

Alternative to Thesis Project Description

Purpose: Due to the COVID-19 crisis, there is an immediate need for a temporary alternative thesis option that will allow students to complete their Kettering thesis requirement.

I. Students Eligible for Alternative to Thesis Project: Students who were a Senior II (104 credits) at minimum as of April 6, 2020 (First day of Spring 2020 term) with or without an approved PTA/Proposal will be eligible. This option should be prioritized over the three current thesis options if they are unable to finish a planned thesis project (ie: Research, Co-op, or Entrepreneurship). Students who are able to finish a planned thesis project have been encouraged to work with their Faculty Thesis Advisors to do so.

II. Option Description: The Culminating Reflection Project

This will be a reflection-based project where students will be asked to examine three **substantial** projects they have participated in or completed throughout the course of their undergraduate career. These projects should showcase how this student acted as a leader, project manager, etc. and for which they had a **distinctive experiential learning opportunity**. Projects should demonstrate the cognitive, affective, and behavioral growth of the student. The student must be able to provide a deliverable or artifact from that opportunity that validates that the student's work was completed as presented. The projects should be diverse to aid in the development of a well rounded reflection of the student's overall academic/professional/personal journey. Some examples of appropriate opportunities include, but are not limited to:

- Senior Design Project
- Extra-Curricular Projects such as work completed with SAE, AutoDrive, SWE, SPS, DECA, etc.
- Projects or papers from classwork in major or area of concentration/minor including group projects/papers
- Community outreach or volunteerism projects
- Journal articles, conference posters, or presentations from on-campus research experiences.
- Co-op Experiences: projects that are not sufficiently rigorous to be used for a standalone thesis project. This may include work they had planned to use as part of a thesis project but no longer can, or other work products to which significant contributions were made. Discussions of and artifacts related to this work must be shared in a confidential manner excluding all identifiable company information/data/etc. These projects will be verified through the Academic Success Center – Thesis Office (ASC – Thesis Office) and Office

of Cooperative Education to ensure the student made significant contributions to the project and a thorough reflection may be developed.

- The evaluation from the term a co-op project is being used will be sufficient for a deliverable/artifact.
- Students are encouraged to only select one project from their co-op experiences in order to showcase a diverse reflection of their experience.

All of the projects included in the reflection project should be from previously completed coursework or experiences. Students may choose to reflect on a project/experience that may be deemed as unsuccessful, however if a student can demonstrate significant growth and learning from this experience it may be permitted as a reflection project to include. They should avoid using work that is currently in progress or ongoing (ie: they are currently registered for the course). All projects must demonstrate growth of the student and offer an opportunity to reflect on overall experience relating this back to their educational/professional/personal journey. The student must explicitly explain and reflect on this growth in relation to the chosen work as it relates to their overall training and education. The student must obtain legal permission to include any proprietary materials for which they do not own the copyright or intellectual property (e.g. projects from a co-op employer or a published journal article).

PLEASE NOTE:

In order to maintain a diverse reflective project, types of projects should be limited to no more than 2 from one area (ie: Co-op, Academics/Courses, Extra-Curricular, etc.) Students must identify at least one project from their academic experience. This may include a project in a course or a series of projects that tie into one theme from multiple courses. Students should try to use only 1 Co-op experience, but may use up to 2 if necessary. Keep in mind, these must be diverse examples of growth and development.

III. Criteria and Manuscript Requirements for the Culminating Reflection Project:

- A. **Format:** The manuscript structure would follow Option 2- Custom Publication, Thesis Manuscript Requirements, shown in Figure 1.
- B. **Introduction:** In this section students should introduce themselves, describing their area of study and long-term academic and professional aspirations. This section should include an overarching discussion of the student's coursework throughout their academic journey and highlight the projects the student will be writing about in this project. The student should provide a brief overview of each

project, describe why each was chosen, and what they demonstrate in terms of the student's performance and preparation. Each chapter will then have a more in-depth introduction to that particular project.

- C. Conclusions:** Conclusions will be written as a summative reflection of the projects highlighted. A thorough understanding of the relevance these projects, and related educational experiences has brought to their career preparation and readiness for their industry or field must be demonstrated. The student should directly connect the completed work to the academic and professional aspirations described in the Introduction, and summarize their progress towards meeting these aspirations throughout their undergraduate career.

Kettering Written Thesis Document

Option 2 – Custom Publication

1. Title Page: Title, Author Name & Author Note (*see attached example)
2. Abstract
3. Table of Contents (*see attached example)
4. Introduction
5. Conclusions and Recommendations (*see attached example)
6. References (section 1 -5 only)
7. **The text of a Journal Publication, Business Plan, Company Training Manual, etc. . .** (1 ½" left margin and page numbering can be separate, meaning non-sequential numbering from elements 1-6)
8. Appendices and Supplemental Materials (Optional)

Figure 1: Option 2 for the current thesis format, as provided to faculty and students in the APA format guidelines. This thesis format lends well to the proposed reflection project option.

