Central Connecticut State University

THE MASTER'S THESIS

A Handbook and Writer's Guide for Graduate Students

Developed by the Office of the
Associate Vice President for Academic Affairs/
Dean, School of Graduate Studies
Henry Barnard Hall

Community of Scholars

To facilitate active and ongoing participation, community, and interaction of faculty and students around a shared commitment to the advancement of knowledge through innovation and research

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# THE MASTER’S THESIS
A Handbook and Writer’s Guide for Graduate Students

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Introduction

Congratulations! You are going to write a Master's thesis, a demanding and intellectually challenging task. As one of the capstone experiences of graduate study at Central Connecticut State University, the Master's thesis signifies a *rite of passage*. You will learn and practice the skills required for organized research and documentation, analysis of information and effective written communication. You are making the transition from one who is a *consumer* of knowledge to one who actively *contributes* to the knowledge base of their discipline. *You are becoming part of the Graduate Studies Community of Scholars by advancing knowledge through your research.*

This handbook is prepared so that students may successfully complete their thesis work. It contains an overview of the thesis process, from start to finish, as well as specific thesis requirements of individual departments. It has four chapters. Chapter 1 defines what a thesis is, while Chapter 2 provides an overview of the thesis process—the steps one must take from the initial conceptualization of a possible thesis idea to the finished project. The third chapter discusses specific standards required by the School of Graduate Studies to guide students through the thesis process. Chapter 4 enumerates specific departmental requirements. Fifteen appendices are also included; one appendix provides a checklist on all items that must be included at the time of submission. Another contains the rubric developed and approved by the Graduate Studies Committee meant to inform you of some of the criteria by which your thesis will be assessed. Other appendices include important information on the Human Studies and the Institutional Animal Care and Use Committee as well as samples of forms and documents that are needed for your thesis, from your first registration to the final submission of your thesis.

Thank you to Professor Marc Goldstein of the Psychology Department for his help in preparing the first iteration of this handbook. Thank you also to members of the Graduate Studies Committee for their dedication to upholding the standards and quality of CCSU’s graduate programs.

While every effort will be made to keep this *Handbook* up-to-date, please confer with your graduate advisor about any recent changes that may have taken place. You may also contact School of Graduate Studies, located in Barnard 102 and at (860) 832-2363, if you have questions.

Writing a thesis takes time, hard work, and patience. Nonetheless, you should find it to be a worthwhile and rewarding endeavor. Many faculty members, along with the School of Graduate Studies staff, are ready to support you. I wish you successful completion of your thesis work.

Dr. Paulette Lemma  
Associate Vice President of Academic Affairs/  
Dean, School of Graduate Studies
Chapter 1

What is a Thesis?

Preparing a Master's thesis is a time-honored tradition in academe, yet many students who are about to undertake such a project have only the vaguest notion of what a thesis entails. Students also may perceive the thesis as a formidable process; yet it does not need to be the case. All theses should be based on the compilation of knowledge and skills acquired throughout the student’s graduate program.

However, no single definition of a thesis exists. What constitutes an appropriate thesis varies considerably between disciplines and even between faculty members within a discipline. Given this lack of uniformity regarding what a thesis is (and the resulting anxiety it invokes in students!), how can we describe a thesis? Here are four common characteristics.

First, a thesis is an exercise in research. You are asked to demonstrate your skills in using the methodologies of your field to examine a topic of interest to your discipline.

What constitutes research methodology varies widely across fields. For example, in the physical sciences, research often (but not always) involves the use of experimental procedures in a laboratory setting; in the humanities, research may involve a descriptive or interpretative analysis of some piece of literature; and in the social sciences, research may involve surveys or field studies.

Various academic departments have identified examples of good Master's theses written by Central Connecticut graduate students in Chapter 4, Table 4-2. You may want to look at the complete thesis (available in the Reserve Room of the Burritt Library) to get a better idea of the types of methodologies used. In addition, more recent theses have their abstracts posted on the Elihu Burritt Library Internet Services (www.ccsu.edu; Click on Library and find Theses & Dissertations). Theses that are numbered from 1,480 onward include their abstracts, which will help you then locate examples of full theses in the Reserve Room that approximate your area of interest. In addition, as of Spring 2002 semester, all students submitted digital copies of their theses and indicated their permission to include the thesis on the University Web Server, providing access to the complete thesis through the library’s CONSULS.

A topic of interest to your discipline means an area of research that is generally viewed as fruitful by other researchers in the field. Within any discipline there are typically many subfields of interest. Research activities, such as a thesis, usually focus on a limited area, exploring a very specific issue or question. Again, looking at the titles of the theses listed in Chapter 4 will give you an idea of the specificity of the typical thesis.

A second characteristic of a thesis is that, no matter what the topic or methodology used, the intent of the research is to make a contribution to the field. A contribution is any “new” information that you can give to your discipline. This can take many forms: a test of a new theory, a reinterpretation of an old poem, or an evaluation of a curriculum.
The list is endless, but the common element is this: an addition to the knowledge base of your field requires you to have an in-depth understanding of some particular area of your discipline. And, you must know the current "state of the art" if you are to add to it.

In this regard, a thesis represents the capstone activity of your graduate degree program. To complete it successfully, you must demonstrate mastery over both a specific content area AND the methodology of your discipline. Indeed, the Master's degree has traditionally identified one as both an intelligent consumer of information and as a contributor to the field of study.

Third, a thesis represents an opportunity to work closely with one or more faculty members in your field. One characteristic of good graduate education is the opportunity for faculty and students to work together in a close relationship characterized as mentoring. While much of the content of any field can be taught in traditional classes, there is always some art to any discipline. These nuances are best conveyed in the context of a close working relationship. Working on a thesis under the tutelage of faculty provides an opportunity for learning that is not always found in other graduate school activities.

The fourth and final characteristic of a thesis is more personal in nature: A thesis is an exercise in self-discipline. Completing a thesis requires sustained initiative and focus for an extended period of time. Unlike classes, there are no fixed times which you must meet or specific deadlines imposed by the instructor. YOU provide the structure. The choice of topic and faculty advisors is largely yours. Indeed, faculty will generally look to you to be the initiator of your thesis work. A Master's degree acknowledges you as a professional in your field, and the mark of a professional is the ability to be self-motivated and self-directed.

To recap, a thesis is a written document that entails an independent research activity undertaken to explore some puzzle, problem or topic of interest to the field. The goal of this activity is to add new knowledge to the discipline and to demonstrate competency and worthiness of an advanced degree in the field.

Quantitative versus Qualitative Theses

Quantitative research studies typically yield statistical analyses of numerical data. Quantitative approaches--those that use “quantitative data obtained from samples of observations in order to... help make decisions to accept or reject hypothesized relationships ...between groups or classes of subjects” (Rudastam & Newton, 1992, p. 24)--have been pre-eminent. Thomas (2003) describes quantitative research as “the current status of people and events in terms of amount and frequencies” (p. 41). Three common types of quantitative methods involve surveys, correlation analyses, and experiments.

Qualitative approaches deal with the “meaning of things” (Lincoln & Guba, 1985). There is “greater emphasis on holistic description--that is, on describing in detail all of what goes on in a particular activity or situation, rather than on comparing the effects of a particular treatment (as in experimental research), or on describing the attitudes or behaviors of people (as in survey research)” (Wallen & Fraenkel, 2001, p. 432-433). In this way qualitative approaches are
“verbal portrayals of the current status of people and events in terms of kinds of characteristics and actions” (Thomas, p.33). Case studies, ethnographies, and narrative experiences are just a few methods associated with qualitative research. Qualitative approaches involve clear standards regarding the documentation of observations and their interpretation.

Studies also may combine research methods that include both types of quantitative and qualitative research (Thomas, 2003).

A Statistical Profile of Recent Master's Theses

The above description of “what is a thesis?” may have helped somewhat, but many students about to embark on a thesis have concerns about the “nuts and bolts.” Questions foremost on the minds of many students are: How long should it be? How many references should it have?

To help address these concerns, a statistical profile of some recent theses done at CCSU has been compiled. Table 1 below is based on an examination of 104 Master's theses completed between 1999-2007. (Please note that this is an informal study and does not include all theses completed during this period but only those available in the Burritt Library Reserve Room at the time theses were examined.)

<table>
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<th>Table 1</th>
<th>Average Number of Pages and References of Theses from 1999-2007</th>
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<tbody>
<tr>
<td></td>
<td>Average Total Number of Pages</td>
</tr>
<tr>
<td></td>
<td>84.12</td>
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</table>

These figures represent an average across all disciplines. When theses are listed by discipline¹ (see Table 2), we can see that there are noticeable differences in length between fields. Please note that there is not an automatic correlation between thesis length and/or number of references and thesis quality! These figures are only to provide a preliminary frame-of-reference.
Table 2
Average Number of Pages and References of Theses by Discipline

<table>
<thead>
<tr>
<th>Discipline (N)^2</th>
<th>Ave. Total Number of Pages Excluding Appendices</th>
<th>Ave. Number of References</th>
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<tbody>
<tr>
<td>Art Education (6)</td>
<td>107.85</td>
<td>79.30</td>
</tr>
<tr>
<td>Biology (17)</td>
<td>66.57</td>
<td>50.83</td>
</tr>
<tr>
<td>Biomolecular Science (4)</td>
<td>50.50</td>
<td>40.00</td>
</tr>
<tr>
<td>Communication (7)</td>
<td>87.40</td>
<td>54.50</td>
</tr>
<tr>
<td>Criminal Justice (14)</td>
<td>43.62</td>
<td>30.1</td>
</tr>
<tr>
<td>English (26)</td>
<td>71.68</td>
<td>40.61</td>
</tr>
<tr>
<td>Geography (10)</td>
<td>91.80</td>
<td>60.30</td>
</tr>
<tr>
<td>History (16)</td>
<td>111.62</td>
<td>85.48</td>
</tr>
<tr>
<td>International Studies (8)</td>
<td>91.63</td>
<td>84.88</td>
</tr>
<tr>
<td>Mathematics (16)</td>
<td>76.20</td>
<td>36.76</td>
</tr>
<tr>
<td>Modern Languages (7)</td>
<td>84.70</td>
<td>51.05</td>
</tr>
<tr>
<td>Psychology (14)</td>
<td>70.64</td>
<td>59.93</td>
</tr>
<tr>
<td>Reading (6)</td>
<td>51.85</td>
<td>31.85</td>
</tr>
</tbody>
</table>

1Only disciplines with at least 4 theses were included in the second table.
2Number of theses.
Chapter 2

The Thesis Process

This section attempts to describe, in some detail, the sequence of steps one goes through in planning, executing and writing a thesis.

Listed below (Figure 2-1) are major steps in the thesis process. While the tabular presentation implies a linear progression, in fact, it rarely happens that way. For example, students could be selecting a thesis advisor (and perhaps other committee members) while they are identifying and/or refining their thesis idea. For ease of presentation, however, steps are discussed in the order shown.

