Ryan L. Solnosky’s Teaching Statement

Teaching Philosophy

I take great pride in my teaching, including other student centered activities that allow students to grow. My teaching approach is dynamic, interactive, and technology driven. This approach was adopted to move by away from strictly “chalk and talk” formats and more towards active learning. Here, fundamental concepts are delivered through two complementary delivery approaches for better student comprehension (as appropriate per topic). The first is through an inverse learning format (i.e. classroom flip) where theory, code provisions, and multi-disciplinary considerations are mixed. The second is with the use of technology in education allows for engagement with the students and can better foster student creativity and develop interpretation skills. An example of this is by having students analyze a system or set of tasks by hand then do the same in modeling software. Discussions would follow on the differences between hand and model results with additional emphasis being placed on how a system/trade decision directly impacts other systems by importing those models into BIM software. In all cases, I use actual projects (e.g. schools, high rises, labs, etc.) in scenario and problem-based instruments to show students that not everything is ideally simplistic or isolated to one discipline.

Teaching Experience

During my faculty career, I have taught service courses as well as required and elective technical courses in the Civil Engineering and Architectural Engineering Depts. but also for the College of Engineering (details in C.V.). Undergraduate courses had students ranging from 1st year to 5th years that were in engineering, architecture, and construction options; sample course include: introduction to engineering, concrete design and a BIM/IPD focused capstone. Graduate level teaching includes computational modeling of buildings. Beyond this, I also served a variety of roles including a guest lecturer/juror for the Departments of Information Technology and Architecture. Moreover, I have participated as a mentor on a nationally acclaimed Collaborative Multi-disciplinary BIM Studio, while also being a lead advisor over the last 3 years with the National AEI Competition where teams have won multiple awards to date in integration and construction. Students have commented that they enjoy my teaching approach through excellent evaluation ratings that average 5.9/7.0 for the course and 6.07/7.0 for my teaching. My students and fellow colleagues have nominated me for a faculty teaching award this past year. Furthermore, students enjoyed the incorporation of professional speakers in my classrooms, as they are able relate closely with their future careers.

To stay up-to-date on current educational trends, I have attended several workshops offered by Penn State’s Engineering Education Center that have focused on active learning and engineering ethics in the classroom. Each experience has enlightened me and shaped my view of teaching, all of which I found extremely rewarding.

Advising and Mentoring

In regards to student mentoring, I take on a very active role for it is important to establish positive relationships. By promoting students to develop a lifelong learning mindset for their career, they can then better perform in a course or in their academic major there they strive to know beyond what is taught in the classroom. Between workshops and senior faculty mentoring (Chimay Anumba for research and Lou Geschwinder for teaching), I keep an open door policy in regards to meetings or asking questions both in and outside of my courses. An additional benefit here is that as students become professionals, then there becomes new opportunities to collaborate in research and service activities with these individuals based on established relationships.