

TM 699 - Technology Management Capstone Project

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Objective

The Technology Management Capstone Project provides an opportunity to demonstrate your mastery of the knowledge provided through the Technology Management graduate program and in your Area of Emphasis, i.e., Information Technology, Information Security, Manufacturing Systems, Environmental Management, or Transportation Systems and Technologies.

Requirements

Completion of this 3 credit hour project course includes the writing and presenting of an original, effectively written, well-documented Comprehensive Capstone Report. This report must be more than a term paper or the development of a system. It should involve the application of management and scientific techniques to a unique problem or task with the potential of contributing to the solution of the problem and producing change. In the case where the comprehensive project is involved with or builds on your professional work experience, the resulting comprehensive project must still satisfy the expectations of this course, which could mean that additional work will be needed beyond that imposed by your employer.

In addition to the written comprehensive report, you will perform an oral defense presentation of your report before the end of the semester to a Graduate School faculty committee. Begin thinking about which faculty members you would like to approach to sit on your committee early in the Capstone development process.

Prerequisites

You must have completed 27 credit hours before registering for TM 699

Additionally, an approved Project Proposal is required prior to registration. Once the Project Proposal has been approved, you may begin working on the project, even prior to registering for TM699.

The Comprehensive Project Report and Oral Defense are expected to be completed by the end of the semester.

Grading

This is a 3 credit hour Satisfactory/Unsatisfactory course. To pass, both the Comprehensive Project Final Report and the Oral Defense must be satisfactorily completed.

Timeline

A critical success factor in determining the successful completion of your Capstone Project is to carefully plan and monitor your timeline, therefore you will be required to develop, submit, and maintain a Project Plan using Microsoft Project. Another CSF is to submitted periodic drafts for review so that revisions do not delay approval of your final report, which could mean a delay in your graduation.

Deliverables Timeline

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| First week of class | Submit a copy of your approved proposal |
| Before writing and On-going | Develop, submit, and maintain a Project Plan using MS Project |
| Upon completion of each report section per your Project Plan | Submit a draft of each section as completed to assure it is in line with expectations. Submit a copy of your updated Project Plan at the same time. |
| Six weeks before end of semester | Submit Final Draft early to avoid delays; Begin preparing Oral Defense while waiting for review and revisions |
| Upon Report Approval | Submit 3 hardcopies and an electronic copy along with the names of the faculty members (minimum of 2) who have agreed to sit on your committee and an electronic copy of your Project Plan; Schedule your Oral Defense, allowing sufficient time for revisions prior to semester end |

Again, the key to a smooth and timely completion of this course is to submit your drafts and final report early enough so that required revisions do not create a delay.

Comprehensive Project Report Format

The Report is a scientific report documenting your work on the Capstone Project. It is not, however, solely documentation supporting the development of an application. This report is meant to demonstrate your ability to effectively and clearly communicate a problem or issue, what is known by others about that topic, your

research methodology and findings, possible resolutions, and your conclusions and recommendations to solve the problem or issue based upon your research.

The report is written in the style of a Master's thesis using APA Style formatting (see Recommended Materials below). It should be written in a clear, concise, and convincing manner; with good grammar, punctuation, and spelling, and without jargon or slang. Prior to submitting drafts for review, a spelling and grammar check must be used and a competent proof-reader engaged. If you anticipate issues in this area, university resources are listed in the Resources section below. I am here to assist you, but I am not your editor. You are responsible for seeking editing assistance so we can focus on assuring your content is appropriate for graduate level work, and not spend our time on exchanges regarding grammar and format.

The Report must follow the specific format given below, unless modifications are pre-approved.

- **Cover Page**
 - Title
 - College name
 - Degree you are pursuing, including area of emphasis
 - Advisor's name
 - Contact information: name, 901 number, address, phone, email address
- **Abstract (with keywords)**
- **Acknowledgements**
- **Table of Contents**
- **List of Tables (if applicable)**
- **List of Figures (if applicable)**
- **Introduction**
 - Background
 - Reason for selecting this topic
 - Problem statement(s)
- **Literature Review**
- **Research Methods**
- **Results**
- **Discussion (Evaluation of Results)**
- **Conclusions and Recommendations for Future Work**
- **Appendices**
- **References**

Abstract

An Abstract is a one page, or less, summary of your report. It includes the problem statement (the issue(s) or problem(s) you are addressing), highlights of the literature review, the methodology used, findings, a brief evaluation of the results, your recommendation, and a conclusion. This is an overview of your entire report summarized in one page or less. Typically the Abstract is the last section written.

The Abstract is single-spaced, and references are not cited. Keywords, separated by commas, are listed as the last paragraph.

Acknowledgements

Identify who you would like to thank or recognize for assisting you in completing your project and achieving your graduate degree goal. Typically this includes family, friends, faculty, and if appropriate, your employer.

Table of Contents, List of Tables, List of Figures

See APA Manual for format. Be sure page numbers listed coincide with text pages!