The first and often most difficult step for many students is selecting a thesis idea. Many students expect that a thesis topic should suddenly come to them as a result of their own reflection. While at times this does happen, a more common process is that a person first identifies a general topic area and, then, following more examination of that area and consultation with his/her advisor, the student begins to focus more specifically on a topic that is appropriate for a thesis.

Thus, the first step is to identify a general research area that you would like to pursue. The sources of this research area are several: it may represent an area in which you have had a long-standing interest; it may be a topic you found stimulating in one of your classes; it may arise through discussions with instructors, your advisor, or classmates; it may come from reading current books or journals in your field; or it may come from some organization or group that has designated this topic of interest or a problem.

<table>
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<th>Some Do's and Don'ts for Selecting Thesis Topics¹</th>
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<tr>
<td>1. <strong>Do</strong> choose an idea that can sustain your interest over a long period of time.</td>
</tr>
<tr>
<td>2. <strong>Do</strong> write down interesting ideas, thoughts and quotations as you come across them in your readings as well as notes on discussions with faculty and peers, etc.</td>
</tr>
<tr>
<td>3. <strong>Do not</strong> choose topics that are overly ambitious. No thesis will be the final word on any particular topic. As one student put it: There are two types of theses: the great ones and the ones that are completed.</td>
</tr>
<tr>
<td>4. <strong>Do not</strong> go it alone. Coming up with a topic is a negotiated effort between you and your advisor. Regularly talk with your advisor about your ideas.</td>
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¹adapted from Rudestam & Newton, 1992.
Figure 2-1

Steps in the Thesis Process

Choosing a Research Area

↓

Developing/Refining a Thesis Idea

↓

Selecting a Thesis Advisor and Committee

↓

Preparing a Thesis Proposal

↓

Conducting the Research

↓

Interpreting the Results

↓

Completing the Written Thesis

↓

Oral Defense of Thesis¹

↓

Submitting the Thesis for Approval

¹Not required by all Departments, see Table 4-1
Once you've identified a **general** problem area in which you are interested, you will need to refine it into a specific, workable project. A key part of this process will involve a critical literature review of the field. This review will do several things: (1) make you aware of the current "state of the art" and knowledge base of the area; (2) help you begin to identify the gaps, *i.e.*, what key issues or questions around this topic need to be explored; and (3) inform you about the kinds of methodologies that have been used to explore aspects of this topic. Keeping good notes on the material you read (including all information needed for a proper bibliographic citation in the thesis style utilized in your department) will help you when you write your thesis proposal.

Today, almost all literature searches begin with (but are not limited to!) electronic search techniques. All major abstracts (*e.g.*, Psychology Abstracts, Periodical Abstracts, Index Medicus) are computerized and can be searched via author, subject, and/or keywords. A complete description of how to use the various electronic databases is beyond the scope of this manual, but Burritt Library provides specific instructions on using the many databases on **Consuls** and in the reference section (third floor) of the library, as well as regularly offering classes in search techniques. Please consult with the reference librarian for further information.

As you read through the literature, you will gain a better understanding of what is known about your topic and key unanswered questions. Indeed, some people have likened the thesis process to a large jigsaw puzzle with a piece missing. Your research is to help fill in the gap in your field.

At this point, it is advisable to begin discussing your thesis idea with faculty in your department. If you have not already done so, you also want to identify a **thesis advisor** who will be very helpful as you determine the suitability of a potential topic. Suitability refers **not** only to the quality of the idea, but to logistical considerations that will have an impact on your ability to complete the thesis. Indeed, students often have good research ideas which, for a variety of reasons, they may be unable to carry out. **Five key issues** to consider: (1) time, (2) cost, (3) access to needed resources, (4) faculty support and (5) approval.

The first consideration is time: How long will the project take? A thesis should represent a substantial effort on one's part, but it is not expected to be one's life work. While there are no hard and fast guidelines, a thesis project (once a workable idea is developed) should take no more than 12 months. Many theses are done in considerably less time, but sometimes take considerable more time. A student who puts in regular, consistent effort on the project and meets regularly with the faculty adviser should be able to bring the thesis to a successful close. However, lack of sustained commitment can make completion of a thesis take years. If it seems that a possible topic would take a long time to complete (assuming regular effort), you should consider narrowing the topic or selecting another topic.

A second consideration is cost. Will the project entail considerable out-of-pocket expense? Most students expect to (and do) spend some money on research expenses, but the amount should not be excessive. If your project requires extensive travel or the use of expensive materials, you should explore possible sources of financial support. For example, the Graduate Student Association (GSA) offers funds to help support student research. (Visit the graduate
web site www.ccsu.edu/grad and click on GSA for funding information.) Your thesis advisor also may have access to research funds to help defray your costs. Depending on your topic, you might be able to get some support from business and industry, philanthropic foundations, and/or professional associations. If funds are not available, and there are substantial costs involved, you may want to rethink your project.

A third consideration is access to needed resources. If your work depends on access to certain library materials or other documents, e.g., agency records, a key question is whether the materials are available. If certain materials are essential for the research, you should check whether thesis materials are obtainable before extensive effort is made in planning the study in more detail. Projects sometime require documents that turn out to be hard to obtain. You may want to set an arbitrary time limit on securing key material. If, for example, the materials you need are under another person's control, such as a school principal or agency director, you may choose to pursue the project (assuming other factors make it seem worthwhile) for no more than six weeks. If after that time, no clear progress has been made in obtaining the needed material, it may be prudent to rethink the feasibility of the project.

A fourth issue that falls under the heading of feasibility is the availability of faculty support. It is in your best interest to connect with at least one faculty member in your program who shares an interest in your proposed topic and who has expertise in this area. If no one in the department has the interest or expertise to assist you, your project probably won't get off the ground. Although some departments may allow you to go outside the department in finding committee members, it is essential that at least one member of the department have sufficient skills and expertise in your area of interest to be able to assist you. (Usually the department requires the thesis adviser to be a member of the department.) Without such assistance, you can get stuck at some point in your research and have no one to help you.

A final and very important concern involves clearance of a research proposal through institutional review procedures. Before submitting your proposal for review to the Human Studies Committee (HSC) or Institutional Animal Care and Use Committee, your thesis advisor needs to review and sign the related forms. While CCSU has its own set of Human Studies and Animal Care review processes (see Appendices D, E, F, G & H respectively), if your research involves another institution (e.g., school, hospital laboratory), your research proposal may also require the review and approval of that institution. It is of critical importance that you identify the nature of the review mechanism, collect or prepare the documents you will need to submit, and allow sufficient time for review. In some cases, institutional review groups meet only a few times each year; failure to submit your project for review at the appropriate time may seriously delay your research schedule. It is important to remember that clearance from HSC or IACUC be given before you begin any data collection.

If your topic seems suitable when tested against the above criteria, the next step is to formally establish your thesis committee. Individual departments have different requirements regarding membership on thesis committees (see table 4.1); some require two members, others three. In some departments, the committee must consist entirely of department members; in others, you may select qualified individuals from outside the department or even outside the university.
If you have been discussing your thesis ideas with your thesis advisor, you might already know who will serve on your committee. On the other hand, if you have developed your thesis idea without consultation with any faculty (which is not recommended!), you may not have a clear idea of who should serve on your thesis committee. In this case, you should talk with your program adviser and the department chairperson; they will know the areas of interest and expertise of the department faculty and will be able to recommend specific people.

In selecting your committee members, you should keep in mind their role. The purpose of the thesis committee is to help you develop and shape your thesis idea, to mentor you as you work on the project, and to evaluate the finished product—the thesis—that you produce. Consequently, your committee should consist of faculty who have a general interest in your proposed area of study, have the kinds of expertise needed to guide and assist you, and are individuals with whom you can work comfortably.

The need for interest and expertise on the committee's part is quite obvious, but you should clearly assess the types of competence needed. Often it is valuable to have individuals whose skills lie in different but complementary areas. For example, you might want one faculty member who is knowledgeable in the particular content area of your thesis and a second who has expertise in research methodology.

Theses (and thesis proposals) go through several revisions, reflecting both conceptual and stylistic changes. It is important to have committee members assisting you whom you trust and from whom you can accept honest and sometimes critical feedback. The thesis process presents an opportunity for a close working relationship that can be a powerful learning experience, but there has to be a certain amount of "personal chemistry" for this to develop.

Finally, thesis committee members must work well with one another. It is probably not wise to select individuals who have an uncomfortable working relationship.

Once you have chosen a committee, you will be talking with the members as you refine your interest area into a specific thesis topic and develop specific hypotheses or research questions. Typically, this is an iterative process that cycles between reading the literature and discussions with your committee members. It is during this period that you will be completing your critical review of the literature or your initial bibliography, depending on the thrust of your study. As you decide upon the specific research questions and methodology you will use, issues of experimental design, measuring instruments, statistical analyses and the like become important. It is crucial that you use the available expertise of your committee on these issues.

All the reading, deliberation and discussion with your committee should culminate in the writing of your thesis proposal. Chapter 3 describes the specific components of the thesis proposal. While the proposal is essentially an action plan, it can also represent, if done carefully, the first several chapters of your thesis. While many students think of the proposal as a hurdle one must negotiate before getting to the “real” work, in fact, a well-crafted proposal represents significant progress toward the end product. For more discussion of the preparation of a proposal, see Cone and Foster (1997); Krathwohl, (1988).
If the research involves either human or animal subjects, you and your committee must submit appropriate forms to the Human Studies Council or the Institutional Animal Care and Use Committee. Approval from the appropriate committee is required before data collection/research can begin. Indeed, starting your research without human or animal subject approval is unethical and potentially exposes you and the university to legal complications. (More information about these committees is given in Chapter 3.) After your thesis proposal has been reviewed and accepted by your committee, the committee should send a copy of the proposal and a signed Approval of Thesis Proposal Form (see Appendix I) to the Assoc. V. P. for Academic Affairs/Dean, School of Graduate Studies.

Following submission and approval of the proposal (as well as from the appropriate subject committee as noted above), the research effort is begun in earnest: experiments are conducted; surveys are distributed; historical works are examined; curriculums are evaluated, etc. For many students this part of the process, which they expect to be tedious, turns out to be exciting. The intellectual challenge of the research endeavor is experienced in a way that is never captured in the dry accounts that typify most academic journals and books.

While engaged in this phase of your thesis, you should keep in close touch with your committee. Problems or questions will often arise (hopefully minor) that may require some modification of your research plan. Consulting with your committee about possible changes will minimize misunderstandings about such alterations later.

