



**Olin College**  
of Engineering

# Unique Offerings at Olin College of Engineering



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## VISION

Lead the transformation of undergraduate engineering learning experience to educate the next generation of innovators who want to better the world.



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## MISSION

Olin College prepares students to become exemplary engineering innovators who recognize needs, design solutions and engage in creative enterprises for the good of the world. Olin is dedicated to **continual discovery and development of effective learning approaches and environments, and to co-developing educational transformation** with collaborators around the globe.



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# **The First Year Experience**

Introduction to Sensors, Instrumentation, and  
Measurement (ISIM)

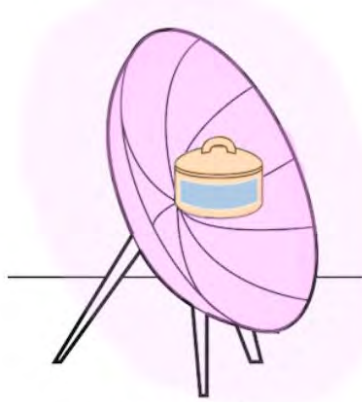
Modeling and Simulation (MODSIM)

Design Nature (DesNat)

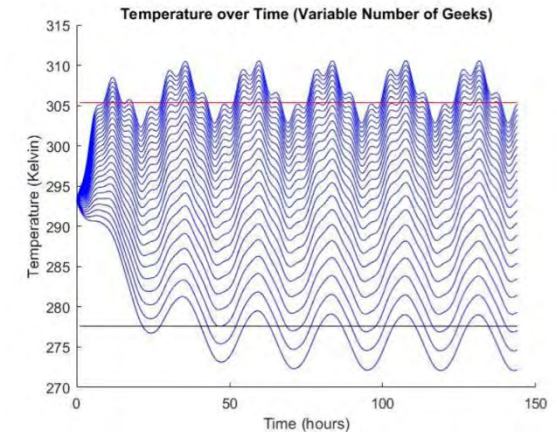
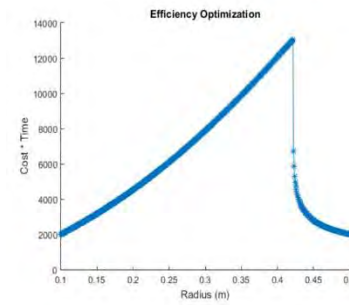
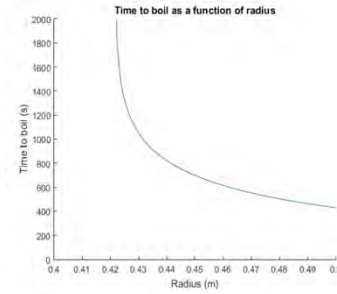
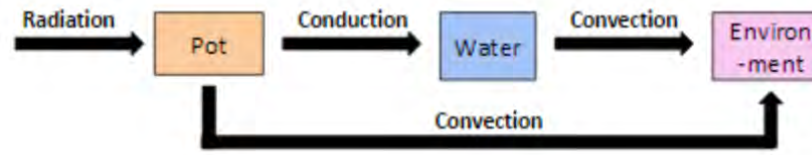
Products and Markets (P&M)