- D. Project Chapters: (Replacing Item 7 in the list of requirements, chapters will separate the projects):** The student will reflect on and identify how the projects they have chosen have contributed to their progress towards their professional and academic goals. Each project will be a separate chapter. The student will need to include in each chapter the completed project, preceded by enough information to help provide context to the reader. Required elements include:

- What was the assignment, the criteria for success, and for which class or experiential learning opportunity (e.g. AutoDrive, SAE, Undergraduate Research, etc.) was it completed?
- If an assignment or class related project, what grade did they receive? Did they meet the criteria for the assignment? If not, what have they gained from this experience they have since applied?
- Why did they choose this project to reflect on, or how did this contribute to their academic or professional goals?
- What professional skills or disciplinary expertise did they demonstrate in this project?
 - Students must present the project(s) as an exemplar or artifact of their work and explain how it exemplifies skills that were gained across classwork/Co-op/extracurricular activities.
 - Students should reflect on how subsequent learning experiences have reshaped their skills and knowledge since completing this project, and discuss how their work may differ if completed again with current knowledge/experience.
 - Students completing a degree in Engineering must choose at least one project that exemplifies their design skills and application of this knowledge effectively.
 - Students completing degrees in Science (i.e. chemistry, biology, physics, computer science) and Mathematics must choose at least one project that includes comparison to and discussion of scientific literature and/or theory.
 - Students completing a degree in Business Administration/Management must choose at least one project that exemplifies their analytical (deductive), multiple framing, and practical reasoning/synthetic decision-making skills.
- If a group or team project is included, what individual role(s) did the student play in the completed project, what were their contributions, and how did their work influence/impact the outcome?
- If the student has changed their major or made other pathway changes and chooses a project from a previous academic trajectory (e.g. previous co-op employment or a previous major/minor), the student must reflect on how knowledge and skills from this experience contributed to their new professional and educational goals.
- Deliverables for this project need not just be a paper (presentation, posters, and other artifacts will work). Students will identify appropriate use and incorporation with their Faculty Thesis Advisor.

IV. Student Responsibilities:

Students are encouraged to creatively consider their involvement in project management and development they participated in, as well as opportunities in which they applied their disciplinary expertise throughout their undergraduate career. In order to pursue this option, they should complete the tasks below.

- Students who wish to complete this project must be deemed eligible by the ASC - Thesis Office.
- A proposal is required for all students completing a thesis project. Students who have already submitted a proposal for a Research, Entrepreneurship, or Co-op thesis will need to submit a new proposal for this thesis option.
- The thesis proposal will be vetted by the Faculty Thesis Advisor. In it the student will clearly outline the three projects they will write about to ensure they are sufficient representations of the student's Culminating Undergraduate Experience. The student must be able to demonstrate how each project contributes meaningfully to their professional and/or academic development.
- Students must obtain appropriate legal permissions to include any artifacts or data for which they do not own the copyright or intellectual property (e.g. projects from a co-op employer or a previously published journal article).
- Students should reference **credible** materials such as primary literature, educational materials, books, manuals, etc. related to the projects. References should be included in the introduction for the project and also incorporated throughout the chapters. All references must be completed within the APA style.
- Students are encouraged to refer to the [University Learning Outcomes](#) for a guide in identifying key educational and professional skills, which may help them select appropriate experiences to use in this project.

V. University Process and Approvals Required:

Students who are eligible for this alternative to thesis option will be proactively contacted by the ASC-Thesis Office. If a student wishes to pursue this alternative to thesis option and they have not been contacted, the ASC-Thesis Office will verify student eligibility before pursuing the approval process. Should they wish to pursue this option, they should follow the steps below.

Steps for Pursuing Approval for Culminating Reflection Project:

1. Eligible students will complete and submit the "Alternative to Thesis Project Proposal Form" **AND** letter of co-op employer approval (if employed) to thesis@kettering.edu (include both documents in same email).
2. The ASC- Thesis Office will review a student's submitted proposal including chosen project topics and verify as necessary.
3. The ASC- Thesis Office will forward a proposal form to the student's degree department head to seek approval (signature required below) of the project topics and assign a Faculty Thesis Advisor.

4. The degree department head will then forward the proposal form to the assigned Faculty Thesis Advisor to seek approval (signature required below). Upon the Faculty Thesis Advisor's determination, the proposal form is then sent to thesis@kettering.edu.
5. Student is notified of determination and if approved, student's official thesis record is updated to reflect the Culminating Reflection Project as thesis type.