The analysis and interpretation of one's results are often the most challenging parts of the project. As the results are examined and initial hypotheses or expectations confirmed or negated, students begin to understand, more clearly than ever before, the human side of the research enterprise. Results are never as clear cut as they seem to be in print; different interpretations now seem plausible; shortcomings in methods are seen in hindsight; and directions for new research emerge. Once again, it is important to consult with your committee as you formulate the conclusions and recommendations that your work will add to your discipline.

If producing and interpreting the data (in whatever form they take) are more exciting than most students expect, writing the thesis is often more painful than students anticipate. Simply put, writing is hard work. If it is any consolation, it is hard work for everyone. There are, however, several strategies that you can follow that will make you more productive.

First, understand that revisions are inevitable and using and saving copies to your computer will make that task relatively painless. Also, word processing packages contain spelling and grammar checks which can help with the writing process. Moreover, there are specialized word processing programs available that can help you with format issues. If you don't own or have access to a computer, they are available on the campus, primarily the Micro Computer Lab in Marcus White Annex. Also, the Micro Computer Lab regularly conducts classes on word processing packages.

The second trick is to write something everyday—even if it is only a few paragraphs. Getting something down on paper (or stored on the computer) is the hard part; it is always easier to
revise once you've gotten the basic idea down. Don't worry if it doesn't sound “right” in its original form--that's what revision is for. If you've done a good job in putting your proposal together, you probably can use most or all of the proposal with some modification.

Thirdly, don't feel that you have to write the whole thesis before you can ask your committee for feedback on what you've written. It is best to submit materials (at least to your committee chair) one chapter at a time. Your committee is there to help you: let them.

A word to procrastinators. You really want to finish and get that degree. If it seems, somehow, that you just never seem to get down to writing, put pressure on yourself. Strike a deal with your thesis advisor. Agree to call weekly telling him or her of your progress. Call even when--and especially when--you have done nothing. Finding other students who are writing their theses can also be a good source of encouragement. Call regularly and commiserate. Set small but realistic goals.

Also, keep in mind that each semester you have not completed the thesis, the Continuing Registration fee of $40 must be paid when you have not registered for any courses. (Fee is due upon receiving the letter from the Dean, School of Graduate Studies. If you do not receive a letter, call Graduate Studies at 832-2363 to confirm that the fee has been charged to your pipeline account.)

Some departments (see Table 4.1) require that students completing theses must make oral presentations, or defenses, of their theses before their committees officially approve it. The oral defense is done after a completed version of the thesis has been presented to members of the committee to read. As Cone and Foster (1997) describe it:

Committee members will ask you to explain what you did, what you found, and what it means, and to discuss your research intelligently in the context of others' findings in the area. They will be looking for evidence that you (a) understand what you did and why, (b) can think about your project from a scientific perspective, and (c) can describe what you did to others (p. 256).

Typically a thesis oral will begin with the student making a short (15-30 minutes) presentation about his or her project followed by questions from committee members. Faculty may ask the student to explain the meaning of the results and how they might be interpreted from different theoretical perspectives undertaken in the thesis. It also is not uncommon for the committee to ask for minor revisions to the text of the thesis.

The best preparation for the oral defense is to be intimately familiar with what you did and the rationale for your approach. Be sure to talk with your thesis advisor about the format of the defense, e.g., how long should it last, what type of presentation you're expected to make, etc. It may be helpful to talk with other students who have recently been through the process. For a more detailed discussion of the oral defense, see Cone and Foster (1997, Chapter 14).

Once your committee has approved your thesis, the instructions in Chapter 3 of this handbook regarding submission of the thesis should be followed. You will need to make several copies,
complete with abstracts, for submission. Your committee will sign an Approval of Thesis Form (Appendix J) which will be turned in with your copies. You also are required to submit an electronic version in addition to the two hard copies.

It is always a good idea for you to check with your advisor or the Dean, School of Graduate Studies after your thesis has been submitted to be sure that you have completed all requirements for graduation. If you haven't completed an application for graduation, be sure to do so. (Applications are available in the Graduate Studies Office, Barnard 102 or on the graduate website www.ccsu.edu/grad.)

That's it! Go home and tell your significant other, family or friends to celebrate with you. You've earned it.
Chapter 3
University Policies and Requirements

Registering for the Thesis

To register for the thesis, Plan A, you must complete the Graduate Capstone Course Registration form (Appendix A), sign it and then obtain the necessary signatures of the Faculty Member and the Department Chair. The form must then be submitted to Barnard Hall 102 for the signature of the Dean, School of Graduate Studies. You should register for the thesis in the semester you intend to begin work with your Thesis advisor on the proposal. You must register using the Capstone Course Registration Form during the regular registration period. It will not be accepted after the add/drop period ends (i.e. after the third week of classes).

In order for you to register for the thesis capstone, graduate policy requires that you have at least a 3.00 overall GPA and that you have completed 18 credits in programs with 30-35 credits or 24 credits in programs with 36 or more credits.

Continuing Registration Fee (CREG Fee)

Graduate students should be registered every fall and spring semester. During fall and spring semesters in which no course work is taken, matriculated graduate students involved in completing Theses (Plan A), Comprehensive Examinations (Plan B), or Special Projects (Plan C or E) must pay a Continuing Registration Fee of $40. This allows students continued access to computer facilities, the library, parking and the faculty.

Once the CREG fee is paid, students may be assured that student loans will not be recalled by loan agencies.

A matriculated graduate student who fails to pay the Continuing Registration Fee for the Capstone Plan A, B C or E will be withdrawn and lose his/her matriculation status. Matriculated graduate students withdrawn for this reason will have to re-apply and pay a Re-enrollment Fee of $50 to regain their matriculation. The length of time to obtain a graduate degree will remain at six years from initial acceptance and courses included on the planned program of study.

The Thesis Committee

Your work on a thesis will be under the direction of a thesis committee. The Policy of the University's Graduate Studies Committee is that all thesis committees will consist of, at minimum, a thesis advisor and one additional faculty member. The chairperson of your committee must be a full-time member of the Department in which you are earning your degree. Individual departments may have additional requirements in regard to the size and membership of the thesis committee beyond the above minimum. Please see Chapter 4 for the specific requirements of your department.
Thesis Proposal

A thesis proposal is, essentially, a written “action plan” of what you intend to do (your topic) and how you intend to do it (your methodology). Table 3-1 suggests the contents of a proposal for an investigative study, while Table 3-2 suggests the typical format of a descriptive or historical study. The proposal must be developed with the advice of your thesis committee.

Both types of studies begin with the specification of the title (A) of the proposed research followed by a description of purpose (B), and the specific hypothesis or research question(s) that your work will examine (C).

Next, you must address the question of need (pertinence): How is your proposed research a contribution to the field? This is often best answered by first providing a selective review of the related research (D), and, then, showing how your work will fill a gap, or, in other words, clarify, extend, or apply the work of others (E).

For investigatory or experimental theses, the next section of your proposal (F) describes the methodology you will use. It is important to provide enough detail of your research design and procedures so that members of your committee will have a clear picture of exactly how you plan to conduct your study. A major purpose of this section of the proposal is to force you to think through your study; the feedback you receive from your committee regarding your methods will make your thesis more focused and, ultimately, make the time you invest in it more productive. The methodology section will also describe how you intend to analyze or evaluate your findings in terms of the research questions you initially posed.

No single research effort or methodology can answer all the relevant questions on a particular topic. Consequently, for both type of studies you should note the limitations of your study (G), both methodological and conceptual. Identifying such limitations does not imply a shortcoming of your work, but rather, suggests a realistic appraisal of the boundaries of any single, time-limited research endeavor.

The final section of the two outlines includes references mentioned in your proposal or the beginning bibliography (H).

A note on writing style: Different disciplines use different formats or style sheets for their professional writing. The formats used by Departments at CCSU include: ACS (American Chemical Society Style Guide; American Chemical Society), APA (Publication Manual of the American Psychological Association; American Psychological Association), Campbell (Form and Style: Research papers, reports, thesis; Slade, Campbell & Ballou), CBE (Scientific Style and Format: The CBE manual for authors, editors and publishers; Council of Biology Editor’s Style Manual Committee), Chicago (The Chicago Manual of Style: For authors, editors and copywriters; University of Chicago Press) and MLA (The MLA Style Manual and Guide to Scholarly Publishing; Gibaldi). Check Chapter 3 for the style used by your department and follow that style in writing your proposal.
Once your proposal has been approved by your committee, a copy of the proposal and an Approval of Thesis Proposal Form, signed by your committee or at least by your thesis advisor, must be sent to and signed by the Assoc. V. P. for Academic Affairs/Dean, School of Graduate Studies. (See Appendix I.)

Table 3-1
A Sample Outline of an Investigative or Experimental Thesis
A. Title of proposed thesis
B. Statement of purpose(s)
C. Stated Hypothesis/Research Questions
D. Relationship of study to related research and analysis of pertinent research (literature review)
E. Statement of need
F. Investigatory or experimental procedures to be followed:
   1) subjects to be used
   2) measures used (surveys/interviews/psychological instruments, etc)
   3) experimental design or intervention
   4) procedures to be followed
   5) plan for the analysis of data
G. Limitations of your project (limiting factors which affect study)
H. References

Table 3-2
A Sample Outline of a Descriptive or Historical Study
A. Title of proposed thesis
B. Statement of purpose(s)
C. Stated Hypothesis/Research Questions
D. Relationship of study to related research and analysis of pertinent research (literature review)
E. Statement of need
F. Proposed chapter development with major subheadings
G. Limitations of your project (limiting factors which affect study)
H. Beginning Bibliography

For those doing a descriptive or historical thesis, you will follow your statements of purpose and need with a preliminary description of the chapters of the thesis, identifying major subheadings (F).

Use of Human Subjects or Animals in Your Research

In keeping with current federal standards and regulations, all research involving human or animal subjects must be approved by the appropriate campus committee: the Human Studies Committee (HSC) or the Institutional Animal Care and Use Committee, (IACUC). These groups function to insure that appropriate safeguards are used to protect the rights and well-being of research subjects. See Appendix D for a more complete description of these committees. Appendix F contains the Human Studies Council Research Approval Form, Appendix G contains the Human Studies Council Exemption Form, and Appendix H contains the Institutional Animal Care and Use Committee Approval Form. For further information, contact the Office of Sponsored Programs in Room 120, Barnard Hall, (860) 832-2365 or the Chair of IACUC, Copernicus, respectively.

In cases where research is being performed at another institution involving human or animal subjects, approval must be obtained from appropriate review committees at that institution. Copies of such approval should be attached to the CCSU forms to expedite the review process.

Thesis Style Requirements

In Chapter 4, you will find style requirements of individual departments. However, the Graduate School also has certain style guidelines that govern: (a) the cover pages of the thesis and thesis abstract, (b) margins, (c) paper quality, and (d) the biographical note. These requirements assure that your thesis is submitted in a format that is suitable for binding and retention in the university library. There also are guidelines for submission of electronic versions of your thesis.

