

Engineering and Entrepreneurship Online Resources (All Quarters/All Projects)

Primary Online Resource

- [Engineering and Entrepreneurship Class Webpage](#)
 - [Course Syllabus](#)
 - [Welcome Letter](#)
 - [Curricula General to All Projects](#)
 - [Project Specific Curricula](#)
 - [Example Projects](#)
 - [Example Presentations](#)
 - [Course Recruitment Page](#)

“What is Entrepreneurship?” Resources:

- Foundation for Economic Education: [What is Entrepreneurship?](#)
- National Association for Community College Entrepreneurship: [The Benefits of an Entrepreneurial Mindset](#)
- Harvard Business Review: [The Post-Capitalist Executive: An Interview with Peter F. Drucker](#)

Example Q1 Design Resources

- **3D Visualization Programs**
 - [OnShape](#) (online CAD program)
 - [Blender](#) (3D modeling software)
- **Drafting Unit**
 - [Orthographic Drafting Slides](#)
 - [Isometric Drafting Info Sheet](#)
 - [OnShape Learning Center](#)
 - [Blender 4.0 Tutorial Videos](#)
- [Project Management Timeline Creation](#)
- [Microsoft Office GNATT Chart Creator](#)

Example Q2 Manufacturing & Fabrication Resources

- [Design to Reality Reading](#)
- [T8 MakerSpace Online Safety Units](#)
 - Project-specific safety units will be designed similarly with components pulled from:
 - [Manufacturers Safety Videos](#)
 - [CCOHS Safety Data Sheets](#)
 - [Teacher-created online safety quizzes.](#)
 - [Teacher-organized hands-on practical tool use exam.](#)
- [Creation of a Production Timeline](#)
- [Wikifactory Stories](#)
 - [How to select the right materials for your product](#)
 - [7 Actions to Reduce Manufacturing Costs](#)

Example Q3 Customer Interface Resources

- **Customer Interface Overview Readings**
 - **Acquire.io articles:**
 - [Creating Strong Customer Relationships](#)
 - [5 Ways to Optimize Customer Relationships](#)
- **Types of Customer Review Interfaces**
 - Harvard Business Review Article: [Customer Wants and Needs Assessment](#)
 - Ideo.com article: [Customer Journey Map](#)
 - Customer Survey Options
 - [SurveyMonkey](#)
 - [Google Forms](#)
 - [Microsoft Forms](#)
 - [Nielsen Norman Group](#)
 - [Usability Testing](#) Article
 - [Infographic](#)
- Analysis of Customer Review Data
 - Forbes Magazine: [Analyze and Improve Based Upon Customer Review Data](#)

Example Q4 Project Management/QA Resources

- **The Motley Fool Article: [Project Management Basics: Everything You Need to Know](#)**
- Possible Management Utilities:
 - [Creation of a Production Timeline](#)
 - [Microsoft Office GNATT Chart Creator](#)
 - [Microsoft Office WBS Creator Instructions](#)
- Identify appropriate Quality Assurance methods:
 - [Design reviews](#)
 - Forbes Article: [Testing and inspection procedures](#)
- *The rubric for each class project’s written reports and presentations will be different and personalized to that specific project/product. Here are examples of a written report rubric and a presentation rubric that has been used in the ENGR102HS course (as previously Governing Board approved)*
 - [UHS ENGR102 Solar Oven Written Report Rubric](#)
 - [UHS ENGR102 Solar Oven Presentation Rubric](#)

In-class note taking template:

- [ENGR Notebook](#)

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Supplemental Articles, Essays, and Data Sheets:

- **Primary sources to be pulled from:**
 - [Econiful](#)
 - [Edutopia](#)
 - [Forbes](#)
 - [Harvard Business Review](#)
 - [US Bureau of Labor Statistics: Occupational Outlook Handbook](#)
 - [The Kaufman Foundation](#)
- **Design Tutorials:**
 - [Blender Tutorial Links](#)
 - [Cricut Maker software](#)
 - [OnShape Learning Center](#)
 - [T8MakerSpace Drafting Links](#)
- **Safety Readings :**
 - Manufacturer's User Guides: e.g.
 - [Singer 4432 Sewing Machine](#)
 - [Ryobi Benchtop Drill Press](#)
 - [DeWalt Table Saw](#)
 - [CCHOS Safety data sheets](#)
 - Instructor Produced Online Safety Tests
 - Instructor Proctored Practical Exams
- **Customer Interactions:**
 - [Forbes](#)
 - [Harvard Business Review](#)
 - [Ideo Journal](#)
 - [Nielsen Norman Group](#)
- **Project Management /Quality Assurance Articles:**
 - [Econiful](#)
 - [Forbes](#)
 - [Harvard Business Review](#)
 - [The Motley Fool](#)
 - Microsoft Office Templates
 - [GANTT Charts](#)
 - [WBS Charts](#)

Partnership Support for the T8 MakerSpace:

(These partners have provided invaluable curricular, monetary, or resource-based support for my engineering and entrepreneurship courses, clubs, and projects in the past.)

- [Econiful](#)
- [FedEd Federal Reserve Educational Outreach](#)
- [PTC Education](#)
- [Thomas R Brown Foundations](#)
- [UHS Foundation and Alumni Association](#)
- [UHS Parents Association](#)
- [University of Arizona: School of Engineering](#)
- [University of Delaware: Center for Economic Education and Entrepreneurship](#)

Instructional/Curriculum Research:

- **Entrepreneurship Education:**
 - Forbes: [Why Entrepreneurship Education Matters](#)
 - The Kauffman Foundation: [The Importance of Entrepreneurship Education](#)
 - Organization for Economic Co-operation and Development (OECD): [The Global Importance of Entrepreneurship Education](#)
- **Engineering Education:**
 - American Society for Engineering Education:
 - [Creativity, Estimation and Critical Thinking Are Essential Skills](#)
 - [Engineering Education and the Science and Engineering Workforce](#)
 - Engineering.com: [The Importance of Supporting Engineering Education](#)
- **Project Based Learning:**
 - Edutopia:
 - [New Research Makes a Powerful Case for PBL](#)
 - [What is Project Based Learning About?](#)
 - SmartLab Learning:
 - [Project Based Learning Benefits\[Research Based\]](#)