

MASTER OF SCIENCE PROGRAMS IN

BIOMEDICAL SCIENCES
CELL & DEVELOPMENTAL BIOLOGY
MICROBIOLOGY
PHARMACOLOGY

CAPSTONE PROJECT THESIS **GUIDELINES**

**PROCEDURES FOR COMPLETION
AND PRESENTATION**

EFFECTIVE JANUARY 2009

RELEASE 2.0

THOMAS JEFFERSON UNIVERSITY

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THOMAS JEFFERSON UNIVERSITY

COLLEGE OF GRADUATE STUDIES

CAPSTONE PROJECT GUIDELINES

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Guidelines for the Master of Science (MS) Capstone Project

The purpose of the Capstone Project Guidelines is to provide academic procedural guidelines for Master of Science students at Thomas Jefferson University, College of Graduate Studies who are participating in the Capstone Project (Non-Laboratory Thesis) Option. The described procedures will assist in the preparation and approval of the Capstone Proposal, committee meetings, preparation of the written report and the oral presentation and defense of the Capstone Project. All the necessary forms and a Milestone Stage Contract and Checklist are provided with this document.

DESCRIPTION AND PHILOSOPHY

This new option is designed to benefit individuals with current positions or career goals in regulatory affairs, clinical research, industry, government, secondary education, and other professions who desire the didactic classroom exposure afforded by advanced graduate studies in the biomedical sciences but for whom a traditional laboratory research-based Master's research thesis may not be the most appropriate option to advance their career. The new Capstone thesis option will still require 40 credits for completion.

Like the laboratory-based research thesis option, the new option still requires 6 (six) credits of Master's Thesis Research culminating in a Capstone Project that will result in a research thesis. The Capstone Project is expected to result in a formal scholarly work reflecting integration of the scientific knowledge and technical and management skills learned in the program through didactic course work. The focus area is chosen jointly by the student and the Capstone Advisor with the approval of the Program Director. This Capstone Project will result in a scholarly paper that may represent a scientific policy discussion, an analysis and solution of a real life problem at the student's place of employment, program planning and evaluation perhaps in response to a changing regulatory environment, a strategic or tactical plan for implementation of an activity in the workplace, development of new science education materials at the K-12 level or a detailed discussion of a specific scientific research topic of particular interest to the student. More detailed examples can be found in the FAQ document posted on the JCGS web page.

Though the content of the final products will differ, all project proposals must include the aims of the project, background research including a literature search and assessment of current information in the area, problem definition and key determinants of the problem, a description of the methodologies to be used for analysis or development, and the conclusions or recommendations with commentary on questions requiring further study. The Capstone Project Thesis will be presented formally and defended in a public forum in a manner similar to the defense of a traditional laboratory research-based thesis. It is anticipated that the process of developing and completing the final Capstone Project Research Thesis will represent approximately 7-10 months of effort on the part of the student.

OBJECTIVES

The student will:

- Enroll in the Master's Thesis Research course appropriate for your program. As with the lab-based research thesis, timing of enrollment for the Master's Thesis Research credits for the purposes of the Capstone Project Thesis Option is dependent upon many issues that the student should discuss with their Program Director. It would be anticipated that the student would enroll in Thesis Research at the initiation of the Capstone Project activity;
- With the assistance of their Program Director, identify a Capstone Project Advisor who is knowledgeable in the area(s) relevant to the suggested Capstone Proposal. The Capstone Project Advisor may be the Program Director, but this is not required. This process should be initiated at least 7-10 months prior to the expected date of program completion;
- Submit a signed copy of Capstone Contract and Checklist to the JCGS Program Office JAH M-46. Keep the original for your records as a checklist of your progress and upcoming commitments (*See Page #21*). This form should be updated and resubmitted at various milestones during your program as a checklist of your progress as noted on the form;
- Select a final developed project topic. The student should develop the topic in consultation and discussion with the Capstone Project Advisor;
- Review the relevant literature;
- Identify members of the **Capstone Project Committee (See Page #5)** that will work with the student and the Capstone Project Advisor;
- Develop a formal proposal;
- Submit the written proposal and plan to the Capstone Project Committee explaining:
 - The topic to be addressed;
 - The aims of the project to be undertaken;
 - The methodology to be utilized;
 - The outcome anticipated by the student;
 - The members of the Capstone Committee (*See Pages #5*);
- Prepare and present an oral presentation of the Capstone Proposal to the Capstone Committee (This is Meeting #1: *See below*);
- Execute the Proposal;
- Meet with the **Capstone Advisor** and Capstone Committee as described below. These meetings should be documented on the Record of Committee Meetings form (*See Page #9*) and noted on the Milestone Stage Contract and Checklist form (*See Page #21*):