Thesis Cover Page

The format of the thesis cover page is shown in Appendix K.

Abstract Cover Page

Each thesis must include a 200-300 word abstract that summarizes the purpose, methodology, findings and conclusions of the study. The format of the cover page for the abstract is shown in Appendix L.

Guidelines for Writing an Abstract

An abstract serves as a summary of the thesis. It should contain the following elements: (1) a summary of the study’s purpose or hypothesis; (2) brief statements regarding the methods of
investigation; (3) a description of the results, including where and how you obtained them; and
(4) conclusions and/or recommendations, which relate back to the original problem or
hypothesis. When writing an abstract, it is important to be exact, concise, and unambiguous.
The abstract should be written with approximately 200-300 words or from one to two pages.
An example of a thesis abstract is provided in Appendix M. Examples are also found on the
University’s library home page where the theses collections are found.

Margins and Spacing

Since the original copy of the thesis will be bound, there should be a left margin of at least one
and one-half inches. Check the style guide that you are following for top and bottom margins as
well as the line spacing, which should be double.

Paper Quality

Use 20 lb. weight bond paper for the original (including the abstract), i.e., the copy that will be
bound. Other copies may be made on regular (no rag content) paper.

Biographical Note

You may include a short biographical note as the last page of your thesis. Appendix N provides
an example. At minimum, you may summarize your academic background and honors and
pertinent employment history. Additional information—about your family, your interests, your
long-term goals—is acceptable.

Policies Regarding Approval of Theses

Central Connecticut State University follows certain procedures regarding approval of theses
(see below). Individual departments may set additional criteria. (See Chapter 4.)

After your thesis has been approved by your thesis committee, the chair of the committee must
submit multiple copies of the thesis and abstract, along with an Approval Of Thesis Form
(Appendix J) signed by all members of the thesis committee, to the Assoc. V. P. for Academic
Affairs/Dean, School of Graduate Studies.

The original, a copy and three (3) copies of the abstract, each with its own cover page, should be
submitted to Graduate Studies, Barnard 102. Each copy of the thesis should be put in a clamp-
type binder as per the instructions below. (Students should NOT use ring binders or any other
means that would create perforations to the thesis; these will not be accepted.)

Instructions regarding submission of thesis  (Do not punch holes in any pages.)
First Binder: The first clamp-type binder should contain the original abstract and the
original thesis. Place a label, with your name and title of the thesis, on the
center of the cover, and a second label-stating ORIGINAL, in the upper
right hand corner. This binder is sent to the library where it is bound and
stored.
Second Binder: The second binder should contain a copy of the abstract and the thesis. Again, place a label with your name and thesis title on the center of the cover and put a second label stating COPY in the upper right hand corner. This copy is returned to your department.

Remaining Abstracts: Enclose the remaining three abstracts in one clear report cover. Staple each set. The Graduate School will send one copy of the abstract to the Dean of your academic school; one will be held in the Graduate School Office; and one will be retained in your academic file.

In addition to the original and copy of the thesis, students may prepare final copies of the thesis for their thesis advisor, other members of their committee, and themselves if they wish.

Digitized/Electronic Submission

Students completing theses are required to submit a copy of their thesis in digital format. The specific procedures are explained below and also in Appendix O. Both the digital copy and the signed Thesis Reproduction Approval Form (Appendix O) should be submitted to the Graduate School Office at the same time you submit hard copies and abstracts of your thesis.

The world of scholarship depends on people making their research available to others. Consequently, Elihu Burritt Library has created an online web list of over 1600 CCSU theses. There has been an increase in interest in our theses since this list went live. This sharing of information stimulates education and research. It also ensures that many people give credit to you for your work and that your research may be cited in others’ publications, which adds to your prestige and can help your future advancement.

Since you spent a great deal of time on your research, it should encourage you to know that others are requesting access to your work. Your literature review may guide others, and your results may save others the time of replicating your study; instead they can build on your research study. It would greatly aid graduate education if as many of these were made available, either through Interlibrary Loan or accessible full-text through the University Internet Servers.

In order to preserve your University Thesis in a digital format, the Graduate School requires that you submit a copy of your thesis in digital format. Once submitted, and if permission is granted, your thesis will be converted to a format suitable for access via the Internet. Only with permission does the library mount your thesis on a University Web Server. You and your thesis advisor must sign the form (Appendix O). Internet users will be able to view your thesis through CONSULS (http://www.consuls.org/) once permission is provided.

Guidelines and Specifications for Submitting Your Thesis in Digital Format:

The library can accept a digital copy of your thesis in one of several formats. In most cases the original word processing format used to write the thesis is acceptable without modification. Current or recent versions of Microsoft Word, WordPerfect, and other formats are acceptable.
Charts or graphics may be included within the word processing file, or as separate graphic files in GIF, PNG or JPG format.

Other alternative formats for submission include: Microsoft RTF (Rich Text Format), HTML (Hypertext Markup Language, including graphics as separate GIF or JPG files), Adobe Acrobat (PDF). If an alternative format is submitted, please also include the original word processing document (Microsoft Word, WordPerfect etc).

Computer files may be submitted on the following media:

CDROM (preferred)
3.5 inch diskettes (Windows or Macintosh)
Zip Drive Disks

If your thesis was produced using very old, or unusual word-processing or editing software, or if you require assistance converting your document for submission, please contact the Library Systems Office at (860) 832-2082 or (860) 832-0064. In most cases, the library staff should be able to help you convert your thesis to a format acceptable for submission.

Please refer to Appendix O. Complete the form and attach along with your Thesis Approval Form.

**Capstone Rubric**

The Graduate Studies Committee has developed and approved a capstone rubric form (Appendix C). The rubric provides specific areas that all theses should contain and indicates levels by which theses will be assessed by committee members.

**Thesis Deadlines**

For May graduation, copies of the approved thesis, abstracts, digitized/electronic copy, and signed approval form must be submitted by April 15 in order to have your thesis included in the Commencement Booklet. For December graduation, copies of the approved thesis, abstracts, digitized/electronic copy, and signed approval form must be submitted by November 15 in order to have your thesis included in the Commencement Booklet. If deadlines are missed for inclusion in the commencement booklet, students may still submit their thesis following the final examination deadlines for fall and spring semesters. The deadlines for students submitting their thesis in summer is August 15. The Assoc. V.P. for Academic Affairs/Dean, School of Graduate Studies must review and approve your thesis. You will be notified in writing, usually within two weeks, that your thesis has been accepted. If any changes are required, you will be informed of the actions you must take before final approval.
Chapter 4

Specific Department Requirements

Beyond the aforementioned Graduate School requirements, individual departments may set additional criteria or policies regarding thesis work. This chapter lists these specific departmental criteria.

Departmental thesis requirements may include committee size and/or composition, style, format, and evaluation process, such as an oral defense of thesis. Table 4-1 presents a summary of these requirements.

Some departments have also selected outstanding theses to serve as examples for students (see Table 4-2). Copies of all theses written by graduate students at Central Connecticut State University are available in Burritt Library. (Theses completed from spring 2002 onward are available through CONSULS, provided students have given permission.)

Note: Some programs do not offer the completion of a thesis as a capstone option. Students should refer to the Graduate Catalog or contact the department to discuss capstone options for completing the Master’s degree. The School of Graduate Studies has a separate Handbook for the Special Project capstone, Plan C or E. Guidelines also have been established for Plan B, the comprehensive examination.
<table>
<thead>
<tr>
<th>Department</th>
<th>Program</th>
<th>Committee Size (minimum of 2 required)</th>
<th>Committee Membership</th>
<th>Style Format</th>
<th>Dept. Chair Signature</th>
<th>Other Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art</td>
<td>MS Art Education</td>
<td>3</td>
<td>Must be graduate advisors at CCSU</td>
<td>APA or MLA depending on thesis type</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Biology</td>
<td>MS Anesthesia</td>
<td>3</td>
<td>Thesis advisor and a minimum of two other members</td>
<td>See Dept. for Guidelines</td>
<td>No</td>
<td>Oral Defense</td>
</tr>
<tr>
<td>Biomolecular Science</td>
<td>MA Biomolecular Science</td>
<td>3</td>
<td>Thesis advisor and two full-time faculty “readers”.</td>
<td>See Dept. for guidelines</td>
<td>No</td>
<td>Oral Defense (public &amp; committee)</td>
</tr>
<tr>
<td>Communication</td>
<td>MS Communication</td>
<td>3</td>
<td>At least 2 dept. members with terminal degree</td>
<td>APA</td>
<td>No</td>
<td>Oral Defense</td>
</tr>
<tr>
<td>Computer Information Technology</td>
<td>MS Computer Information Technology</td>
<td></td>
<td></td>
<td>Thesis option not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counseling and Family Therapy</td>
<td>MS Counselor Education, MS Marriage &amp; Family Therapy</td>
<td>2</td>
<td>One of whom must be a full time faculty member in department</td>
<td>APA</td>
<td>Yes</td>
<td>Oral Presentation</td>
</tr>
<tr>
<td>Criminology/Criminal Justice</td>
<td>MS Criminal Justice</td>
<td>2</td>
<td>Thesis advisor and reader approved by thesis advisor</td>
<td>APA</td>
<td>Yes</td>
<td>Oral Defense</td>
</tr>
<tr>
<td>Design (Graphic Information)</td>
<td>MA Information Design</td>
<td></td>
<td></td>
<td>Thesis option not available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational Leadership</td>
<td>MS Educational Leadership</td>
<td>2</td>
<td>Must hold terminal degree</td>
<td>APA</td>
<td>Yes</td>
<td>ED 598 as pre-requisite</td>
</tr>
<tr>
<td>Engineering Technology</td>
<td>MS Engineering Technology</td>
<td>2</td>
<td>Must be Members of the Department</td>
<td>Chicago</td>
<td>No</td>
<td>Public Presentation to faculty and students in the program</td>
</tr>
<tr>
<td>English</td>
<td>MA English, MS TESOL</td>
<td>2</td>
<td>Must be members of the dept.</td>
<td>MLA(for Literature) APA (for TESOL)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Geography</td>
<td>MS Geography</td>
<td>2</td>
<td>Must be members of the dept.</td>
<td>Chicago</td>
<td>No</td>
<td>Oral defense</td>
</tr>
<tr>
<td>History</td>
<td>MA History</td>
<td>2</td>
<td>Must be members of the dept. Depending on topic, committee may include member outside of Depart. or univ.</td>
<td>Chicago</td>
<td>Yes</td>
<td>Thesis Option- not available for MA Public History</td>
</tr>
<tr>
<td>International and Area Studies</td>
<td>MS International Studies</td>
<td>2</td>
<td>Full-time faculty teaching courses related to IS program</td>
<td>APA or MLA</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>
Table 4-1 (continued)
Department Requirements

