CENTER FOR TECHNOLOGY, ESSEX

Engineering / Architecture

Advisory Board Meeting

Minutes – June 1ˢᵗ, 2022

The meeting was in person and held in room E-105 at CTE. The advisory group was split for this meeting into only the Architectural advisors. The meeting was warned on May 27th.

Present at the meeting:

Jim Dirmaier – Instructor

Bobby Harriman – G4 Design Studios

John Lamothe – Wiemann Lamphere Architects

Kevin Racek - Centerline Architects

Jesse Robbins – Freeman, French, Freeman

- The meeting was called to order at 7:08 AM
- There were no visitors present
- Jim passed out the agenda:

Jim welcomed the group and went over the agenda for the meeting which he had also shared with them by email. Jim noted that there were no visitors present to be heard.

Agenda for the meeting:

1. 7:00 a.m. Call to Order
2. Visitors and Staff to be Heard
3. Review of the Year and current Program Status
4. Review of Competencies
5. Review of Cooperative Education Opportunities
6. Advisory Board Input and Commentary
7. Advisor Sign-ups for Presentions
8. Future Agenda Items
9. 8:00 AM Adjourn

- Jim welcomed the group and went over the agenda for the meeting which he had also shared with them by email. Jim noted that there were no visitors or staff present to be heard.
- Jim gave a brief overview of the past school year and the challenges that occurred this year:

  - The after-effects of remote learning during the pandemic became evident this year with students displaying a greater learning disconnect, lack of focus, and increased behavioral issues. These issues were common across all schools and grade levels this year. Although, Jim commented that his second-year returning students were focused and had adjusted to the learning changes well.

  - Some students seemed to display less resilience and a lowered self-esteem in connection to learning challenges this year. However, their skill performance and proficiency levels, overall, were on par with the results from other years. SolidWorks certification and Workkeys scores were generally good this year.

  - Even with the challenges this year, there were a good number of coop experiences, college course enrollments, and SkillsUSA successes.

- Bobby commented that it is always a joy working with the students that are from the program during Career Work Experiences and visits.

- Jesse commented that the Career Work Experience (CWE) student they had this year was excellent and has an internship next year at FFF if she wants it.

- John said that the CWE student that they had at Weimann Lamphere also was great to have.

- John asked if Jim was seeing "a similar drive and skill with all students or if there is a gap?" Jim said that there was definitely a gap with some students taking full advantage of all of the opportunities that the program offers and other students struggling with the basic skills of how to learn, organize, and other executive functioning skills.

- The group then moved to a discussion on cooperative education.

  - Jim commented that he was wanting to get a student to do a CWE at Centerline this year but that it just didn't coalesce.

  - Kevin mentioned that it is difficult for them to accommodate a student CWE because they are such a small firm and have two offices. He just isn't large enough to have someone train a CWE student.

  - John commented that he found just having the students follow him around during their time was really helpful.

- - ○ Jesse said that he had their CWE student shadow him during on-site visits and meetings and that, eventually, they had her do a specification review working on project documentation.

- The discussion then moved on to the Proficiency documents that Jim had shared with the group prior to the meeting. Jim commented that it was his goal for the program proficiencies to be a living document that the advisory board should look at every year and adjust as the group sees fit, accordingly. Jim asked if there were any questions, additions, or deletions that the board thought necessary.

  - ○ Kevin commented that he thought there should be more in the second-year proficiencies for students to understand the codes associated with architectural projects. Jim commented that the students do learn a little about codes but they don't have the time to cover much more. He will look into how they can add those skills to the proficiencies. Jim added that the best way for students to get to know the codes is through real projects.

  - ○ Kevin asked where students learn about how to calculate structural loads. Jim pointed out in the first-year proficiencies where students learn some basics about loads and that the second-year students become proficient at doing beam and snow load calculations. Bobby, John, and Jesse commented on how they all did the paper beam competition when they were students of the program and how much fun it was.

  - ○ Kevin also stressed that there is a big difference between the skills needed for drafting and those required to use a Building Information Management (BIM) system, such as Revit. Kevin stated that, from his experience, that for an architect **"to think is to draw"** and that students need to be taught to think with the pencil first and these skills should be stressed ahead of the CAD skills.

    - ■ Jim agreed, and pointed out the sketching proficiencies and that they are taught first.

    - ■ Bobby commented that it is really hard to design a project only on the computer. He finds that he has to spend a lot of time going through many (50, or so) iterations before he finally lands on a design solution that works. He feels that just learning to use the computer as a design tool causes more "freezing" of creative ideas than working it out first with paper and pencil.

    - ■ John said that Revit is a powerful tool but that it is not a substitute for following the design steps. "Students need to understand what the output must be, **first**, before starting a design in Revit."

    - ■ Jesse commented that the most valuable courses he took in college were the ones that had him use sketchbooks.

- - - The group agreed that the program students needed as many opportunities as possible to design by sketching.

    - ○ Kevin asked about the second bullet on the second-year proficiencies to learn proper dimensioning standards and pointed out that it is a very important skill for architects to be proficient in and that it should extend to students knowing the importance of **what** to dimension to on floorplans.

- ● John began a discussion that we should consider having the architecture students work with the Computer Animation and Web Design students (CAWD) to create 3-D flyover/walkthrough videos of buildings using their software. He said that they, Weimann Lamphere, are doing more of this and that they have people in-house working with the software to create these: Twinmotion, Enscape, and Lumion.

    - ○ Bobby added that people (customers) want real-time animations so that they can virtually move around in the proposed structure and "feel" what it will be like. He also uses Matterport cameras to scan in an existing space so that they can add designs to the virtual space and show the results to a customer.

    - ○ John commented that Twinmotion was free software and could be used in with the students. John then showed a "flyby" that their firm had created on a recent project as a demonstration of the level of 3-d graphics that are now being used and where things are going in the industry.

    - ○ The group agreed that there is a niche market being created in architecture and that a crossover with the CAWD program would be a good opportunity for students to gain experience in a growing area of architecture.

    - ○ Jim commented that it might be possible to create a sort of Architectural Academy within CTE that combined, in some fashion, both the Engineering/Architectural program and the Computer Animation program. It might be as simple as having a student complete one year of each program. Jim promised to look into this and initiate discussions with the CAWD instructors and administration about how we could do this.

- ● The meeting adjourned at 8:32 AM. Everyone said their goodbyes.

Submitted by:

Program Teacher: Jim Dirmaier

Date: 6/4/22