ABET Outcome Survey

Important Note: These outcomes reflect a personal (student) assessment of the course, not the instructor's assessment.

ABET Outcomes for AE 481W/482	Outcome not able to be assessed	Level of ability demonstrated but below acceptable	Minimum acceptable level of ability demonstrated	More than minimum level of ability demonstrated
	(Score of 0)	*(Score of 1)*	*(Score of 2)*	*(Score of 3)*
a. An ability to apply knowledge of mathematics, science, and engineering	☐	☐	☐	X
b. An ability to analyze and interpret data	☐	☐	☐	X
c. An ability to design a system, component, or process to meet desired needs	☐	☐	X	☐
e. An ability to identify, formulate, and solve engineering problems	☐	☐	☐	X
f. An understanding of professional and ethical responsibility	☐	☐	X	☐
g. An ability to communicate effectively	☐	☐	☐	X
h. The broad education necessary to understand the impact of engineering solutions in a global and societal context	☐	☐	☐	X
i. An ability to engage in life-long learning	☐	☐	☐	X
j. A knowledge of contemporary issues	☐	☐	☐	X
k. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice	☐	☐	☐	X
o. Engineering design capabilities in at least two (2) of the (3) basic curriculum areas of architectural engineering, and that design has been integrated across the breadth of the program	☐	☐	☐	X
p. Communication and interaction with other design professionals in the execution of building projects	☐	☐	☐	X

AE 481W/482 Reflection

The educational opportunities presented to me over the past two semesters through the AE Senior Thesis Project have been invaluable. Despite how highly I regard the education I have received from The Pennsylvania State University through the Architectural Engineering program, I sometimes felt it lacked in educating us on actual design practices. The Senior Thesis Project however, gave us the chance to apply the fundamental concepts which he had been taught to a real design scenario. Through the project we were able to analyze a current building, identify areas that could be improved upon, and conduct studies to investigate the results of our proposed building system redesigns. This type of process is precisely what I anticipate on operating under in my professional career and I therefore believe that the project served us well as students

On that same note, it would have been nice at times to have more guidance throughout the design processes we attempted to complete on our own. Classmates, professors, and industry professionals, were certainly instrumental and utilized as we undertook our redesign endeavors for both our depths and breadths, but at the same time I highly doubt that many students would say that they believe that their work is ready to be "stamped for approval." This leads me to be concerned about whether or not poor design practices were used throughout the design processes employed in our Senior Thesis Projects and if these practices will be carried over to our industry practices.

Overall, I feel that my education has prepared me very well to go out into the workforce and that the Senior Thesis Project contributes the most to this confidence. It was an excellent experience where I was able to apply the knowledge which I have attained up unto this point in my life, discover things about the design process and my abilities, and operate under my own schedule. These are all things that I believe are very important to my development as an engineer and will prepare me for a career in the engineering profession.

CPEP Reflection

I think creating a website was useful for many reasons. It allowed for me to easily display and distribute my work to those who needed or wished to have access to it. The web based project also serves as a database to future students which I know will be a very valuable resource to them just as it was to me. However, I do not feel that creating a website was useful to me in any way as far as gaining experience in web design. Due to the software used, the limited amount of resources to us, and having little to no coding experience, I feel we were limited as to how much we could actually accomplish with our web designs. Often times, it also came down to whether I should put more time into my thesis work itself or my website. My thesis work won every time. For this reason I do not feel that my website design reflects me as a design engineer or web designer as I did not spend nearly as much time focusing on the details of my website as I did my thesis work.

I found the discussion board that was available to us as students to post questions to industry members as ineffective for several reasons. First of all, I posted several fairly general questions and received no response to any of them. Secondly, I found it much easier to go to a professor or personal industry contact with a question as they were much more reliable. Finally, it was much easier to explain a complicated question to someone in person or even over the phone than what it was to post the question on the discussion board.