<table>
<thead>
<tr>
<th>Department</th>
<th>Program</th>
<th>Committee Size (minimum of 2 required)</th>
<th>Committee Membership</th>
<th>Style Format</th>
<th>Dept. Chair Signature</th>
<th>Other Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing &amp; Construction Management</td>
<td>MS Construction Management</td>
<td>2</td>
<td>Advisor and at least one more faculty member</td>
<td>APA</td>
<td>Yes</td>
<td>Public presentation to faculty and students in the program</td>
</tr>
<tr>
<td>Mathematics</td>
<td>MA Mathematics</td>
<td>2-3</td>
<td>At least 2 must be full time members of the department</td>
<td>APA</td>
<td>Yes</td>
<td>Oral defense may be Required</td>
</tr>
<tr>
<td></td>
<td>MS Mathematics</td>
<td></td>
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<tr>
<td></td>
<td>MS Data Mining</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Music</td>
<td>MS Music Education</td>
<td>2</td>
<td>Full time faculty</td>
<td>APA</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Modern Languages</td>
<td>MS Spanish</td>
<td>2-3</td>
<td>Committee size and membership depends on topic</td>
<td>MLA</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MA Modern Language</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Education &amp; Human Performance</td>
<td>MS Physical Education</td>
<td>3</td>
<td>Full time faculty May have one from outside dept.</td>
<td>APA</td>
<td>Only if on committee</td>
<td>Oral presentation to faculty and graduate students</td>
</tr>
<tr>
<td>Physics/Earth Science</td>
<td>MS Natural Science-Physics</td>
<td>3</td>
<td>At least one member must be knowledgeable in content area of thesis; one in methodology to be employed; one committee member may be from outside the department</td>
<td>See Committee for guidelines</td>
<td>Yes</td>
<td>Oral defense to committee with at least two other faculty invited to attend</td>
</tr>
<tr>
<td></td>
<td>Earth Science</td>
<td></td>
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<tr>
<td></td>
<td>Science Education</td>
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<tr>
<td>Psychology</td>
<td>MA Psychology</td>
<td>3</td>
<td>Chair must be full-time Ph.D.</td>
<td>APA</td>
<td>No</td>
<td>Oral Defense</td>
</tr>
<tr>
<td>Reading/ Language Arts</td>
<td>MS Reading</td>
<td>2-3</td>
<td>Full-time faculty</td>
<td>APA</td>
<td>No</td>
<td>Thesis option not available; only Plan C</td>
</tr>
<tr>
<td>Special Education</td>
<td>MS Special Education</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Teacher Education</td>
<td>MS Early Childhood Education.</td>
<td>2 or more</td>
<td>May include one faculty member outside the dept. at the discretion of the thesis advisor</td>
<td>APA</td>
<td>Yes</td>
<td>Oral Defense</td>
</tr>
<tr>
<td></td>
<td>MS Educational Foundations: Policy/Secondary</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>MS Elementary Education</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Technology &amp; Engineering Education</td>
<td>MS Technology &amp; Engineering Education</td>
<td>2</td>
<td>Depending on topic, committee may include member outside of department or university</td>
<td>APA</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Table 4-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Examples of Outstanding Theses</td>
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<td><strong>Anesthesia</strong></td>
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<td><strong>Art</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Allegretti, Elizabeth M. (2000)</td>
<td>Improving Kindergarten Students’ Fine Motor Skills through an Art Based Occupational Therapy Intervention</td>
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<tr>
<td>Fogarty, Michelle L. (2002)</td>
<td>The Artistically Talented: Modifications in the Middle School Art Room</td>
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<td></td>
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<tr>
<td>Damiano, Jeff (2007)</td>
<td>The Role of E-Cadherin in Parietal Endoderm Outgrowth Migration</td>
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<td>Ye, Naiqing (2006)</td>
<td>Interleukin 20 Receptor α (IL20RA) is Not the Molecular Basis of the Mouse Male Sterility and Histoincompatibility(mshi)Mutation</td>
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<td><strong>Biology</strong></td>
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<td>Giannelli, Julie (2004)</td>
<td>Shell Selection Behavior of the Hermit Crab, Pagurus Longicarpus</td>
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<td><strong>Communication</strong></td>
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Table 4-2 (cont'd)
Examples of Outstanding Theses

Communication (continued)

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
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<tbody>
<tr>
<td>Riley, Shannon</td>
<td>Network Ties as a Predictor of Realistic Job Previews (2002)</td>
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<tr>
<td>Wnuk, David J.</td>
<td>Neutralizing the Effect of Organizational Structure Has On</td>
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<td></td>
<td>Communication Through the Implementation of Strategic Communication</td>
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</table>

Criminology

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
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<tbody>
<tr>
<td>Hill, Brian</td>
<td>Juvenile Detention Decisions: A Study of the Influence of Legal and</td>
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<td></td>
<td>Extralegal Factors (2001)</td>
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<tr>
<td>Metzler, Timothy</td>
<td>An Investigation of the Relationship between Gun Control Laws, the</td>
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<td></td>
<td>Extent of Handgun Ownership and the Amount of Homicide Committed with</td>
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<tr>
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<td>Handguns (2000)</td>
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English

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<tr>
<th>Author</th>
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<td>Piantek, Karen</td>
<td>Criminals and Artists: Rebellion and Power in Shakespearean Self-</td>
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<td></td>
<td>Creation (2004)</td>
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History

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<tr>
<th>Author</th>
<th>Title</th>
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<tr>
<td>Gartner, David</td>
<td>The Failed Promise Of Good Roads (2003)</td>
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Modern Languages

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
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<tbody>
<tr>
<td>Burton, Kathleen</td>
<td>The Christian Resistance in France During The Second World War: Its</td>
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<td>Uniqueness and Obscurity.</td>
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<td>Werstler, Jessica</td>
<td>Total Physical Response Storytelling: A Study in Actively Engaging</td>
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<td>Students Across the Modalities.</td>
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<td>Kremens, Elzbieta</td>
<td>La Presencia Morisca en Don Quijote: Cercantes y Su Vision Sobre</td>
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<td>Esta Minoria Marginada.</td>
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<tr>
<td>Modern Languages (continued)</td>
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<td>----------------------------------------------------------</td>
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<td>McCarthy, Brian</td>
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<td>Serpents in the Desert: Soteriological Pharmaka or</td>
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<tr>
<td>Ambivalences in the Christian Doctrine of Salvation in</td>
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<tr>
<td>the Mythological Drama of Calderon</td>
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<tr>
<td>(2007)</td>
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<th>Music</th>
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<tr>
<td>Dickson, Rob</td>
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<tr>
<td>Applying the Adornian Concept of Listening Regression to</td>
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<td>the Significance of Violence in Contemporary Music</td>
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<td>(2007)</td>
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</table>

<table>
<thead>
<tr>
<th>Physical Education &amp; Human Performance</th>
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<tr>
<td>Failla, Michelle</td>
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<tr>
<td>Perceptions of Weight Training in Division 1:</td>
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<td>Collegiate Male and Female Soccer Players.</td>
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<tr>
<td>(2006)</td>
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<table>
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<th>Psychology</th>
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<tr>
<td>McKay, Elizabeth</td>
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<td>Psychological Sense of School Membership Mediates the</td>
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<td>Relationship between Attachment and Academic Motivation</td>
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<td>in Adolescents.</td>
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<td>(2006)</td>
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<th>TESOL</th>
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<tr>
<td>Krystyna Sulima</td>
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<tr>
<td>Acquisition of Polish Nasal Vowel Syllables by Native</td>
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<tr>
<td>English Speakers.</td>
</tr>
<tr>
<td>(2000)</td>
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</tbody>
</table>
References


Appendix A

Graduate School—Central Connecticut State University, New Britain CT 06050
GRADUATE CAPSTONE COURSE REGISTRATION FORM for Plan A (Thesis) and Plan C (Special Project)

| Name: | ID or Soc Sec #: |
| Street: | Telephone Nos.: (H) |
| City: | (W) |
| State/Zip: | Email Address: |
| Country (if appl.): | Date: |

Program (e.g., Math, Reading, Spanish) and Degree (e.g., MS, MA):

Current Graduate Overall GPA: | Number of Program Credits Completed:

***A student must have at least a 3.00 overall GPA to be eligible for all graduate program capstones and have completed 18 credits (for programs with 30-35 credits) or 24 credits (for programs with more than 36 credits).***

Capstone Title:

<table>
<thead>
<tr>
<th>Capstone Type</th>
<th>Academic Term</th>
<th>Year</th>
<th>Student Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Plan A: Master's Thesis</td>
<td>□ Fall □ Spring</td>
<td>□ Full-time □ Part-time</td>
<td></td>
</tr>
<tr>
<td>□ Plan C: Special Project</td>
<td>□ Summer (only by special approval of the Dean of Graduate Studies)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The sponsoring faculty member completes this section with the graduate student:

Proposed Course No. (e.g., ENG 599, TE 596): | Average Weekly Contact Hrs. (3, 6): | Credits (3, 6):

Meeting Place (classroom, office, or other location):

Evaluation Schedule:

Planned Readings and Other Assignments:

Means for Evaluation:

Required Capstone Written Agreement/Approvals:

Submitted by | Date: |
| Print Name |  |

Sponsored by | Date: |
| Print Name |  |

Approved by | Date: |
| Print Name |  |

Dean of Graduate School’s Signature | Date: |

Dean of Academic School’s Signature | Date: |

Dean of Academic School’s Signature | Date: |

Note: faculty load credit of .5 is awarded when capstone advisor submits student’s thesis or special project proposal approval form and thesis or special project proposal to the Graduate School Dean; final .5 is awarded when advisor submits completed capstone work and final approval form to the Graduate Dean.

Effective 11/2005. Distribution of Completed Form: original-Enrollment Center; copies-faculty member, chair, student, academic dean, Graduate School.
Appendix B

THESIS CHECKLIST

The following checklist is provided to assist you with the organization of your thesis and is to be used in conjunction with CCSU’s The Master’s Thesis: A Handbook and Writer’s Guide for Graduate Students. It is suggested that you check all the boxes below to be certain your thesis contains each of the items before you submit your thesis for review.

The paper format of your thesis “original” and “copy” should be assembled in the following order (see p. 19 for additional instructions):

<table>
<thead>
<tr>
<th>Original</th>
<th>Copy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thesis Cover Page (Format according to Appendix K)</td>
<td></td>
</tr>
<tr>
<td>Abstract Cover Page (Format according to Appendix L)</td>
<td></td>
</tr>
<tr>
<td>Abstract</td>
<td>Use Guidelines on page 17 of this manual and follow example of a thesis abstract according to Appendix M. The abstract size should be between 200-300 words.</td>
</tr>
<tr>
<td>Text</td>
<td>Style and departmental guidelines and requirements are given in Table 4-1, pp. 22-23</td>
</tr>
<tr>
<td>List of References</td>
<td></td>
</tr>
<tr>
<td>Appendices</td>
<td></td>
</tr>
<tr>
<td>Biographical Statement (Format according to Appendix N)</td>
<td></td>
</tr>
</tbody>
</table>

Other submission requirements:

- Three copies of the abstract, each with its own abstract cover page
  Instructions provided on p. 18.

