. In the fall of 2005, I taught *ESC 115 Physical Geology* and its labs, *EVS 248 Environmental Geology and Hydrology* and its lab for a total of 12 contact hours, plus I was on Wendt faculty release time for three hours, giving a total of 25 contact hours for 2005.

In my first year of teaching at the University of Dubuque, my experiences in the classroom haven't been far outside my expectations. The students are not particularly different than I've found elsewhere in the world, though I've taught very few freshmen here so far. During my first-semester *ESC 115 Physical Geology* class, I gave exactly the same tests as I had given the preceding semester at the University of New Orleans. Average grades were consistently about 5 points lower at UD than at UNO. I attribute this to a higher proportion of non-traditional-age students at UNO who tended to make the best grades in the class. I miss those students, particularly for out-of-class chats, but I enjoy the small-school environment here at UD. For example, here I teach my own laboratories rather than having them taught by graduate students. This makes far simpler the integration of hands-on learning activities into the course experience, a difficulty I faced in lecturing to groups of 125 students at UNO. In addition, the physical environment surrounding Dubuque enhances geologic opportunities (though integrating coastal studies and hurricane tracking was far more relevant in New Orleans!) Finally, I enjoy my colleagues in DNAS and find discussions with them to be helpful in planning class activities. Dan Call and Gerry Zuercher are particularly good at involving students in field studies.

1.1 Highlights

During the time I've been here, teaching and related activities have dominated my time, though committee work is beginning to claim its share. Some of the more significant uses of my time are noted below:

- Developed or extended course web sites at `http://www.geocities.com/DaleEasley`. I started the web site a decade ago and have gradually added to it. I use it for posting assignments, additional readings, old tests, items of interest, announcements, personal thoughts, and lecture outlines. Student evaluations through the years have indicated that the web site is one of the things they appreciate most.
- Prepared a laboratory manual for *ESC 115 Physical Geology*, detailed below in 2.1, online at `http://www.geocities.com/DaleEasley/Physical/lab/Welcome.htm`
- Revised classroom presentations for *ESC 115 Physical Geology*, such as `FirstDay.exe`. The accompanying outline available to students is at

http://www.geocities.com/DaleEasley/Physical/Chap01.pdf. Such presentations and outlines were prepared for each chapter of our textbook.

- Prepared new classroom presentations to augment those already in use:
  - Iowa geology at IowaGeology.exe. This presentation is given during the last of the semester to augment lab assignments throughout the semester. The goal is to apply the student's geologic understanding to local geologic conditions, a case study of sorts.
  - Picasso's Guernica at Guernica.exe. This presentation uses a famous painting and a quote by Norman Maclean to make the case that though learning and reaching understanding may be difficult, they are both possible and worthwhile. Guernica has been called the greatest painting of the twentieth century. I had the opportunity years ago to visit a museum set aside for that one painting. Yet, the painting at first glance is far from *pretty,* the only characteristic most students use for evaluating painting. Is it worth their time to try and understand why so many people think it's great? Might there be other things (e.g., science) that are also difficult but worth the effort?
  - Norman Maclean and A River Runs Through It (Maclean.exe). Norman Maclean was the son of a Presbyterian minister. In his best-known book, **A River Runs Through It,** Maclean presents a variety of material that is well-suited as examples of the main points of the UD Mission. I also purchased a copy of the DVD from which to show excerpts in class.
- Performed a stream assessment of a portion of Catfish Creek for the Dubuque County Soil and Water District with my *EVS 248 Environmental Geology* class. Sandi Helgerson spoke to the class in preparation for the assessment. This was a serendipitous event, unplanned until after the fall semester began. I was contacted by Sandi about the opportunity to participate. Students were provided with training by a professional working with the project and subsequently undertook the assessment in groups of three. I had previously walked along parts of Catfish Creek in Swiss Valley and the Mines of Spain. However, the assessment took us upstream to agricultural areas that I wouldn't have explored otherwise. Certainly, it was educational for me and, I hope, for the students.
- Received 800k funding for laptops for the ESC 115 lab and developed exercises using them. We installed wireless access in the lab and began taking advantage of the many free resources available online. An example is a site for mineral identification such as http://www.rockhounds.com/rockshop/mineral_id.
- Obtained 800k funding for GPS units and software maintenance for *EVS 333 Geographic Information Systems Applications.* I will be teaching this course in the Spring of 2006, using the purchased materials.