- Meeting #1: Proposal presentation to Capstone Committee
- Meeting #2: Interim progress report
- Meeting #3: Oral presentation to the Capstone Committee of the final results for approval (**NOTE: This is not the formal public Capstone Project Thesis presentation and defense.**)
- Submit a rough draft of the final project thesis to the Capstone Committee for review and approval;
- Implement revisions to the final research thesis as suggested by the Capstone Committee;
- Upon approval by the **Capstone Committee** and the **Capstone Advisor**, the student should, schedule a formal public JCGS Capstone presentation. Three such opportunities are available during the year in April, July and November (**NOTE: This is distinct from Meeting #3**). Check the JCGS web page for the deadlines and dates: www.jefferson.edu/jcgs or contact the Administrative Coordinator, Ms. Eleanor Gorman at eleanor.gorman@jefferson.edu
- Present the Capstone Project Thesis and the results at a formal public JCGS forum;
- Submit a **final bound** copy of the Capstone research thesis and the signature page, signed by the Capstone Committee to the Office of Graduate Studies, JAH M-46. This should be done on the day of the formal Capstone presentation and defense (*See Page #18*).
- Forms for use during the Capstone process are included in this document.

THE CAPSTONE PROJECT COMMITTEE

PURPOSE OF THE CAPSTONE PROJECT COMMITTEE

The purpose of the Capstone Committee is to guide and advise the student in their project. The Capstone Advisor must be aware of the specific expertise that the proposed Capstone Committee members will contribute toward the students growth and development as well as the students Capstone Project activity. The proposed Committee composition should have the necessary expertise in the area of the Capstone Project.

MEMBERSHIP OF THE CAPSTONE COMMITTEE

A student should have three persons on their **Capstone Committee including the Capstone Advisor**. As noted previously, the Capstone Advisor may also be the student's Program Director though this is not a requirement. The **Capstone Advisor** shall act as **Chair of the Committee**. The second committee member must be knowledgeable about the topic area which will be the focus of the student project. The third committee member should have a background in the topic area, project type, or methodology related to the Capstone Project. However, regardless of the affiliations of the Committee, one member of the Committee *must* be of faculty rank at Thomas Jefferson University. All members of the Capstone Committee are expected to be fully engaged and active members of the committee.

CAPSTONE PROPOSAL

The purpose of the proposal is to clearly and concisely answer the questions **WHAT**, **WHY**, and **HOW**. The proposal will be an outgrowth of the independent study, should explain the topic, the purpose or aims of the project, the plan for the project, and how the plan will be accomplished. It is expected that most proposals will be seven to eight double-spaced typed pages in length and should include a bibliography of the most relevant references on the topic. Format for the proposal is detailed on the following page (*See Page #6*).

Capstone Proposal Format

Proposed Capstone Title

This may be a provisional title, but it should be sufficient to orient the Capstone Advisor and Capstone Committee to the topic of the proposed project.

Introduction or Definition of the Problem

This section should answer the **WHAT** and **WHY**. It should describe the specific aims of the project. It should establish the rationale for the project by summarizing the previous work that has been done on the problem or topic, the available information, and any deficiencies in this information. It should also relate the significance of the proposed project.

Project Design and Scope

This section should describe **HOW** the problem will be addressed. An individual reading the proposal should be able to determine whether the project plan will adequately accomplish the project aims. The members of the Capstone Committee should be able to determine from this section whether the project is feasible with respect to time, resources, and expertise. The specific steps should be described and the methods of analysis and/or evaluation should be clearly stated.