- Approval of Thesis Form (See Appendix J)
  Form must be signed by all members of the thesis committee.

- HSC or IACUC Approval Forms, as appropriate

- Thesis Processing and Reproduction Approval Form (See Appendix O)
  A copy of this form must be completed and signed.

- Digitized /Electronic Copy of Thesis
  Guidelines for submission are on pp. 19-20.
## Appendix C

### Capstone Rubric

**Student’s Name:** _________________________  
**CCSU ID:** ________________

**Faculty Assessors:** __________________________________________________

<table>
<thead>
<tr>
<th>Capstone Rubric (Plans A/C/E)</th>
<th>Does Not Meet Expectations (1)</th>
<th>Meets Expectations (2)</th>
<th>Exceeds Expectations (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Definition of Project/Introduction Or Statement of Hypothesis</td>
<td>Introduction does not clearly explain the nature and structure of the capstone, its rationale and relevance to discipline.</td>
<td>Introduction clearly presents the capstone, its nature, relevance and structure.</td>
<td>Introduction makes strong case for the value the capstone provides to the discipline, as well as presenting its nature and structure.</td>
</tr>
<tr>
<td>2. Thesis/Argument</td>
<td>Argument is unclear, inconsistent, inappropriate, or not suitably original.</td>
<td>Argument is appropriate, clearly presented, consistently applied, and suitably original.</td>
<td>Argument is clear, consistent, sophisticated, and strikingly original.</td>
</tr>
<tr>
<td>3. Familiarity with/ Grounded in Literature. Knowledgeable of the current state of discipline</td>
<td>Does not indicate familiarity with literature; has large gaps and shows little grounding of the capstone in the literature. No substantive engagement.</td>
<td>Displays familiarity with reasonably full range of literature; demonstrates an appropriate grounding and engagement with the literature.</td>
<td>Displays impressive familiarity with full range of and grounding in literature; engages with it substantively and productively.</td>
</tr>
<tr>
<td>4. Methodology or Plans for the Project</td>
<td>Methodology is not clearly presented, not appropriate or not adequately applied to capstone.</td>
<td>Methodology is clearly presented, relevant and appropriately applied to capstone.</td>
<td>Methodology and project are mutually enriching.</td>
</tr>
<tr>
<td>5. Results/Findings/ Demonstration of Thesis Argument and Claims</td>
<td>Outcomes minimally address research questions and fail to demonstrate its claims persuasively. Presentation minimally addresses research questions; structure reflects a lack of organization, detail, understanding and/or accuracy.</td>
<td>Outcomes address research questions. Presentation of evidence uses argumentation and is reasonably persuasive in making connections with research ideas.</td>
<td>Outcomes thoroughly address research questions. Presentation of evidence conveys a mastery of argumentation. Structure provides a coherent and clear focus of new understandings.</td>
</tr>
<tr>
<td>6. Summary/ Conclusion or closing argument</td>
<td>Capstone summary is minimally supported by results and/or findings; exhibits a lack of original ideas, personal interpretation of findings, and/or an inability to draw an inventive synopsis.</td>
<td>Summary sufficiently supported by results and/or findings while adequately and accurately summarizing the capstone.</td>
<td>Summary presents carefully analyzed information to present inventive and originally developed decisions and/or conclusions supported by results and/or findings.</td>
</tr>
<tr>
<td>7. Bibliography/ References</td>
<td>Lack of proper format and limited details with many sources missing or incomplete.</td>
<td>Bibliography/References are mostly complete and correctly formatted. Capstone contains a variety of sources.</td>
<td>Bibliography/References are complete (all sources shown) and correctly formatted: inserted to validate evidence.</td>
</tr>
<tr>
<td>8. Writing</td>
<td>Writing is unclear, distracts from meaning, is not at appropriate level, or contains excessive errors.</td>
<td>Writing is clear and appropriately sophisticated, with virtually no errors, and supports meaning.</td>
<td>Writing is at or near professional level, has no errors, and enhances meaning.</td>
</tr>
</tbody>
</table>

**Totals**  
  
**Overall Score**  
________
Appendix D

Description of the Human Studies Council and the Institutional Animal Care and Use Committee

Use of Human Participants or Animal Subjects in your Research

In keeping with current federal standards and regulations, all research involving human participants or animal subjects must be approved by the appropriate campus committee: the Human Studies Committee (HSC) or the Institutional Animal Care and Use Committee (IACUC). These groups function to insure that appropriate safeguards are used to protect the rights and well being of research subjects.

Human Studies Council

The function of the Human Subjects Council is to protect the rights and welfare of human research participants and to assist faculty and students engaged in relevant research from unknowingly committing unethical acts. The HSC conducts a risk-benefit analysis in which committee members review: the objectives and methods of the proposed study, the involvement of humans in the project, the potential for risks to participants, the procedures that will be used to protect participants from risk, and the potential social and scientific benefit that will accrue from the study. Many minimal risk studies with adult volunteers are approved quickly through an expedited review process. However, research with certain protected populations (e.g., children, prisoners, mentally disabled persons) or research that involves deception or greater than minimal risk go through a full review process. The full review process can be done only at convened meetings of the full HSC. These meetings generally take place during the regular academic year every three weeks. Students should be sure to submit proposals in a timely manner that factors in the turn around time that will be needed for the review process. It is important that your research proposal is submitted for HSC review, since approval by this committee essentially says that the University supports your work. Copies of the CCSU Human Research Policy, guiding ethical principals and federal guidelines, are available from the Office of Sponsored Programs, Barnard 120 or at www.ccsu.edu/humanstudies.

In cases where research involving human participants is being performed at another institution, approval must also be obtained from appropriate review committees at that institution. Copies of such approval should be attached to the CCSU forms to expedite the review process.

For more information, or for copies of the Human Research Approval Form, contact Mimi Kaplan, Assistant Director of the Office of Sponsored Programs, 120 Barnard Hall (phone: 832-2366; e-mail: Kaplan@mail.ccsu.edu or www.ccsu.edu/humanstudies.
Institutional Animal Care and Use Committee (IACUC)

The IACUC is responsible for oversight and evaluation of the animal care and use program at CCSU. Its functions include inspection of facilities; evaluation of programs and animal-activity areas; review of proposals for the use of animals in research, testing or education; and the review of concerns involving the care and use of animals at CCSU.

The following should be considered in the preparation and review of animal care and use protocols:

- Rationale and purpose of the proposed use of animals
- Justification of the species and number of animals requested. Whenever possible, the number of animals requested should be justified statistically.
- Availability or appropriateness of the use of less-evasive procedures, other species, isolated organ preparation, cell or tissue culture, or computer simulation.
- Adequacy of training and experience of personnel in the procedures used.
- Unusual housing and husbandry requirements.
- Appropriate sedation, analgesia and anesthesia.
- Unnecessary duplication of experiments.
- Conduction of multiple major operative procedures.
- Criteria and processes for timely intervention, removal of animals from a study, or euthanasia if painful or stressful outcomes are anticipated.
- Post procedure care.
- Method of euthanasia or disposal of animals.
- Safety of work environment for personnel.

The Application for Project Approval (APA) form is available from Ruth Rollins, Chair IACUC, located in Copernicus Hall. Each APA is reviewed by the IACUC, which includes a veterinarian. Some protocols may be approved by an expedited process and may require two to three weeks. Other protocols require a full review process that can be done only at a regularly convened meeting of the full IACUC. The full committee generally meets four times a year. Timely submission of proposals is especially important if approval is required before submission of research proposals for university or external grants.
Appendix E

CENTRAL CONNECTICUT STATE UNIVERSITY
HUMAN STUDIES COUNCIL
HUMAN RESEARCH INFORMATION
www.ccsu.edu/humanstudies

WILL HUMANS BE INVOLVED IN ANY WAY?
PLEASE TYPE YOUR ANSWERS ON THIS FORM

TO ALL CCSU APPLICANTS:
If humans are to be involved and/or are to be placed at risk,\(^1\) directly or indirectly, in any research project, please read this notice carefully.

HHS regulations require that all applications for support of research or training projects, which use human subjects or human materials, or place humans at risk in any way, should have the prior approval\(^2\) of the Central Connecticut State University Human Studies Council. The HSC operates under strict HHS guidelines. Each principal investigator is expected to submit the Human Studies form for HSC review and approval.

If you have any questions, contact the Office of Sponsored Programs and Research Services (832-2366). For forms and policies go to www.ccsu.edu/humanstudies.

NOTE: HSC APPROVAL MUST BE RENEWED ANNUALLY

Review of non-sponsored research by the HSC is encouraged. If a project is not reviewed, CCSU is not liable for any legal action resulting from the research. It is in your best interest to have your research reviewed.

---

\(^1\) The following extract is taken from HHS regulations:
"Subject at risk means any individual who may be exposed to the possibility of injury, including physical, psychological, or social injury, as a consequence of participation as a subject in any research, development or related activity which departs from the application of those established and accepted methods necessary to meet his needs, or which increases the ordinary risks of daily life, including the recognized risks inherent in a chosen occupation or field of service."

\(^2\) If prior approval is not obtained; approval of the HSC must follow the application within 60 days of mailing.
Appendix F
CCSU Human Studies Approval Form

CCSU HUMAN STUDIES APPROVAL FORM

PLEASE TYPE

PRINCIPAL INVESTIGATOR:__________________________________PHONE:_________

IF CCSU STUDENT, PLEASE ENTER CCSU ID#______________

INVESTIGATOR'S MAILING ADDRESS: STREET, CITY, STATE AND ZIP
________________________________________________________________________

TITLE OF PRINCIPAL INVESTIGATOR:__________________________________EMAIL _______

TITLE OF PROJECT:______________________________________________________

For students, please indicate (check) which of the following best describes your project:

___ Dissertation
___ Thesis
___ Special Project (graduate level capstone other than thesis or dissertation)
___ Class project: specify CCSU DEPT/CLASS: ______________________________
___ Other undergraduate research project

Who is your supervising professor? _______________________

What is your professor’s academic department? ______________

☐ If this research is for thesis/graduate work or ANY other STUDENT PROJECT, your supervising professor must sign below indicating approval for submission of proposal to HSC. Professor’s approval means that the supervising professor has reviewed all material to be submitted by the student researcher and has determined that the submission is complete, is consistent with relevant ethical principles and procedures, is free of typographical and other errors, and that the quality of the material is deemed to be suitable for human studies review and distribution to potential participants, as appropriate.