ISIM





Parabolic Solar Cooker



Abstracted Model

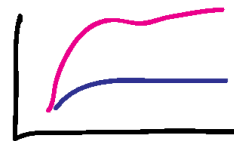
$$\dot{x} = -Cx + y$$



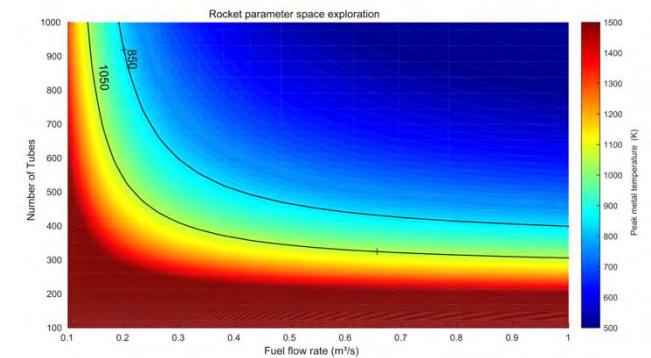
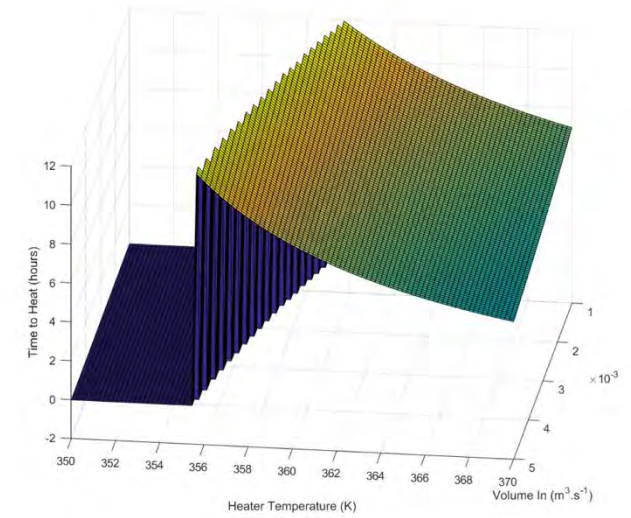
Implementation



Physical System

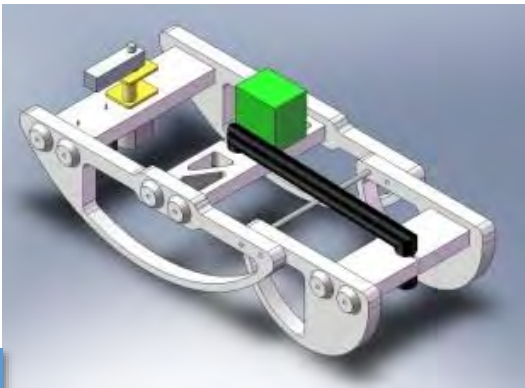
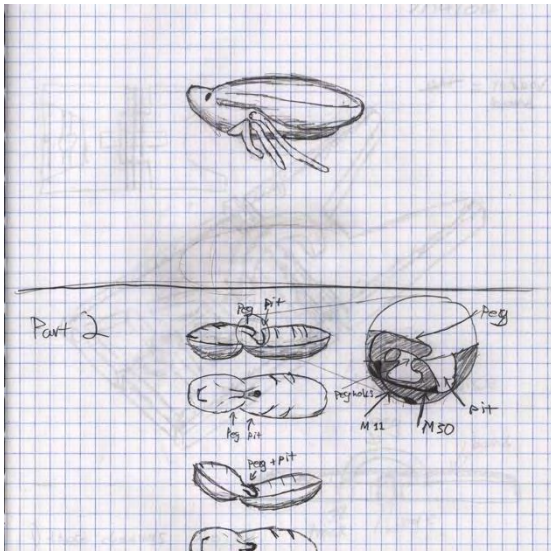
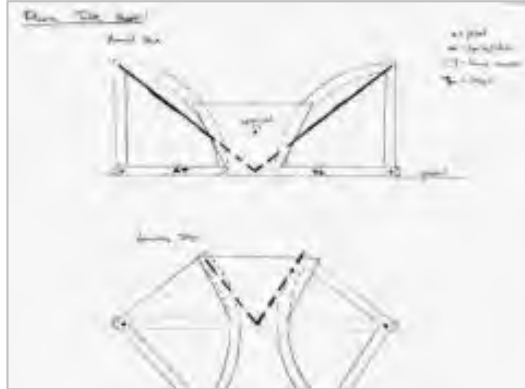