Bibliography

A bibliography based on the current literature should be included. Pertinent journal articles and reference texts should be cited using the format of a major scientific journal. Most proposals will have 10-30 references.

Students are encouraged to set-up a bibliography database at this point. Reference database programs, *e.g.* RefWorks and training courses are available through Scott Memorial Library (Jeffline).

MS CAPSTONE PROJECT PROPOSAL APPROVAL FORM

The attached Capstone Project proposal has been submitted by:

Print your name in the space above

Student Signature

Date

a student in the Master of Science Program in:

The following persons have agreed to serve as advisors and members of the Capstone Committee and have found that the student has sufficient knowledge in the field to proceed with the proposed project toward the completion of the Master's Capstone Project Thesis requirement.

SIGNATURES OF MS CAPSTONE THESIS COMMITTEE MEMBERS

Print name above

Capstone Advisor's Signature

Date

Print name above

Signature

Date

Print name above

Signature

Date

Print name above

Program Director's Signature

Date

RESPONSIBILITIES OF THE CAPSTONE PROJECT ADVISOR

- To assist in the development of the proposal for approval by the Committee.
- To ascertain adequacy of the literature search.
- To assist the student in project design including suggestions for necessary revisions.
- To instruct, demonstrate, or make available to the student space or other resources as needed for the completion of the project to the extent possible.
- To guide the student in application of methodology.
- To provide guidance to the student in the preparation of illustrations, graphics presentations, *etc.*
 - Training courses in PowerPoint, Excel, Access, Word and PhotoShop are available through Scott Memorial Library.
- While it is ultimately the responsibility of the student to be motivated and reach closure on their project and writing of the final thesis document, it is expected that the Capstone Advisor will exercise the supervision necessary for the student to complete the project. The student however has ultimate responsibility to make sure that all relevant forms are signed on-time and that the Milestone Stage Contract and Checklist stays current; this includes both the student's original copy and the checklist copy in the student's files in JAH M-46.
- To collaborate with members of the Capstone Committee in the final evaluation of the project.

The **Capstone Advisor** is responsible for overseeing that an appropriate level of scholarship is exhibited by the Capstone Project Thesis. The Capstone Project Thesis must demonstrate a high degree of professional and methodological competence. The candidate's Capstone Committee can provide the student with the guidance and instruction necessary to achieve this competence. **The Capstone Committee should meet regularly.** At least three (3) meetings are required although the Committee may meet more frequently if necessary to evaluate progress during the student's period of project activity. Records of these meeting must be submitted to the Director's office in the College of Graduate Studies (JAH M-46). Meeting records should consist of the signed meeting form (*See Page #9*) and a brief (less than 1 page) summary of the meeting prepared by the student.

RECORD OF CAPSTONE COMMITTEE MEETING

Instruction

Student _____ Program _____

To the student:

- Complete the information at the top of the form prior to each meeting;
- Have your Capstone Advisor and the Committee Members sign in the appropriate places on this form;
- After each meeting, prepare a one (1) page summary of the meeting;
- Have your Capstone Advisor review and initial the one page meeting summary;
- Return the signed form, with the initialed one page meeting summary, to the College of Graduate Studies office, M-46 Jefferson Alumni Hall.

MEETINGS OF THE MS CAPSTONE COMMITTEE

Full Capstone Committee meetings are to be held at least three times prior to the final submission of the thesis. After the meeting to approve the Capstone Proposal, Committee meetings are for the purpose of reporting progress and to address any problems that may have arisen and for the discussion of drafts of the final Capstone Thesis.

Sign your name and have your Capstone Project Advisor and each member of your Committee sign his/her name. Following each meeting, the student is to prepare a one-page overview of the project progress to date and recommendations of the Committee members. Your Program Director will sign the form after reviewing your report.

Committee Meeting (circle one) **#1,#2,#3**

Date

Principle Objectives of the Meeting:

1.

2.

