The Capstone to Work (C2W) research team studies students’ experiences in the transition from capstone engineering design courses to the workplace.

Data come from a cohort of 60 engineering students from 4 universities.

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1. **Self Directed Learning**

Managing and monitoring one's own time and knowledge

including ...  
- finding resources  
- time management  
- work ethic  
- finding work or keeping busy  
- time pressure  
- lack of knowledge

"With capstone you're just kind of given an idea, take these semesters, come back with a product. We have guidelines, but at the end of the day you have to make it happen."

I think that initiative, that you have to develop if you don't already have it, in senior design definitely translates to R&D.

"I feel like in [capstone], I got to learn a lot for the project because there was a lot of things I didn't know, and so I feel like it's helped me to realize that it's possible to learn everything and to complete a project even though I don't know much about it going into it."

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"And I feel that sponsor interaction is one of the biggest things I took away from capstone and one of the most useful."

"So definitely something that I learned was how to know when to just ask someone a question or just ask a few questions versus have a sit down meeting with multiple people because it’s not always needed."

2. TEAMWORK AND COMMUNICATION

Working in teams or communicating clearly including ...
- client meetings
- formal & informal presentations
- team meetings
- interpersonal communication
- formal and informal writing
- team functions
- project planning and logistics
3. TECHNICAL WORK

Engineering design and technical work including:
- CAD modeling
- Engineering calculations
- Generating and refining concepts
- Project budgeting
- Prototyping and testing designs
- Defining requirements
- Handling ambiguity and uncertainty
- Using software
- Working with tools and equipment

"I felt the capstone was a really good prep. I got a lot of manufacturing experience, a lot of CAD. ... It was the closest thing in college I had to projects I deal with now."

"There was a lot of requirements analysis in that [capstone] design course, so being in that mindset of designing everything you're making around the requirements is good. I think that prepared me."
4. IDENTITY DEVELOPMENT

Seeing oneself as an employee and/or an engineer

including ...
- learning one's role
- feeling competent
- thinking like an engineer
- having a sense of belonging
- experiencing responsibility and accountability

"I feel like capstone did a really good job of putting me in the position that I needed to be to learn what I needed to do to be a good engineer."

Adapting to problems was what our senior design capstone was supposed to be about.

I think I have those adaptability skills now and I was able to implement them into my work.