PROFESSOR’S SIGNATURE INDICATING APPROVAL*________________________

Note: If you are submitting this electronically, your supervising professor should submit a separate e-mail or letter indicating approval of your project.

Will your research be conducted in a school or other external agency? _____yes _____no

If you answered ‘yes’ to the question above, you must attach written “gatekeeper” approval with this application. (For example, if you are conducting a study in a school or external agency, gatekeeper approval is typically written permission from the principal/superintendent or agency director. Letter should be on official letterhead. Gatekeeper must indicate familiarity with the goals and methods of the study and state permission/support for the project.

SPONSORING AGENCY (if applicable)________________________________________

PROJECT START DATE:______________________ CONTINUATION__________________
NEW PROPOSAL______ OLD PROPOSAL WITH CHANGES______
OLD PROPOSAL WITHOUT CHANGES______

IF OLD PROPOSAL, PREVIOUS HSC #________

PLEASE COMPLETE ALL PARTS OF THIS FORM

1. SUMMARIZE YOUR PROPOSED RESEARCH; OUTLINE OBJECTIVES AND METHODS
(Do not exceed 150 words) See #2 on Checklist.

2. SUMMARIZE ALL INVOLVEMENT OF HUMANS IN THIS PROJECT: (WHO, HOW MANY, AGE, SEX, LENGTH OF INVOLVEMENT, FREQUENCY, ETC.)

3. INDICATE WHETHER ANY SUBJECT OF YOUR RESEARCH WILL BE SELECTED FROM THE FOLLOWING CATEGORIES:

( ) Minors  ( ) Pregnant women  ( ) Mentally retarded  ( ) Mentally disabled
( ) Physically disabled  ( ) Prisoners  ( ) Addicts  ( ) Parolees
( ) Fetuses  ( ) none of the above

4. CHECK ALL RISKS TO HUMANS INVOLVED IN YOUR PROJECT: (See #3C Checklist)
   ___ No risks
   ___ Deception
   ___ Personal material (interviews, opinions, test scores)
   ___ Stress or emotional arousal
   ___ Loss of privacy
   ___ Embarrassment, disappointment, or other disagreeable emotion
   ___ Alteration of self-concept (e.g., through knowledge of test scores)
   ___ Physical or psychological trauma or pain
   ___ Loss of legal rights
   ___ Experimental diagnostic procedures
   ___ Side effects of medications
   ___ Experimental treatment procedures
   ___ Contraction of disease
   ___ Worsening of illness

BRIEFLY EXPLAIN ANY OF THE ABOVE YOU CHECKED
5. INDICATE PROCEDURES TO PROTECT HUMAN PARTICIPANTS FROM RISKS
(Check all appropriate):

_____ Precautions in uses of stressors or emotional material (explain below)
_____ When deception used, subjects full informed as to the nature of the research at a feasible
time (explain below)
_____ Procedures to minimize changes in self concept (explain below)
_____ Data from protected sources
_____ Code numbers will be used
_____ Individual data submerged in results
_____ No unauthorized use of data
_____ Data confidentiality will be used
_____ Debriefing on experimental purposes
_____ Clinical trial (describe data monitoring below)
_____ Sterile equipment
_____ M.D. or other appropriately trained individual in attendance

OTHER AND EXPLANATIONS:

6. INDICATE HOW YOU WILL OBTAIN INFORMED CONSENT (see sample CONSENT FORM)

_____ Subject or parent/guardian reads information on consent form and signs (Please attach a copy of the
consent form used)

_____ Subject receives ORAL briefing (from principal investigator or Project personnel) and then gives
ORAL consent. (Please attach copy of the text of briefing and consent)

_____ Other (please explain)

7. BRIEFLY DESCRIBE THE SOCIAL AND SCIENTIFIC BENEFITS THAT WILL ACCRUE TO EACH
HUMAN SUBJECT, OR TO HUMAN BEINGS IN GENERAL, AS A RESULT OF THE INDIVIDUAL'S
PARTICIPATION IN THE PROJECT:
DRUG FREE CERTIFICATION
As a condition of approval of this research, I certify that I will not engage in the unlawful manufacturing, distribution, dispensing, possession or use of a controlled substance in conducting any activity associated with this research. (45 CFR 620, subpart F, Appendix C)

SCIENTIFIC MISCONDUCT STATEMENT
I certify that I am aware that Central Connecticut State University does not tolerate scientific misconduct. The following PHS definition (NPRM) is accepted by the University: “‘Misconduct’ or ‘misconduct in science’ as used herein is defined as plagiarism, deception or other practices that seriously deviate from those that are commonly accepted within the scientific community for proposing, conducting or reporting research; or (2) material failure to comply with federal requirements that uniquely relate to the conduct of research.”

Signature of Investigator ___________________ Date ___________________

*If you are submitting this form electronically check here____ and read section B below. Please note that you should also print one hard copy of this form and send it with your signature via mail to: Office of Sponsored Programs, Barnard Hall, Room 120. We must have a signed copy on file before we can approve the project.

A. If submitting paper copies: SUBMIT TWO (2) COPIES OF THIS FORM WITH THE FOLLOWING ATTACHED TO EACH COPY:
1. Copies of each consent form (written and/or verbal text)
2. Copies of all questionnaires, surveys, tests and other relevant material used

SEND OR DELIVER ALL COMPLETED FORMS TO:

Mimi Kaplan, Kaplan@ccsu.edu Sponsored Programs, Barnard Room 120.

B. If submitting electronically: Submit a copy of this form, a copy of each consent form (written and/or verbal text), and a copy of all questionnaires, surveys, tests and other relevant material used attached as MS-Word or .pdf (or similar standard file type) documents. E-mail to Kaplan@ccsu.edu and to waite@ccsu.edu.

Where to direct questions: Please call Ms. Mimi Kaplan, Assistant Director, Office of Sponsored Programs at (860) 832-2366 or Dr. Bradley Waite, Chair, Human Studies Council at (860) 832-3115, if you have questions about submissions.

Be sure that you also view the HSC Sample Consent Form and checklist.
The sample consent form is intended for your use as a “boilerplate” consent instrument. You will need to fashion your actual consent instrument in a format that is appropriate for and specific to your study and research participants.

All HSC information can be found at www.ccsu.edu/humanstudies

HSC Sample Consent Form

The sample provided below is intended as a guide to assist you in providing full information and obtaining and documenting participants’ informed consent. Feel free to draw from it liberally or use as a “boilerplate.” See item 4 of the HSC approval checklist (in Appendix D on web site) for a listing of issues that should be addressed in your consent form. See also the Documentation of Informed Consent Checklist (Appendix B on the website) for further information.]
Sample Consent Form

CENTRAL CONNECTICUT STATE UNIVERSITY

Department of [                        ]

1615 Stanley Street

New Britain, CT 06050

Phone number(s)

e-mail address(es)

PROJECT TITLE HERE

List Principal Investigator’s name and position

List other investigators and/or faculty supervisor or sponsor

INFORMED CONSENT STATEMENT

1. Invitation to Participate and Description of the Project. You are being asked to participate in our study of [                         ]. We are investigating this topic in order to further our understanding of [                        ]. [Describe how participant was recruited to participate if it is not obvious]. Your participation in the research study is voluntary. Before agreeing to be part of this study, please read and/or listen to the following information carefully. Feel free to ask questions if you do not understand something.

2. Description of Procedure. If you participate in this study, you will (may) be asked to [list and describe all procedures here; include information on the duration of involvement].

3. Risks and Inconveniences. [List all risks here. List protections from risk here. Risks are not limited to the physical. They may also involve the potential for psychological or social injury, fatigue or other. For example, consider embarrassment or other feelings that are uncomfortable. For some studies a statement like the following might be useful: There is a possibility that some of the questions in the interviews may make you feel uncomfortable. We will be asking you about personal things and you may feel embarrassed at times when taking about [               ]. This rarely happens, but if you do feel uncomfortable, you can do any of the following: you can choose not to answer certain questions, you can take a break and continue later, you can choose to stop the research (interview, etc). If you wish you can call [                 ] or someone else of your choosing to talk about your feelings. Please note that some of these issues may not be applicable to your study and you may have other protections from risk in place. Please describe such here.]

4. Benefits. [Describe all benefits here. Even if your study has no direct benefits to the participant you should describe the general class of benefits to accrue, such as: This study was not designed to benefit you directly, however, there is some possibility that you may learn about [              ] through your participation. In addition, what we learn from the study may help us to better understand [               ].]
5. Financial (or other) considerations: [Describe any financial or other (e.g., course credit) considerations.]

6. Confidentiality. [Describe confidentiality arrangements. For example, if applicable you may state: Any and all information obtained from you during the study will be confidential. Your privacy will be protected at all times. You will not be identified individually in any way as a result of your participation in this research. The data collected however, may be used as part of publications and papers related to [the research topic]. If participation is anonymous you may note that here.]

7. Voluntary Participation. Your participation in this study is entirely voluntary. You may refuse to participate in this research. Such refusal will not have any negative consequences for you. If you begin to participate in the research, you may at any time, for any reason, discontinue your participation without any negative consequences.

8. Other considerations and questions. Please feel free to ask any questions about anything that seems unclear to you and to consider this research and consent form carefully before you sign.

Authorization: I have read or listened to the above information and I have decided that I will participate in the project described above. The researcher has explained the study to me and answered my questions. I know what will be asked of me. I understand that the purpose of the study is [     ]. If I don't participate, there will be no penalty or loss of rights. I can stop participating at any time, even after I have started.

I agree to participate in the study. My signature below also indicates that I have received a copy of this consent form.

Participant’s signature________________________________ Date _________________

Name (please print) __________________________________________

[If applicable, Signature of Person Obtaining Consent]

[Please be reminded that signed, fully informed permission of parent(s) or guardian(s) as well as the assent of participants will be required for studies involving minors.]

If you have further questions about this research project, please contact the principal investigator, [name, at (860) 832-xxxx, e-mail:              ] or faculty supervisor [if different, name, at (860) 832-yyyy, e-mail:              ]. If you have questions about your rights as a research participant or if you have a research related complaint please contact Ms. Mimi Kaplan, Assistant Director, Office of Sponsored Programs and CCSU Human Studies Council Administrator at (860) 832-2366, e-mail: Kaplan@ccsu.edu; or Dr. Bradley Waite, Chair, CCSU Human Studies Council at (860) 832-3115, e-mail Waite@ccsu.edu.

The participant will be given one copy of this consent form. One copy of this form is to be kept by the investigator for at least five years.

[Version 8.30.01]
APPROVAL CHECK LIST

1. Administrative
   ___ a. Are the appropriate number of copies submitted?
   ___ b. Are copies of each informed consent form submitted?
   ___ c. Are copies of each questionnaire and/or example stimuli submitted?