SIGNATURES OF CAPSTONE COMMITTEE MEMBERS

Student Signature

Capstone Advisor's Signature

Capstone Committee Member

Capstone Committee Member

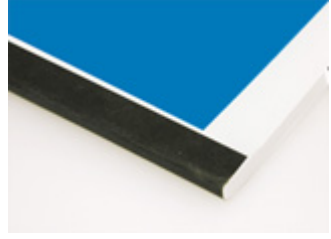


Capstone Committee Member

Program Director

Date

CAPSTONE PROJECT FORMAT

The final version of the Capstone Project Thesis should incorporate all necessary changes and corrections stipulated by the Capstone Committee. **One bound copy** of the Capstone Project Thesis containing original photographs and illustrations should be submitted to the College of Graduate Studies Office, M-46 Jefferson Alumni Hall, on the day of the Capstone presentation. Samples of appropriate binding styles are available for review in the Graduate Program Office in JAH M-46. Acceptable types of binding are shown in the illustrations below.

		
Thermal tape binding	Coil binding	Comb binding

Binding of project reports can be done at Kinko's or Creative Characters which are close to campus or at a copy center of your choice. A copy of the final Capstone Thesis should be given to each Capstone Committee member. All text pages including footnotes, legends, figures, tables and the bibliography should be typed double-spaced on one side of 8.5" by 11" bond paper. Margins should be at least 1" on all sides. Any legible standard type face or font is acceptable as long as it is consistent throughout the document. Suggested type fonts and pitches are: Times 12; Tahoma 10; Arial 10; and Verdana 10.

The general format is as follows:

TITLE PAGE

Include title, student's name, date, program and institutional affiliation, the Capstone Advisor's name and a listing of all Capstone Committee members.

DEDICATION

Optional

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS OR FIGURES

LIST OF TABLES

ACKNOWLEDGEMENTS

This page expresses appreciation for all those who assisted the student and mentions any permission obtained to quote copyrighted material.

ABSTRACT

The abstract should briefly describe: 1) the background and focus of project; 2) the methods utilized in the project; 3) a summary of the results of the project and; 4) conclusions. The abstract is limited to a maximum of 250 words. The abstract may also be used as the Capstone Project abstract for the oral presentation submission (*See Page # 14*).

INTRODUCTION

The introduction should relate the background to the project, including a statement of the problem, and the aims of the project. The project should be presented so that it is related to an existing body of knowledge or work on the subject with a review of the relevant literature.

MATERIALS AND METHODS

This section is an expansion of the same section in the proposal. After reading this section, someone in the field should be clear enough about the methods, *e.g.*, planning techniques, statistical approaches, *etc.*, that they should be able to replicate the work if that is appropriate. Previously published procedures should be referenced in the bibliography.

RESULTS

This section is a presentation the collected data and analysis. Tables and Figures should be included as necessary.

DISCUSSION AND CONCLUSIONS

This section presents conclusions drawn from the data and additional analysis. The discussion should accurately reflect the project findings and also discuss unexpected results. Findings should be related to existing knowledge on the topic. Difficulties or barriers to implementation encountered in the project and recommendations for further study should also be included.

BIBLIOGRAPHY OR LIST OF REFERENCES

Every reference cited in the text must appear in the bibliography. Pertinent journal articles and reference texts should be cited using the format of a major scientific journal. If the project report will be submitted for publication in a journal use the format required by that journal.

CAPSTONE PROJECT EVALUATION

The final Capstone Project Thesis will be evaluated by the Capstone Committee. The final evaluation will be based upon:

- Appropriateness of the project;
- Adequacy of the literature search;
- Organization and execution of the proposal plan;
- Project scope and level of difficulty;
- Validity of conclusions;
- Quality and thoroughness of the written paper.

SUBMISSION OF WRITTEN PAPER AND ORAL PRESENTATION

A public research seminar is scheduled for the presentation of the Capstone Project Thesis by the candidate. This presentation is required for graduation. The candidate must demonstrate competence in his/her specific area of work. The Capstone Project is presented to the audience in an oral presentation with accompanying graphs, tables and other visuals. The candidate must display the ability to answer questions pertaining to the project for those in attendance.