- Applied for and attended an NSF course on teaching hydrogeology (http://serc.carleton.edu/NAGTWorkshop This course was in the summer at the University of Nebraska. Its focus was on learner-centered and field activities. I came away with resources and ideas that I have already begun incorporating into classes.
- Applied for and received funding for a NAGT lecture by Paul Moren on geowall technology in the classroom (http://geowall.geo.lsa.umich.edu/). I was initially quite excited about geowalls, but have since found that Paul's inclusion of anaglyph maps is more useful here at UD. I can develop and print the maps myself, make multiple copies for the classroom, and use the maps in any location. They are more flexible and much cheaper.

1.2 Student evaluations

Hard copies are attached in Appendix A. John Stewart's comments on my first-semester evaluations are at SpringStudentEvaluations.pdf. In summary, my courses generally receive high marks from students. The reasons for this vary, but talking with students has led me to believe, though with little data, the following:

- Experienced students appreciate the effort I put into preparing for class, especially my web site and lecture outlines.
- Apprehensive students believe that I care that they do well, and generally they respond well to encouragement.
- Most students feel I conduct the course fairly, including not allowing make-ups in large classes but dropping the lowest grade plus posting old tests on my website. (Example: http://www.geocities.com/DaleEasley/Physical/Test1_Fall_2005.pdf)
- Most students are comfortable with, perhaps even entertained by, my personality. I have worked hard on skills in story-telling, humor, and drama, and try to incorporate them into my lectures, along with videos and slides.

That said, I must add that I worry sometimes that student evaluations are mostly a popularity contest. Geology may come out ahead of physics or chemistry simply because it is more visual and less mathematical, and I get rewarded for that reduced rigor. One of my UNO colleagues argued that only years down the road can a student truly evaluate a course, and even then hindsight may color the evaluation. Can any of us give an accurate evaluation of our current girlfriend? Still, if I date 40 women and they all say I'm a jerk, the resulting average is pretty believable.

1.3 Peer evaluation

I was evaluated in my *ESC 115 Physical Geology* lab session by Brad Clarke of UD's education program ClarkReview.pdf. I chose Brad because of his specialization in science teaching plus his many years of experience.

1.4 Self-assessment

Submit a 2-3 page self-assessment of your teaching. Describe the learning objectives and the teaching goals of each of the courses you offered. Describe what you learned about your teaching from student and colleague evaluations. Identify the primary teaching strategies that you plan to continue using, extending, and developing in subsequent courses and the primary improvements you plan to implement. Be as specific as you can, especially about your plans for improvement.

My self-assessment is here: SelfAssessment.html. Specific learning outcomes are on my syllabi at http://www.geocities.com/daleeasley/RES104/Welcome.htm, http://www.geocities.com/daleeasley/Physical/Syl_phys.htm, http://www.geocities.com/daleeasley/En and http://www.geocities.com/daleeasley/GIS/Syllabus.htm

2 Scholarship

2.1 Lab Manual for ESC 115

In the spring of 2005, I decided to develop a lab manual for ESC 115 for two reasons: the use of a purchased manual was adding approximately $80 to the students' cost for the course, and an in-house manual could be tailored easily to local geology and resources. The manual was produced as a series of pdf documents available on the course web site at http://www.geocities.com/DaleEasley/Physical/lab/Welcome.htm. Because of having only 10 contact hours in the spring of 2005, I had time to begin the writing, which was mostly completed over the summer. I continue to make revisions in light of student feedback. In developing the manual, I spent considerable time determining available online resources, producing figures of my own, and writing the text. I also sought to produce the lab in a manner that made it straight-forward for students to prepare for weekly quizzes that begin each lab session. The main purpose of the quizzes is to assure that students come to lab having read over the material in advance.