Behavior/Prediction



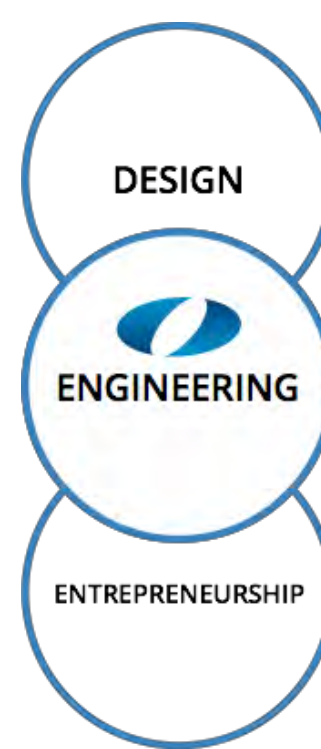
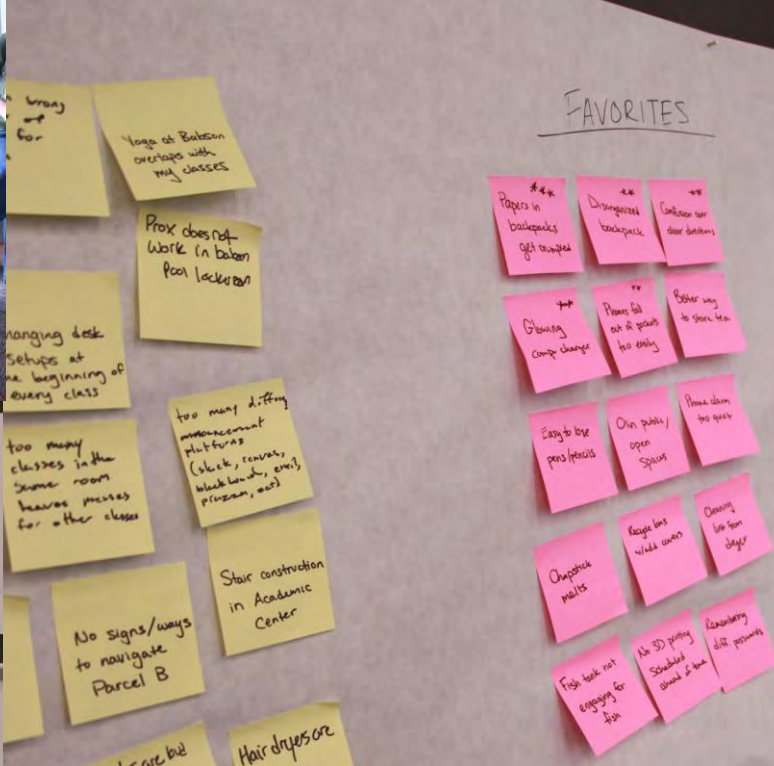
MODSIM





DES NAT





P&M





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## **The Design Stream**

User Oriented Collaborative Design (UOCD)

Integrated Product Design

Sustainable Design

Affordable Design and Entrepreneurship (ADE)

...and many more



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## **AHS\*-and... Integration**

\*AHS = Arts, humanities, and social sciences

Six Books that Changed the World

Six Microbes that Changed World

The Intersection of Art and Science



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## **And So Much More**

Olin Conductorless Orchestra

Engineering for Humanity

Teaching and Learning

Investigating Normal

Introduction to Sustainability





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## **Experimental Courses:**

Education Design Studio

Environmental Analysis and Science

Neurotechnology, Brains and Machines

Biomedical Device Design

Quantitative Biology

Emerging Technologies in Cancer Research, Diagnosis  
and Treatment



# Quantitative Engineering Analysis

“If you want to engineer effectively,  
you must be able to **choose and use  
appropriate quantitative approaches**  
for a given situation.”

Credit: the QEA teams, including Rebecca Christianson, John Geddes, Siddhartan Govindasamy, Mark Somerville, Chris Lee, Paul Ruvolo, Samantha Michalka



# Learning objectives include:

- Ability to **select and appropriately apply** quantitative tools for engineering analysis in context.
- Demonstration of understanding and ability to **implement a variety of quantitative tools** for analysis.
- **Clear communication** of technical process and results.
- **Professionalism** in terms of participation, teamwork, and completion of work on time.