Presentations are scheduled three times each year: April, July and November. Students who present in April and have completed all other requirements for graduation will be eligible to graduate in June of the same year. Students who present in July or November, for whom this is the last requirement to complete their program, will be invited to attend the graduation ceremony in June of the following year. Students presenting in July or November may request a letter from the Registrar indicating the completion of all program requirements for their respective Master of Science degree.

- The student should present the Committee members a neatly typed "draft" version of their project **at least one (1) week prior to the final Committee meeting**. Photographs, graphs, illustrations, and tables need not be the originals for this final draft copy of the project but the draft must have sufficient content to allow the **Committee** to determine if the student will be able to complete all the requirements prior to submission of an abstract for presentation.
- Students need to incorporate suggestions from the Capstone Committee into their written paper for the final version of their Thesis. Students may have to present more than one draft of the paper to their Committee before final acceptance.

- Only those students who have completed their Capstone Project Thesis and have had their rough draft approved by their Committee may apply to make the oral presentation.
- The final Capstone Committee meeting must occur *prior* to submitting the abstract for the final oral presentation.
- Approximately one (1) month prior to the scheduled presentation the student must submit an abstract of his/her study. The abstract is to be submitted online.

GUIDELINES FOR PREPARING A CAPSTONE PRESENTATION ABSTRACT

By convention, abstracts have a precise format. This makes it easier for the reader to quickly and efficiently grasp the complex content of these short summaries. The abstracts should be single-spaced. Use the Tahoma 11-point font. Do not indent or otherwise format any part of the abstract. Please be aware that the abstract will be published on the Thomas Jefferson University College of Graduate Studies' web page for a period of **2-3 weeks** prior to your formal oral presentation of your project. According to the Jefferson Office of Technology Transfer, publication of your abstract on the TJU web page constitutes public disclosure. If the abstract is to be embargoed, please inform us upon submission that it is not posted on-line.

Obtaining a Capstone Presentation Abstract Template

1. Send an e-mail to Administrative Coordinator, Eleanor Gorman at eleanor.gorman@jefferson.edu. In the "subject" line put the words "Abstract." You need not put anything in the body of the message. Ms. Gorman will e-mail you a Microsoft Word template for the abstract. The template will be called "Capstone Abstract.doc". The document will be set as "read only," which means that you can open the file but cannot modify it.
2. To work with the file, open it. Once it is open save it under a different name on your computer (use the "File|Save As" function from the toolbar). When prompted, give the file a new name and include your last name in the file name. It will be saved on your computer without read/write restrictions. **Do not** change any settings on this file except for its designation.
3. If you have problems downloading the template bring a flash drive to Room M-46, Jefferson Alumni Hall. Ms. Gorman or someone else will copy the template onto your media.

Title Information

- Capitalize the entire title.
- List the authors' names: Use initials without periods for first and middle names, not full names. Academic degrees should not be listed.
- The abstract should have only two names; your name (as the presenter) and your Capstone Advisor. Underline your name.
- Provide departmental and institutional affiliations.
- Please see the example on **Page #16**.

Abstract Proper (Body of the Abstract)

- Organize the body of the abstract in this fashion:
 - A statement of the study's purpose (one sentence);
 - A statement of the methods used;
 - A summary of the results obtained, presented in sufficient detail to support your conclusions;
 - A statement of the conclusions reached. Note that it is **not** satisfactory to state, for example, that "the results will be discussed," or that "other data will be presented."
- The entire body of the abstract, *i.e.*, the entire abstract except the Title Information, **must** be in a single paragraph. DO NOT separate "methods," "results," or "conclusions" into separate paragraphs. Figures and tables are not permitted in the abstract.
- See the example on **Page #16**.
- The ENTIRE abstract (Title Information and Body of the Abstract) **MUST** fit into a space 4.5" wide and 7.0" deep when formatted with the 11 point Tahoma font. If your material does not fit, **you** must shorten it. The Office of Graduate Studies **will not** edit your abstract to make it fit the template. You **may not** use a smaller font or a different font in order to make it fit.