Student response to the lab manual during its use in the fall semester was generally positive. One of the online components yielded by far the most complaints, and the lab containing it will be modified during the spring, 2006, semester. Not surprisingly, the students appreciate most not having to purchase a manual.

2.2 Reviews

I am on the editorial board of *Environmental Geology*, a leading journal in my field. I received a manuscript to review approximately every 6 weeks. In addition, I wrote a book review of a geostatistics text for publication in the journal.

3 Service

In 0.5 to 2 pages, describe your service activities for the current year, including any confirmed plans for the remainder of the period. For a description of what counts as "service," see the Handbook, 2.9.1.3. Distinguish among service to the University, service to your profession, and service to the community. Include relevant documentation.

3.1 Profession

- Editorial board member, *Environmental Geology*, as mentioned above in 2.2.
- Reviews: During 2005, in addition to reviews for *Environmental Geology*, I reviewed a manuscript for the American Water Resources Association and a research proposal for the Geological Society of America.
- Membership: I am currently a member of the American Water Resources Association, the National Ground Water Association, and National Association of Geoscience Teachers.

3.2 UD

- COAC committee member.
- Interviewed candidates for library position and institutional research position.
- Fulbright contact for UD.

3.3 DNAS

- Worked with Greg Nelson to clean up the DNAS web site (http://www.dbq.edu/academics/envirosci/evs.c
- Wrote mission and learning outcomes for EVS, biology, and DNAS (MissionandLearningOutcomes.pdf).
- Prepared a guidance document for field trips (FieldTrip.pdf).
- Prepared template for COAC course proposals from DNAS (DNAS_CourseProposalForm.(11-09-05).doc).
- Prepared a course proposal for EVS 248 with added lab and assisted Dan Call and Kathy Dolter in preparing stat proposal (EVS230.pdf).
- Wrote letters of recommendation for students past and present.
- Prepared a document on teaching loads for lab-science instructors (TeachingLoadsandTeachingScience.pdf).

3.4 Other

- Invited presentation for the Maryknoll regional conference, New Orleans, March, 2005 (NewOrleansConference.exe).
- Invited presentation for the *Great Decisions* series, February, 2006 (Draft: EnergyTalk.exe).
- Joined the Catfish Creek Coalition, Friends of Mines of Spain and the Dubuque County Conservation Society.
- Became certified for the Iowater sampling program (http://www.iowater.net).

4 Advising

Write a one-page or shorter description of your work as an advisor and your contributions to the Universitys recruitment efforts. Include relevant documentation.

4.1 Advising

During the first semester, I was assigned no advisees. During the second semester, I was assigned six students whose major was undecided. I helped two register and three find advisors in their new major. One, a girls volleyball player, transferred to another school.

4.2 Recruiting

- Email to prospective EVS students: I worked with Jesse James to contact prospective students who had expressed an interested in environmental science. I wrote an email (bulkEVSemail.pdf) which Jesse then sent out in bulk using Admissions software.
- Meetings: I met frequently with prospective students and attended multiple Preview Day events, both in the summer and fall.
- Speech—River Museum: In October, I gave a speech to high-school guidance counsellors at the River Museum (Counsellors.exe). The event was hosted by UD's Admissions Department. The speech was well received and led directly to my being invited to give a lecture in February, 2006, on energy to the annual Great Decisions series held in downtown Dubuque.

5 Mission

Describe the ways you perceive your teaching, scholarship, service, and advising to support the mission of the University. What courses do you teach that help

achieve the Universitys goals? How does your scholarship promote UDs mission? How do your advising and service also do this? I ask in this section that you be reasonably articulate about how your work supports UDs Reformed Christian mission. You are not required to adopt a Reformed Christian perspective, but like every UD student who takes WVS1, you are expected to understand what UDs perspective is and to describe in more than a sentence or two how your work complements, extends, or otherwise supports it.

5.1 Class presentation on mission:

A River Runs Through It (Maclean.exe), as discussed in 1.1 above.

