

Engineering Workforce Skills Assessment

1. Select the option that best describes you.

- Current undergraduate student
- Current graduate student
- Currently employed in the workforce

Engineering Workforce Skills Assessment

Undergraduate Students

2. Choose your expected graduation year.

3. Please select your gender

- Male
- Female
- Non-binary
- Prefer not to answer
- Other (please specify)

4. In which state do you reside?

5. What university do you attend?

6. Please rate your perceived level of preparedness of the following technical skills upon completion of your undergraduate degree.

	Very Prepared	Somewhat Prepared	Very Little Preparation	Not Prepared at All
Hard sciences and engineering science fundamentals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to identify, formulate, and solve engineering problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Economics and business acumen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Systems integration and systems thinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Artificial intelligence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digital twin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Additive manufacturing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Model-based systems engineering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Data analytics- Interpretation and visualization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Security knowledge (data, cyber, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Robotics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet of Things (IoT)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Augmented reality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. Please rate your perceived level of preparedness of the following professional skills upon completion of your undergraduate degree.

	Very Prepared	Somewhat Prepared	Very Little Preparation	Not Prepared at All
Communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Curiosity and persistent desire for continuous learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-drive and motivation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cultural awareness in the broad sense (nationality, ethnicity, linguistic, gender, sexual orientation)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
High ethical standards, integrity, and global, social, intellectual, and technological responsibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Critical thinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project management (supervising, planning, scheduling, budgeting etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teamwork multidisciplinary work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional intelligence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. If you participated in an internship or co-op while an undergraduate, please indicate where you gained the most experience with the following skills/knowledge. If you have not participated in an internship or co-op, please leave this question blank.

	Undergraduate Degree Program	Internship/Co-op	Both Undergraduate Program and Internship/Co-op
Strong applied skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Industry specific knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An understanding of emerging technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentoring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Please share your level of agreement with the following statements about your experience during the COVID-19 lockdown in the shift to online education at your institution.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I was able to effectively transition to working and studying from home.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was able to effectively continue to connect with my instructors.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was provided with sufficient online resources for my courses.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident my research program will continue on time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. Please explain how the pandemic has or has not affected your career plans.

Engineering Workforce Skills Assessment

Graduate Students

11. What year did you graduate with your **undergraduate** degree?

12. Please select your gender.

- Male
- Female
- Non-binary
- Prefer not to answer
- Other (please specify)

13. In which state do you currently reside?

14. What university did you attend for your **undergraduate** degree?

15. Please rate your level of preparedness of the following technical skills upon completion of your **undergraduate** degree.

	Very Prepared	Somewhat Prepared	Very Little Preparation	Not Prepared at All	Gained Skill After Graduation
Hard sciences and engineering science fundamentals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to identify, formulate, and solve engineering problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Economics and business acumen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Systems integration and systems thinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Artificial intelligence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digital twin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Additive manufacturing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Model-based systems engineering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Data analytics- Interpretation and visualization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Security knowledge (data, cyber, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Robotics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet of Things (IoT)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Augmented reality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. Please rate your level of preparedness of the following professional skills upon completion of your **undergraduate** degree.

	Very Prepared	Somewhat Prepared	Very Little Preparation	Not Prepared at All	Gained Skill After Graduation
Communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Curiosity and persistent desire for continuous learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-drive and motivation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cultural awareness in the broad sense (nationality, ethnicity, linguistic, gender, sexual orientation)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
High ethical standards, integrity, and global, social, intellectual, and technological responsibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Critical thinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project management (supervising, planning, scheduling, budgeting etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teamwork multidisciplinary work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional intelligence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. Please share any other skills you gained after completing your **undergraduate** degree that have been useful in your career.

18. What other skills were you poorly prepared for or not prepared for at all from your **undergraduate** degree?

19. If you participated in an internship or co-op while an **undergraduate**, please indicate where you gained the most experience with the following skills/knowledge. If you did not participate in an internship or co-op, please leave this question blank.

	Undergraduate Degree Program	Internship/Co-op	Both Undergraduate Program and Internship/Co-op
Strong applied skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Industry specific knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An understanding of emerging technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentoring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Engineering Workforce Skills Assessment

Currently Employed in the Workforce

20. What year did you graduate with your **undergraduate** degree?

21. Please select your gender.

- Male
- Female
- Non-binary
- Prefer not to answer
- Other (please specify)

22. In which state do you currently reside?

23. What university did you attend for your **undergraduate** degree?

24. What company do you work for currently?

25. Please rate your level of preparedness of the following technical skills upon completion of your **undergraduate** degree.

	Very Prepared	Somewhat Prepared	Very Little Preparation	Not Prepared at All	Gained Skill After Graduation
Hard sciences and engineering science fundamentals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to identify, formulate, and solve engineering problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Economics and business acumen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Systems integration and systems thinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Artificial intelligence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digital twin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Additive manufacturing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Model-based systems engineering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Data analytics- Interpretation and visualization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Security knowledge (data, cyber, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Robotics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Simulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet of Things (IoT)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Augmented reality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26. Please rate your level of preparedness of the following professional skills upon completion of your **undergraduate** degree.

	Very Prepared	Somewhat Prepared	Very Little Preparation	Not Prepared at All	Gained Skill After Graduation
Communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Curiosity and persistent desire for continuous learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-drive and motivation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cultural awareness in the broad sense (nationality, ethnicity, linguistic, gender, sexual orientation)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
High ethical standards, integrity, and global, social, intellectual, and technological responsibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Critical thinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project management (supervising, planning, scheduling, budgeting etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teamwork multidisciplinary work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional intelligence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

27. Please share any other skills you gained after completing your **undergraduate** degree that have been useful in your career.

28. What other skills were you poorly prepared for or not prepared for at all from your **undergraduate** degree?

29. If you participated in an internship or co-op while an **undergraduate**, please indicate where you gained the most experience with the following skills/knowledge. If you did not participate in an internship or co-op, please leave this question blank.

	Undergraduate Degree Program	Internship/Co-op	Both Undergraduate Program and Internship/Co-op
Strong applied skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Industry specific knowledge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
An understanding of emerging technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentoring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>