Submitting the Abstract

Your abstract must be submitted as Microsoft Word file. You may submit it *via* e-mail or in person *via* a flash drive. Send the file as a file attachment in an e-mail to eleonor.gorman@jefferson.edu. It is advisable to send a copy to yourself to make sure your e-mail left the server.

Sample Abstract Page

THE IMPACT OF HEALTH INSURANCE ON NUMBER OF MISSED SCHOOL DAYS OF ASTHMATIC CHILDREN.

E Moll and J. Lofland, Thomas Jefferson University, Philadelphia, PA

This goal of this study is to investigate the relationship between health insurance and number of missed school days in school-aged children with asthma. Data from the 2003 Full Year Consolidated Data File and the Medical Conditions File of the Medical Expenditure Panel Survey (MEPS) were used for the analysis. Individuals between the ages of 5 and 17 years who were non-institutionalized civilians and who were enrolled in primary or secondary school during the reference period for the survey were included in the study population. There were 12,587 observations of children who were between the ages of 5 and 17 years on December 31, 2003 and a member of the US civilian, non-institutionalized population. A total of 612 observations met the inclusion criteria (reported asthma and attended school for at least part of 2003). Of the 612 children with reported asthma, 535 reported that they had been diagnosed with asthma and were therefore eligible for follow-up questions about their asthma. Of those who reported an asthma diagnosis, 352 reported ever using preventive asthma medication and 135 reported using the medication daily or almost daily. These 135 observations were categorized as having “persistent” (more severe) asthma and the remaining observations were categorized as having “intermittent” (less severe) asthma. Only 32 children in the population were uninsured; therefore the observations for uninsured children were excluded and children with private and public insurance were compared. What was the mean number of days missed from school? In the linear regression analysis, age category, asthma severity proxy, and health insurance type were significantly ($P < 0.05$) associated with an increased likelihood of missed school days. Sex, race, and poverty category were not significantly associated with missed school days.

SAMPLE ABSTRACT

The final copy of the Capstone Project Thesis and the form on the next page, signed by the members of the Capstone Committee, must be submitted on the day of the presentation to the Office of Graduate Studies in JAH M-46.

JEFFERSON COLLEGE OF GRADUATE STUDIES

THOMAS JEFFERSON UNIVERSITY

SIGNATURE PAGE

Student Name _____

A Candidate for the degree of

Master of Science in:

Degree Program: _____

Has successfully completed the final copy of the Capstone Project Thesis. We have found that the candidate has successfully completed the requirements for the Master of Science Capstone Project thereby demonstrating knowledge of the skills needed to contribute to the scientific advancement of his or her area of study.

Name	Date
_____ Capstone Advisor Signature	_____
_____ Capstone Committee Member Signature	_____
_____ Capstone Committee Member Signature	_____
_____ Capstone Committee Member Signature	_____

Guidelines for Preparing for the Oral Capstone Presentation

The Jefferson College of Graduate Studies will provide a computer, laser pointer, and digital projector for the Capstone presentation. You must adhere to the following guidelines:

1. Presentations must be done in Microsoft PowerPoint. The computer provided runs the Microsoft Office 2003 version of PowerPoint and is backward compatible to previous versions.
2. PowerPoint files should be submitted as an attachment in an e-mail addressed to:
eleanor.gorman@jefferson.edu
3. If the files are too large to be e-mailed you may bring your presentation on a CD or a flash drive to the Office of Graduate Studies (JAH M-46).
4. PowerPoint files must be received at least **two (2) business days** before the date of your presentation. This allows us to load your presentation on our computer and check it for problems. We will acknowledge the receipt of your files *via* e-mail.
5. If you created your PowerPoint slides on a Macintosh computer, please load your presentation on a Windows-based machine, convert the presentation to the Windows version of PowerPoint and make sure the fonts, table formats and graphs have all converted properly.
6. If you are presenting movies imbedded in your PowerPoint slides, please make sure we have the same program available on the presentation computer, *e.g.*, Windows Media Player, QuickTime, *etc.*

Tips for Effective Presentations Using Four Important Design Concepts:

**Big
Simple
Clear
Consistent**

If you pay attention to these four concepts as you put the visuals together, the end products will be effective.