Introduction

The Introduction sets the stage for your report. It identifies any background information, to include why you chose this project; the problem statement; and any information needed to 'introduce' the reader to your project.

Literature Review

A literature review is conducted to determine what is already known about the problem or issue. This is a very important part of the project, as it lets you and readers know what others in the field have to say about the topic. Be sure to appropriately cite references per APA guidelines when quoting or summarizing the work of others. Not citing references is a very serious offense (see Plagiarism below).

Research Methods

Identify the methodology used for data collection and analysis. Data collection is usually a major undertaking in any project. It can be collected from your employer (with permission), coursework, journals and other library materials, the Internet, government agency reports, etc.

When applicable, and if time permits, a survey can be administered. A more efficient methodology, however, may be the interpretation or re-interpretation of previously conducted surveys of others (be sure to cite references when using the work of others). Often information is provided in published surveys that is not primary to the author's findings, but may be of interest for your project.

Results

The evaluation of results is the heart of your Capstone. This is where mastery of analytical skills is demonstrated, as you will need to use the tools and skills you have acquired throughout your tenure in the Technology Management program. Feel free to request assistance from university faculty if necessary to complete this section.

Discussion of the Results

In your own words, discuss the results or findings of your research.

Conclusions and Recommendations for Future Work

Conclusions are statements, observations, determinations and inferences that are possible based on the work you have done for this project. These conclusions must relate back to the literature review and the results stated in your report.

Recommendations for future work (by you or others) that could be carried out as a result of your work are included in this section.

Appendices

Supplemental data that would be distracting in the body of the report, i.e., letters, surveys, raw data, large tables, etc.

References

Using the APA style format, this section identifies works cited within the report (see Resources below)

Report Format

There are no minimum or maximum pages assigned to your report. It should be long enough to thoroughly cover the topic and assignment, yet concise enough to keep readers interested. It is the quality of the words you choose, not the quantity that will be evaluated. I have seen good papers written in as few as 25 pages and as many as 366 pages.

The body of the report should be in 12 pt. font, double-spaced (except for the Abstract, Table of Contents, List of Tables, List of Figures, and References). It should have margins of 1.25" on the left side (report cover margin) and 1" on the top, bottom, and right side. It should not be right justified. Pages should be numbered and relate to the page numbers identified in the Table of Contents, List of Tables, and List of Figures. Keep your fonts and formatting simple and easy to read. Refer to the APA Publication Manual for full formatting requirements.

Report Revisions

Committee members generally request revisions to the report either upon review of the Final Report or after the Oral Defense. Be sure to adhere to a timeline that permits revisions to be made prior to the end of the semester or you risk receiving an Incomplete for the course until those revisions are approved.

Once all revisions are made, submit 3 hardcopies in report covers and an electronic copy of your revised report. You will be notified as soon as the report is approved, or if additional revisions are required.

Oral Project Defense

Once your Final Report has been approved without further revisions required, you will need to submit your final 3 hard copies in report covers and an electronic copy, along with the names of the other faculty members who have agreed to sit on your committee. At that time your Oral Defense can be scheduled. Allow at least a week for the Faculty Committee to review your final report before presenting your Oral Defense.

During the defense, you will make a 20-30 minute PowerPoint presentation on your project and report. This presentation should demonstrate your understanding of the project, along with your analysis and recommendations. It is more than an outline of your report, yet is concise enough to be completed in your allotted time.

Presentations should be developed using PowerPoint. It is also a good idea to bring extra hardcopies of your Final Report and handouts of your presentation with you for the Committee.

It is recommended that you practice making your presentation to friends, family, your dog, and/or the mirror to assure that your confidence with your topic is not overshadowed by your nerves. Be sure to dress and behave in an appropriate business fashion, as this is a very important presentation and your last step in achieving your graduate degree goal.

Your presentation venue will be equipped with a computer and projection equipment. Be sure to arrive at the presentation location early enough to load and test your presentation and to take a deep breath or two before the Committee arrives.

Anticipate that revisions to your report and/or presentation will be required before you pass the course, so do not be offended when they are requested. Again, allow plenty of time to make all required revisions prior to the end of the semester.

Plagiarism

Plagiarism will not be tolerated! This warrants repeating... Plagiarism will not be tolerated! If you are not familiar with the University's plagiarism policy, please read it carefully. At minimum, plagiarism in this course will result in an Incomplete, meaning that you will not graduate this semester. Depending upon the severity of the offense, more severe punitive actions are possible!

Resources

APA Style Manual – This is highly recommended!

Publication Manual of the American Psychological Association, Fifth Edition

Available in the MU, and other, bookstores; the library, and online

<http://www.apastyle.org/pubmanual.html>

MU Writing Center and Resources

<http://www.marshall.edu/english/writingcenter/owc/>

<http://www.marshall.edu/english/writingcenter/writingresources.html>

TE 600 Online Orientation

Available to students currently or previously enrolled in TE 650. If you would like access and are not currently enrolled, please email me.