Credit: the QEA teams, including Rebecca Christianson, John Geddes, Siddhartan Govindasamy, Mark Somerville, Chris Lee, Paul Ruvolo, Samantha Michalka





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## Integrated Science

Chemistry, biology, materials science, AHS\*

2 semesters, 12 credits (total)

Fulfills all foundational science and AHS requirements

\*Arts, humanities, social sciences



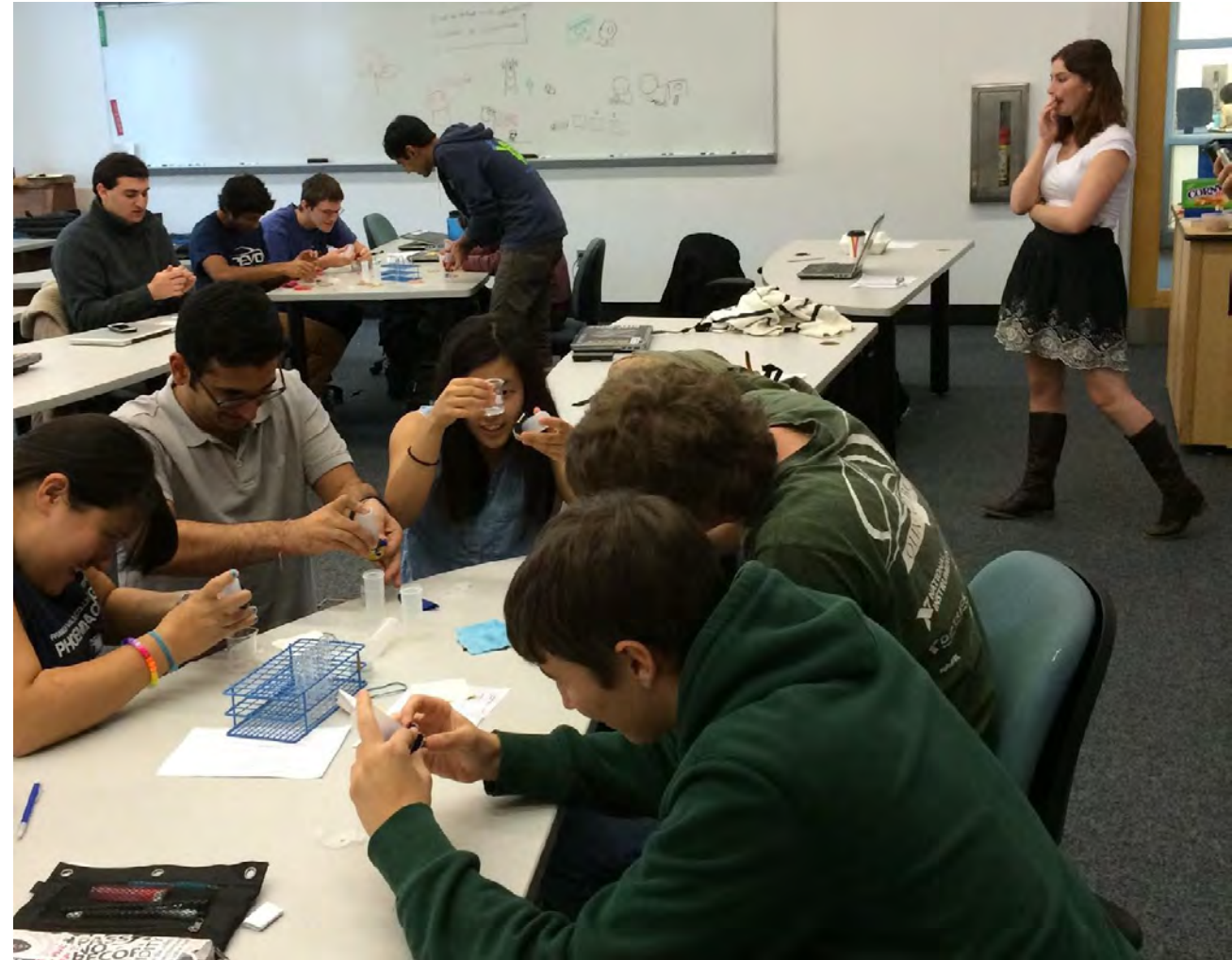
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# Integrated Science

Semester 1: lead project

Semester 2: TBD

Science fundamentals  
+ context





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# **Beyond the Classroom**

Co-curriculars

Passionate pursuits