

# **Overview of Evaluation of the Quality of Learning**

## **Undergraduate Programs Offered by the Earth Science Department By Dr. Weihong Wang, Associate Professor and Department Chair**

Revising course and program curricula is an ongoing mission for our department, as we continually do our best to provide students with the most effective and enriching educational experiences. Some major actions we have taken to enhance our curricula include the items in the list below. I want to emphasize the crucial role our faculty play in this important process.

A wide range of stakeholders at UVU and beyond actively contribute ideas and provide feedback to ensure we offer well-designed programs and courses—an essential component for attracting prospective students, retaining current ones, facilitating timely completion, and fostering an engaging college experience overall.

- Based on feedback from employers (through surveys, available upon request) and our environmental science and management majors, we made significant updates to the Environmental Studies program - creating two streamlined tracks—Environmental Science Track and Environmental Management Track—to better prepare students for careers and graduate programs in their area of interest. This change provides clearer direction and more tailored skill-building within the major.
- Undertaking a collaborative, department-wide effort to overhaul the program learning outcomes for clarity and measurability. Faculty are working on aligning course learning outcomes with program learning outcomes to showcase the progression of learning and competencies gained. We continue examining the course learning outcomes to further strengthen that alignment.
- Utilizing our Earth Science Advisory Board, comprised of industry leaders and professionals in the field, state, and federal agencies to provide insights on desirable skills and knowledge as well as feedback on refining our curriculum. Their valuable employer perspective helps ensure our programs align with current workforce needs (an example of a previous meeting agenda and the minutes are provided to showcase this partnership).
- To glean insights on strengthening our programs, we have conducted comprehensive surveys (available upon request) of both current students and those who left our programs. The surveys provided valuable perspectives on areas working well and aspects requiring improvement.
- Implementing student exit surveys (available upon request) to evaluate achievement of program learning outcomes from the students' vantage points and assess areas where our programs can continue improving to ready graduates for career and academic success. The survey provides data on how effectively our offerings are meeting program goals.

# UVU Earth Science Board Meeting Agenda

Location: UVU Clarke Building (CB 511)  
Date: October 31<sup>st</sup>, 2023  
Time: 12:30pm – 2:00pm  
Provided: Coffee, lunch, dessert

## Agenda Items

1. Introduction/grab food (Dr. Atkins) 20 mins.
  - a. Name
  - b. Agency/department/job title
  - c. Background/expertise
  - d. Get to know you question (choose one):
    - i. What is something you wish you could get paid to do?
    - ii. What is something you wish you had known or done sooner?
    - iii. Where has been your favorite place in the world to visit?
2. UVU Earth Science Program Overview (Dr. Wang) 20 mins.
  - a. Overview of Advisory Board objectives
  - b. Student demographics
  - c. Core requirements
  - d. Enrollment trends/student career trajectories
  - e. Questions/comments from the Advisory Board ~10 mins.
3. Needs from Advisory Board members (Dr. Atkins) 40 mins.
  - a. Desired skillsets/qualities of recent graduates
  - b. If you had to prioritize 3 traits or skills for new hires, what would these be?
  - c. Where have you seen gaps in preparedness of recent hires?

## To consider between this meeting and next meeting:

1. Are there opportunities for students within your organization?
  - a. If so, how are these opportunities advertised? Can you provide more info?
  - b. If none currently exist, are there ways to engage students in your organization in the future?
2. Review the current UVU curriculum. Are there any topics or skills you'd like to see emphasized or developed further? Are there any gaps?



## Earth Science Department Inaugural Advisory Board Meeting

Oct. 31<sup>st</sup>, 2023

Adam: Unsatisfied with employment—any more data/insight on this?

Daren: Most of the time my students complain about peers.

Bill: The one complaint I get is that we aren't paying people enough. One of the things I hear is the generation of kids coming out about what they are getting and what they can achieve. There is an expectation that they don't have to work hard to get what they need to achieve.

Rachel: We need to align expectations with reality. Part of that is looking at what is out there and looking at the pros and cons. It's important for students going into this.

Daren: We currently have an ENVT careers class where we try to focus on the path people took to get there. We have them do career interviews with those in the field. We are hoping to do this in the other degrees.

Erica: I'm learning there are trade-offs with each job.

### Three Skills/Qualities When Hiring

Melisa: Writing skills, reliability, basic GIS/AGOL

Richard: Willingness to work and learn, technical (experience with software), how much do you think you're worth and what should I be paying you? A lot of people don't know what they are worth until you offer them something.

Adam: Teamwork, communication (live people), coding (at least understand it), self-directed.

Erica: Writing, motivated/ability to learn and excited to learn, technical skills, some idea of how the world actually works (implied experience, diversity in studies).

Bill: Attitude (a willingness to get in and do it--I want students that are able to think), cultural fit, aptitude (technical knowledge). My last question in an interview is, "Why us?"

Tara: When hiring for USGS, I look for people with mental stamina (the ability to cope). Passion is a large part of this. You can also see a person's reaction as you are describing what the job entails.

Rachel: I wonder if we can ask people something they have done for a long period of time?

Adam: Sometimes I hire people with a short attention span for rapid work. In another department I need people who won't think outside of the box who are doing the same thing every day.

Rachel: I want someone with varied experiences. From my understanding right now, the students here get this.

### Where have you seen the gaps in preparedness of recent hires?

Writing, analytical

Bill: We need geoscientists who are more quantitative.

Rachel: It's a challenge that students who come out with an Earth Science degree as opposed to a Geology degree don't qualify for hydro jobs.

Daren: We've had a lot of students come through who don't want to do any math. We have divided it into two different paths.

Bill: If you have some skillset, I can teach you the other ones.

Melisa: My position right now in management is for more with the soft skills, but you still need some ability to understand how the world works. This is helpful when you need to make the call. We should

find a way to help undergrads have a clue about this. How are we using the information to make this decision?

Daren: We have beefed up the other classes students are required to take. We are adding rigor to them. We do some of that, but management needs to do both of those.

Richard: They keep saying in high school that you won't use math again, though it's a complete fallacy. There are basic math and statistics that you need to know. You need to know how to apply the statistics to what you are looking at.

Tara: I feel that if a student can take a Physics class and get a good understanding, that would be better than taking a direct math class.

Weihong: Please read through the curriculum before the next meeting. If you have resources/connections, please send those to us.