

**Instructions to complete this form:**

1. Answer all questions on the E-ship Thesis Proposal page, with responses immediately following the number or bullet and attach to this cover sheet.
2. An E-ship Thesis requires identification as one of three options: 1) Business Concept Thesis; 2) Product Development Thesis; or 3) Business Plan Thesis. Please see Thesis Proposal Option Descriptions.
3. Submit the proposal to [CUEproposal@kettering.edu](mailto:CUEproposal@kettering.edu). CCUE will schedule a once a month meeting for the E-ship Thesis Proposal Review Committee to evaluate all submitted proposals. Additionally, the student proposer will be asked to summarize his/her topic in a five minute presentation to the committee, either in person or via teleconference if appropriate.
4. Upon committee approval, the student proposer is encouraged to identify an appropriate faculty member as the Faculty Thesis Advisor and a Committee Member will be assigned by CCUE.
5. CCUE will facilitate securing required signatures which are needed in order to register the student for the CUE 495-E project (*Module 2 of the 4 Required CUE Module – see attached document “CUE Required Modules”*)
6. Once all required signatures are secured, the proposal is considered approved and the student can begin work on the project.

## **E-ship Thesis Proposal (CUE-495-E)**

*CUE Module 2 of 4*

### **PROPOSAL COVER SHEET**

E-ship Thesis Project Title: \_\_\_\_\_

### **AGREEMENT**

***The individuals who sign below agree to the following:***

1. The **student** agrees to perform and manage the project. The **student** will be required to submit to CCUE:
  - a. A progress report (after the 1<sup>st</sup> term of conducting research - Module 3 of the 4 Required CUE Modules).
  - b. A formal written thesis document following CCUE guidelines upon successful completion of the project (required by 1<sup>st</sup> week Friday of the students last academic term (Module 4 of the 4 CUE Modules).
2. The research conducted and the documentation (thesis) completed by the student is to take the equivalent of two terms (6 months), working 20 hours per week. In other words, approximately 480 hours of student effort is typical to include all research and documentation (writing of thesis). **Student** and **Faculty Thesis Advisor** signatures below indicate agreement to these expectations, and any variations must be mutually agreed to.
3. The proposal description & timeline for this research are documented in this proposal. Changes to the description and/or timeline will require approval by **all** who sign this agreement.
4. The formal written thesis document will be assessed by both the **Faculty Thesis Advisor** and the **Committee Member (2<sup>nd</sup> faculty reviewer of the formal written document)**.
5. **Department Head** signatures are necessary for faculty load purposes and acknowledgement of students pursuance to complete the E-ship Thesis option.

_____ (Student – Please Print)	_____ (Student Signature)	_____ Date Signed
_____ (E-ship Proposal Review Committee (Topic Approval) – Please Print)	_____ (E-ship Proposal Review Committee Signature)	_____ Date Signed
_____ (Faculty Thesis Advisor – Please Print)	_____ (Faculty Thesis Advisor Signature)	_____ Date Signed
_____ (Committee Member – Please Print)	_____ (Committee Member Signature)	_____ Date Signed
_____ (Faculty Thesis Advisor’s Department Head – Please Print)	_____ (Faculty Thesis Advisor’s Department Head Signature)	_____ Date Signed
_____ (Student’s Degree Department Head – Please Print)	_____ (Student’s Degree Department Head Signature)	_____ Date Signed

# E-ship and I-ship Thesis Proposal Option Descriptions

An applicant for an I- or E-ship thesis project will select one option as the primary thesis form for comprehensive completion. Other options or elements of other options may be included with the primary if desired and time permits.

**1. Business Concept Thesis (BCT).** *Example: The thesis documents the process of how a better mouse trap (as an idea with or without much engineering detail) could be brought to market in accordance to the 24 steps outlined in the recommended reference.*

A written document reporting the plan, actions, and results of researching and planning a pathway to and market potential of an idea for product(s), system(s), and/or service(s). This evaluation and planning of a business concept should include many of the 24 steps summarized below and described in more detail in the recommended reference, Disciplined Entrepreneurship: 24 Steps to a Successful Startup by William Aulet:

- Product/service/system description: Design/function/purpose which may or may not include more technical aspects.
- Market Analysis: Research data on market conditions (industry, market, customers, competition) to analyze need, opportunities and profitability;
- Competition: Comparison and analysis;
- Commercialization plan: Competitive advantage; value proposition; specific markets (customers) defined and quantified; sales, distribution, and customer service strategies; marketing and advertising strategies.
- Operations: Systems, strategic partners, and processes needed to sell, produce and deliver.