5.2 Wendt faculty release time, Fall 2005

During the 2005 fall semester, I participated in the group of faculty who had release time funded by the Wendt Initiative. We met most weeks, sharing ideas on the nature of the Wendt Initiative, methods for incorporating it into the classroom (EthicsIncorporation.pdf), and further readings related to the topics (AnnotatedBibWendtEasley.pdf).

5.3 Incorporation of the UD Mission and Wendt principles into the classroom

Incorporation of the UD Mission and Wendt principles into the classroom takes two major forms:

- the methods of developing and implementing the course, and
- the specific materials used in the course.

The Wendt principal most important in running a class is fairness. Students must believe that hard work yields positive results, and that others have no unfair advantage in the resulting grades. I have addressed this by allowing no make-up exams in my ESC 115 course and by posting old exams on my web site. In a large class, there is no way that I have yet discovered of being fair with make-up exams. Therefore, I instead drop the lowest grade. If a student misses a test, that is the one that is dropped. In addition, by posting the old exams, all students know equally well what I have done in the past, not just those who might have access to a former students old tests.

Within a course, incorporating the UD Mission and Wendt principals is natural, given my interest in environmental geology. The environmental field is inherently value-driven. Should we preserve wilderness areas? Why? Science can tell us what a wilderness area is and its role in ecosystems, but decisions about its preservation depend on what matters—more money, short-term profit, Native-American spirituality, or good stewardship. An essay question *from my EVS 248 Environmental Geology and Hydrology* course is an example of advancing students recognition of the role values play in their profession:

Essay question: What should be the distinction between moral, technical, and financial responsibility as applies to the hazardous waste site at Love Canal?

This question was from the Test 1 of the fall, 2005, EVS 248 course (http://www.geocities.com/daleeasley/Phy In class, we had previously discussed the historical background of the hazardous waste site a Love Canal and technical issues dealing with epidemiology and groundwater contamination. Their textbook devoted a section to Love Canal. In addition, I provided them with links to a number of web sites, such as http://ublib.buffalo.edu/libraries/projects/lovecanal/.

In the spring of 2005, I also faced the incorporation of the mission and principals into *RES 104 Research Writing*. The course is broken into three sections for which I prepared the following:

- Humanities: a presentation of paintings (demonstrates the Reformed tradition ideas of a lack of separation between the sacred and secular; Paintings.exe),
- Social sciences: a discussion of a quote by Kavanaugh on commodification of our desires (demonstrated stewardship, Christian love, and Reformed view of humankind; Kavanaugh.pdf), and
- Physical science: a presentation on sustainable development (demonstrates stewardship, Christian love, and professional preparation; SustDev.exe).

6 Vita

Available on my web site at http://www.geocities.com/daleeasley/Webvita.htm.

7 Professional Development Plan

In a paragraph—or more, if necessary—describe your professional development plan for the next 1-3 years. Tell what you will do to enhance your professional capabilities as they support your departments and the Universitys missions. Identify what you believe are performance deficiencies, the level of proficiency you plan to achieve, the time line for achievement, and the activities that will help you develop in these ways.

My professional development plans focus on adapting my knowledge to the specifics of UD and the Midwest. I intend to focus on three main areas:

Field Trips: I will be participating in a Boundary Water Canoe Trip in the summer of 2006, with plans to develop my own trip for UD students. My own experience with geology field trips as an undergraduate plus my experience leading them for many years indicates that field trips are among the best ways to gain and maintain student interest in the natural world. I also hope to develop a field trip to Wyoming, the location of my graduate studies and a place close to my heart.

Additional skill-building in GIS.: Presently I am weakest professionally as to the requirements of my job in the area of GIS. Though I have done much

of the work of mapping, database management, and geostatistics that forms the basis of GIS, I am not yet thoroughly versed in the particular software, ARCGIS, that I will be using.

Student research projects: This fall was my first opportunity to teach a course for our EVS majors, and I hope to begin undertaking individual projects with several of them. These will focus primarily on mapping and water resources.

Staying busy in the upcoming year is unlikely to be a problem.