1. **Make it BIG**

Test: can you read everything from the back row?

2. **Keep it Simple**

Guidelines for text on visuals

- No more than 6 lines of text per slide.
- No more than 7 words per line of text.

We all tend to put too many words on our slides. Use the above guidelines to get rid of unnecessary text. Your audience can read faster than you can talk; you don't want their attention split between the slide and you. (Using "builds" in PowerPoint can help control the audience's attention.)

3. **Make it Clear**

Choose fonts, font sizes, and colors that enhance readability of your slides. Most of PowerPoint's default font sizes and color schemes work well; if you decide to experiment with your own, be sure not to reduce readability in the process.

4. **Be Consistent !**

Your goal should be to educate and inform your audience. Make sure the stages of your presentation, and the visual aids you use, follow a logical sequence. Use transitions to help the audience understand how successive stages are related to each other, and to the big picture.

A final word of advice:

1. Begin preparing your visuals early
 - Allow enough time to make any necessary changes.
 - Project the visuals to verify content , spelling, sizes, and colors
 - Practice the presentation with the visuals.
 - Take the time to reconsider the presentation as a whole.
2. When using the computer, make frequent back-up copies of your PowerPoint presentation.
3. Practice the presentation. You want to be able to speak it, not read it.
4. Two cardinal rules of public speaking:
 - Never turn your back on an audience.
 - Always maintain eye contact with your audience.
5. Know your environment:
 - Check out the lighting and plan how you (or someone else) will control it:
 - Do you need a pointer? a podium? chalk? Arrange for these in advance, or bring your own.
6. Other things: Room temperature, noise, seating arrangement:

If there is unfamiliar equipment, ask to have someone demonstrate it for you, or ask to have them operate it for you during the talk. Don't fiddle during the talk.

BACKUP: ELECTRONIC EQUIPMENT SOMETIMES FAILS. BE MENTALLY PREPARED TO COVER YOURSELF FOR 5-10 MINUTES WHILE EQUIPMENT PROBLEMS ARE RESOLVED OR THE EQUIPMENT IS REPLACED.

ADAPTED FROM: COLUMBIA UNIVERSITY DEPARTMENT OF PSYCHOLOGY PRESENTATION GUIDELINES

NAME: _____

MS PROGRAM _____

CAPSTONE ADVISOR: _____

MILESTONE STAGE CONTRACT AND CHECKLIST

CHECK OFF	ACTIVITY	DATE	STUDENT INITIALS	ADVISOR INITIALS
	Identify Capstone Advisor			
*	Initial Capstone Project Milestone Contract: 1 Copy for student + 1 copy for the files in M-46			
	Select members of the Capstone Committee			
	Submit written proposal for capstone project			
	Oral presentation of final proposal to Capstone Committee			
	Approval of final proposal: First official action of the Capstone Committee.			
*	Submit final approved proposal to JCGS Office			
	Capstone Committee Meetings:			
*	Meeting #1			
*	Meeting #2			
*	Meeting #3			
	Prepare rough drafts of the written report for committee review			
*	Make necessary revisions and get Final approval of paper			
	Check with JCGS Office (M-46) to insure all records are current and all course requirements have been fulfilled prior to handing in the project document			
	Schedule formal presentation of project (April, July, November)			
	Submit abstract to JCGS Office (M-46): This is usually 30 days prior to the actual presentation date			
	Formal presentation of Capstone Project Thesis			
*	Submit a final bound copy of the thesis along with signature page to JCGS Office (M-46).			

***SUBMIT A COPY OF THIS CONTRACT FOLLOWING EACH HIGHLIGHTED EVENT AND WITH THE FINAL COPY OF THE CAPSTONE PROJECT THESIS.**

STUDENTS SHOULD KEEP THE ORIGINAL CHECKLIST AND DELIVER OR FAX UPDATES TO JAH M-46 OFFICE @ 215.503.3433