

Minor in Applied Sciences and Engineering

Dr. Richard Goldberg

Teaching Associate Professor

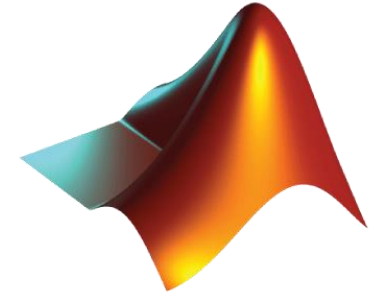
Director of Undergraduate Studies

Dr. Heidi Harkins

Associate Chair of Departmental
Initiatives

Why an engineering minor?

- Learn skills for the workplace
 - Tools and techniques used in engineering, such as...



MATLAB



Why an engineering minor?

- Complement the learning in your STEM home department



Why an engineering minor?

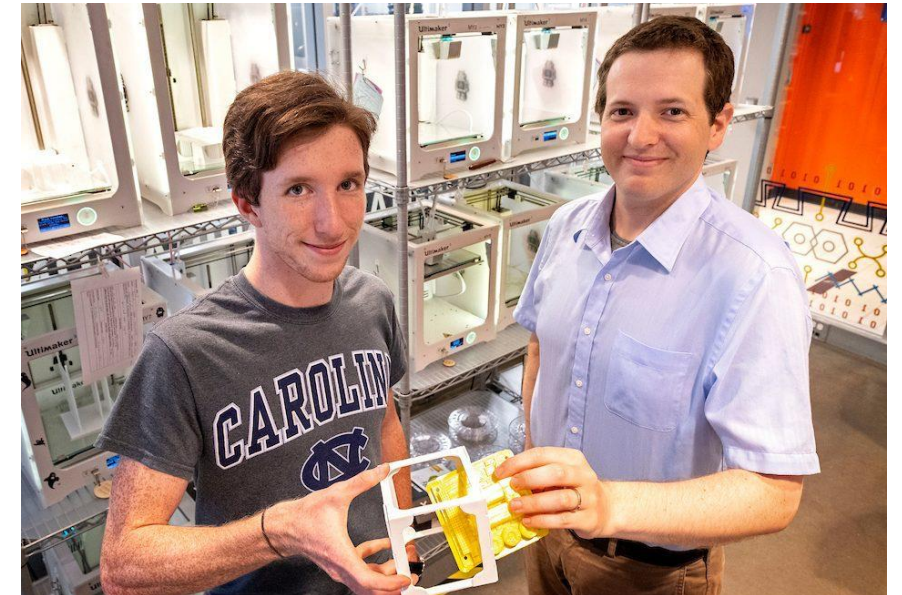
- Develop an entrepreneurial mindset as a life-long skill
 - Demonstrate curiosity about the world around them
 - Make connections to integrate knowledge
 - Identify unexpected opportunities to create value

**Engineers With an Entrepreneurial Mindset
Transform the World**



Why an engineering minor?

- If you think that designing, making, and modeling things is fun, then the minor will be fun!



What is the APSE minor?

- Pre-requisite courses that are common for most BS majors
- Introduction to Engineering (2 courses)
- Engineering Fundamentals (1 course, choose from list)
- Engineering Topics (2 courses, choose from list)

Pre-requisite courses that are common for most BS majors

- MATH 231 Calculus of Functions of One Variable I 4
- MATH 232 Calculus of Functions of One Variable II 4
- MATH 233 Calculus of Functions of Several Variables 4
- PHYS 104/114/116/118/L Mechanics 4
- PHYS 105/115/117/119/L Electromagnetism and Optics 4
- CHEM 101/L General Chemistry I 4
- CHEM 102/L General Chemistry II 4
- And a choice of (1 course, 3 credit hours):
 - COMP 110 Introduction to Programming 3
 - COMP 116 Introduction to Scientific Programming 3

Introduction to Engineering (2 courses)

All students must take both courses

- APPL 101 – Exploring Engineering
- APPL 110 – Introduction to Design & Making: Developing Your Personal Design Potential

Engineering Fundamentals (1 course, choose from list)

- APPL 240 Developing your 6th sense: Designing Sensors and Electrical Circuits to Make Measurements
- APPL 260 Living in a Material World: Intro to Materials Science and Engineering
- APPL 280 Fluid relationships: An Intuition Building Approach to Fluid Mechanics
- PHYS 231 Physical Computing
- ENVR 205 Engineering Tools for Environmental Problem Solving

Engineering Topics (2 courses, choose from list)

- Long list from many departments in the Division of Natural Sciences and Mathematics
- In Computer Science and Neurosciences, you must be majoring or minoring in those departments to take their courses on our list

Questions

- Can I get a job as an engineer if I complete the APSE minor?
- Can I go to graduate school in engineering if I complete the APSE minor?
- Can I do the APSE minor if my major is not a Bachelor of Science degree?
- How can I get more engineering experience outside of the APSE courses?

Other questions?

- Feel free to contact me at r.goldberg@unc.edu