**2. Product/Service Development Thesis (PDT).** *Example: The thesis embodies an innovation and documents the scientific research, design, technology, testing, and result of efforts toward developing an innovative product or service.*

A written document reporting the plan, actions, and results of a project or proof of concept for product(s), system(s), and/or service(s) that may have commercialization value. This project or proof of concept may include some or all of the following:

- Research
- Design/plan
- Development (prototype)
- Testing
- Implementation
- Outcomes

**3. Business Plan Thesis (BPT).** *Example: The thesis documents a "formal business plan" that could be used to secure funding needed to build or expand a business for the production, marketing, distribution and selling of a better mouse trap.*

A written document describing the nature of a new business or an enhancement/redefinition of an existing business that includes all of the following elements summarized below and defined in more detail in the annotated Business Plan outline that will be provided:

- Business description including company's mission and vision;
- Market Analysis: Research data on market conditions (industry, market, customers, competition) to analyze opportunities and profitability;
- Marketing and Sales: Product(s) or service(s) and specific markets (customers) defined and quantified; competitive analysis; marketing, advertising, sales and customer service strategy plans;
- Management and Operations: Names and qualifications of owners/managers; personnel plan; operations plan (systems and processes needed to sell, produce and deliver);
- Financial Projections: Cash flow, profit and loss, balance sheet (2-3 years); funding needs and how the money will be used (sources and uses).

# **E-ship Thesis Proposal (CUE-495-E)**

## ***E-SHIP THESIS PROJECT PROPOSAL & PLAN***

Name \_\_\_\_\_

Date \_\_\_\_\_

As framed by Curt Carlson and William Wilmot in their book “Innovation – The Five Disciplines for Creating What Customers Want,” innovation is a process of “creating and delivering new customer value in the marketplace.” The fundamental basis of an E-ship thesis is a value proposition that goes beyond the design/build/technology of what may -- or may not be -- a new idea, gadget, solution or improvement (“a better mousetrap”). As such, the E-ship proposal contains criteria for consideration of the possible markets (customers), needs, approach, benefits, and competition. A proposal for research, design, or development that does not include this consideration will not be classified as an E-ship thesis.

1. Please indicate E-ship Thesis type: Business Concept Thesis \_\_\_\_\_ ; Product Development Thesis \_\_\_\_\_ ; or Business Plan Thesis \_\_\_\_\_. (Please review the attached descriptions.)
2. What is the important customer and market need being addressed in the thesis?
  - What is the problem/need for which you want to supply a solution?
  - Specify and quantify the need (social, economic or otherwise)?
  - Describe your solution and the benefits and/or positive change (solutions) you anticipate from this project.
  - Define and quantify the marketplace (who/customer) that would benefit from this solution.
3. Define your approach to satisfying that need.
  - What due diligence and/or validation will be needed (i.e., market research, competition analysis and comparison, alternatives consideration, prototyping, actual or simulated testing, etc.)?
  - By whom and how will you be assisted in completing this project?
  - In what forms will the project be presented on completion (i.e., thesis/investigative report, prototype, business plan, other)?
4. Define the competition.
  - What other solutions to this need already exist and what are the benefits and features of those solution(s)? (If not, did you do any literature review?)
  - Who is providing those solutions and what are their strengths and weaknesses?
  - What would be your solution’s competitive advantage as compared to the competition?
5. Define the barriers to market entry (such as cost advantage, capital requirements, incumbents with production and market advantages, know-how, location, time to market, state of technology, etc.)
6. How will the project provide an opportunity for the student to demonstrate the academic and experiential competence?
  - What are the specific knowledge, experience or skill sets on which this project will draw?
  - In what ways will this project allow student to demonstrate creativity, planning skills, problem solving, and/or independent thinking?
7. What is the project timeline?
  - What are the proposed starting and completing terms (two 12-week terms)?
  - Define a schedule and plan for managing and completing the project within the thesis terms (including some landmarks such as mid-project progress review, writing the thesis draft and final thesis review.

**Instructions to complete this form:**

1. Answer all questions on the following page and attach.
2. Secure signatures on this form.
3. Submit the progress report to CCUE Room 3-3301 AB or ccue@kettering.edu for processing (*Module 3 of the 4 Required CUE Modules*). *Submit the Progress Report after the 1<sup>st</sup> term of conducting research..*

## **E-ship Thesis Progress Report (CUE-495-E)**

*CUE Module 3 of 4*

1. Project Title:
2. Student Name:
3. Faculty Advisor Name:
4. Committee Member Name:
- 5.a. Describe the research/activities that have been completed to date.
- 5.b. Describe any changes in project scope since the E-ship Thesis Proposal was submitted.
- 6.a. Indicate progress on timeline originally submitted. If there are setbacks, have you and your advisor agreed upon changes to expected outcomes?
- 6.b. How many approximate hours have been spent to date?
- 6.c. What work remains on your project? List all activities still necessary, including writing and/or presenting your work.
- 6.d. How many expected hours of student effort are anticipated to complete these activities?

\_\_\_\_\_  
(Student – Please Print)

\_\_\_\_\_  
(Student Signature)

\_\_\_\_\_  
Date Signed

\_\_\_\_\_  
(Faculty Thesis Advisor – Please Print)

\_\_\_\_\_  
(Faculty Thesis Advisor Signature)

\_\_\_\_\_  
Date Signed

\_\_\_\_\_  
(Committee Member – Please Print)

\_\_\_\_\_  
(Committee Member Signature)

\_\_\_\_\_  
Date Signed

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(Faculty Thesis Advisor's Department Head – Please Print)

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(Faculty Thesis Advisor's Department Head Signature)

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Date Signed

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(Student's Degree Department Head – Please Print)

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(Student's Degree Department Head Signature)

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Date Signed