2. Scientific Aspects
   ___ a. Is the hypothesis stated?
   ___ b. Is the research design appropriate?
   ___ c. Does the information to be collected provide a means to answer the hypothesis?
   ___ d. Is a sample size calculation performed? If not, is it necessary?

3. Human Subjects Issues
   ___ a. Is the study population defined?
   ___ b. Are there any anticipated problems from using this study population? Is it appropriate for the hypothesis to be tested? Are subject recruitment procedures documented?
   ___ c. Will the study be advertised? Is subject compensation addressed?
   ___ d. Are the risks adequately defined?
   ___ e. Are the potential benefits clearly defined to the subjects and to society?
   ___ f. Do the benefits outweigh the risks?
   ___ f. How are subjects protected from risks?

4. Consent Form
   ___ a. Is the study title on each page with the investigator's name and contact telephone numbers?
   ___ b. Is there a clear description of the study goals, design and implementation?
   ___ c. Is there a clear description of potential risks?
   ___ d. Is there a clear description of what is expected of the subject such as extra visits, extra tests, and the duration of the subject's participation?
   ___ e. Are all of the standard University statements, as stated in the CCSU Human Studies Council policy, included (such as confidentiality, withdrawal, subject rights, and compensation provided)?
   ___ f. Is the consent form readable and in clear, easy to understand lay terms? Are there spelling, typographical, or grammatical errors?

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"Risk" means any individual who may be exposed to the possibility of injury, including physical, psychological, or social injury, as a consequence of participation as a subject in any research, development, or related activity which departs from the application of those established and accepted methods necessary to meet the person's needs, or which increases the ordinary risks of daily life, including the recognized risks inherent in a chosen occupation.
Appendix G

Human Studies Council Exemption Form

Human Studies Council Exemption Form

PLEASE TYPE into bracket areas. Use as much space as you need.

PRINCIPAL INVESTIGATOR: ___________________________                      ______________________
                                      Your Name                                      Phone

IF CCSU STUDENT, PLEASE ENTER CCSU STUDENT ID# __________________________

INVESTIGATOR’S MAILING ADDRESS:

________________________________________
Street                                      City          State          Zip

TITLE OF PRINCIPAL INVESTIGATOR: _____________________________________________

E-MAIL: ____________________________

TITLE OF PROJECT: _____________________________________________________________

_____________________________________________________________________________

If this research is for thesis/graduate work or other student project, your supervising professor must sign below indicating approval for submission of proposal to HSC. (If you are submitting this electronically, then your supervising professor should submit a separate e-mail or letter indicating approval of your project).

For students, please indicate (check) which of the following best describes your project:

___ Dissertation
___ Thesis
___ Special Project (graduate level capstone other than thesis or dissertation)
___ Class project: specify CCSU DEPT/CLASS: ____________________________________
___ Other undergraduate research project

Will your research be conducted in a school or other external agency?  ___yes   ___no

If you answered ’yes’ to the question above, you must attach written ”gatekeeper” approval with this application. (For example, if you are conducting a study in a school you must attach written permission from the principal or superintendent of that school or district.)

Who is your supervising professor? ________________________________

What is your professor’s academic department? ____________________________
PROFESSOR’S SIGNATURE INDICATING APPROVAL*  
(*note: professor’s approval means that the supervising professor has reviewed all material to be submitted by the student researcher and has determined that the submission is complete, is consistent with relevant ethical principles and procedures, is free of typographical and other errors, and that the quality of the material is deemed to be suitable for human studies review and distribution to potential participants, as appropriate.)

SPONSORING AGENCY (if applicable): ____________________________________________

PROPOSED PROJECT START DATE: _______________________

A. See the listing of exemption categories attached at the end of this form. In which of these exemption categories do you believe your project falls? ______ (insert the specific number here)

B. Please check Yes or No for each of the following items.

___Yes  ___No  1. My research deals with sensitive topics (i.e., those dealing with behaviors, which, if publicly disclosed, could be damaging to participants or place them at risk of criminal or civil prosecution.

___Yes  ___No  2. My research participants may experience physical, emotional, or mental stress, discomfort or harm as a consequence of their participation (e.g., includes embarrassment, etc).

___Yes  ___No  3. My research will include hospitalized, institutionalized, or mentally retarded persons; prisoners; pregnant women or fetuses; or other members of a vulnerable population).

If you answered “yes” to any of the above questions STOP HERE, your project does not qualify for exempt status; you should apply for an expedited or full review. See www.ccsu.edu/humanstudies/hsc_forms_page.htm to get the HSC form and to get further information (or call 832-2366). Otherwise go on to items 4 and 5.

___Yes  ___No  4. My research participants will include children under the age of 18 years.

___Yes  ___No  5. My research will be conducted in a normal classroom setting and will involve only normal educational practices.

If you answered “yes” to Item 4 and “no” to Item 5 STOP HERE, your project does not qualify for exempt status; you should apply for an expedited or full review. See www.ccsu.edu/humanstudies/hsc_forms_page.htm to get the HSC form and to get further information (or call 832-2366). Otherwise, type a brief answer to each of the following:
1. Describe the nature and purpose of your research. Be sure to describe your methods here (Do not exceed 150 words).

2. Summarize all involvement of humans in this project. (who, how many, age, sex, length of involvement, etc).

3. Describe the procedures you will use to assure participants that their involvement in the project is voluntary and that there is no penalty for not participating. Include verbatim instructions or text, as appropriate.

4. Will the information you collect include identifiers of any kind? Yes____ No____
   *If yes, describe the procedures you will use to inform your participants of this and to ensure the confidentiality of their information.*

5. If applicable, please submit the following attachments:
   a. Copies of each consent form (written and/or verbal text) or letter.
   b. Copies of all questionnaires, surveys, tests and other relevant material used.
   c. Copy of gatekeeper letter.

PRINCIPAL INVESTIGATOR’S SIGNATURE*_______________________________________

* Your signature indicates your belief that this study is exempt from review.

If you are submitting this electronically, check here ___ if you believe your study is exempt from review.

Email completed form (with accompanying surveys, consent forms, gatekeeper letters) to waite@mail.ccsu.edu and to Kaplan@mail.ccsu.edu or submit 2 paper copies to:

Mimi Kaplan, Sponsored Programs, Room 120 Barnard Hall. Phone: 832-2366
Exemption Categories
Research activities in which the only involvement of human participants will be in one or more of the following categories are exempt from review:

(1) Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
   (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

(3) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph (2) of this section, if: (i) the human subjects are elected or appointed public officials or candidates for public office; or (ii) Federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.

(4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

(5) Research and demonstration projects which are conducted by or subject to the approval of Department or Agency heads, and which are designed to study, evaluate, or otherwise examine: (i) Public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs.

(6) Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.

Thanks to CSUSM for the foundations of this exemption form.
APPROVAL CHECK LIST

1. **Administrative**
   ___a. Are the appropriate number of copies submitted?
   ___b. Are copies of each informed consent form submitted?
   ___c. Are copies of each questionnaire and/or example stimuli submitted?

2. **Scientific Aspects**
   ___a. Is the hypothesis stated?
   ___b. Is the research design appropriate?
   ___c. Does the information to be collected provide a means to answer the hypothesis?
   ___d. Is a sample size calculation performed? If not, is it necessary?

3. **Human Subjects Issues**
   ___a. Is the study population defined?
   ___b. Are there any anticipated problems from using this study population? Is it appropriate for the hypothesis to be tested? Are subject recruitment procedures documented? Will the study be advertised? Is subject compensation addressed?
   ___c. Are the risks adequately defined?
   ___d. Are the potential benefits clearly defined to the subjects and to society?
   ___e. Do the benefits outweigh the risks?
   ___f. How are subjects protected from risks?

4. **Consent Form**
   ___a. Is the study title on each page with the investigator's name and contact telephone numbers?
   ___b. Is there a clear description of the study goals, design and implementation?
   ___c. Is there a clear description of potential risks?
   ___d. Is there a clear description of what is expected of the subject such as extra visits, extra tests, and the duration of the subject's participation?
   ___e. Are all of the standard University statements, as stated in the CCSU Human Studies Council policy, included (such as confidentiality, withdrawal, subject rights, and compensation provided)?
   ___f. Is the consent form readable and in clear, easy to understand lay terms? Are there spelling, typographical, or grammatical errors?

---

1"Risk" means any individual who may be exposed to the possibility of injury, including physical, psychological, or social injury, as a consequence of participation as a subject in any research, development, or related activity which departs from the application of those established and accepted methods necessary to meet the person's needs, or which increases the ordinary risks of daily life, including the recognized risks inherent in a chosen occupation.
Appendix H

Application for Project Approval
Form Revised 3/9/03 1:00 p.m.

Central Connecticut State University
Institutional Animal Care and Use Committee
(IACUC)
Chair: Ruth Rollin, 860-832-2659,
rollin@mail.ccsu.edu

PLEASE TYPE:

A. ADMINISTRATIVE DATA:
   Project Director:
   Department:
   Telephone: Emergency: E-Mail:
   Project Title:
   Initial Submission ☐ or Renewal ☐ or Modification ☐ of Project Number
   If a teaching project, what is course number:
   If a research project, what is the funding source: Submission Deadline:
   Proposed Project Start Date: Project End Date:

B. ANIMAL REQUIREMENTS:
   Species: Age/Weight/Size: Sex:
   Stock or Strain:
   Source(s):
   Housing Location(s)(If animals will be housed in lab or anywhere else outside the primary facility for more than 12 hours, provide building and room number): Animal Procedure Location(s):
   Number of Animals:

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<td>Year 1</td>
<td>Year 2</td>
<td>Year 3</td>
<td>TOTAL</td>
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</table>
C. SPECIAL CONCERNS OR REQUIREMENTS OF THE PROJECT: □ Yes □ No   If no, go to Section D.
List any special housing, equipment, animal care (e.g., special caging, water, feed, or waste disposal, environmental enhancement, etc.). Solid-bottom caging, with bedding is recommended for rodents. Housing rodents on wire requires scientific justification. If laboratory personnel are primarily responsible for animal care, provide a copy of the standard operating procedures.

D. TRANSPORTATION: □ Yes □ No   If no, go to Section E.
Transportation of animals must conform to all institutional guidelines/policies and federal regulations. If animals will be transported on public roads or out of state, describe efforts to comply with USDA regulations. If animals will be transported between facilities, describe the methods and containment to be utilized. If animals will be transported within a facility, include the route and elevator(s) to be utilized. Will live animals be returned to animal facilities?

E. PROJECT OBJECTIVES:
1. Briefly describe in non-technical terms the aim of the project and how the project may benefit human or animal health or advance scientific understanding of biological processes or educational objectives. (What do you expect it to achieve? Why is the project important?)

2. Only If Renewal. Briefly explain why more work needs to be done.

F. RATIONALE FOR ANIMAL USE:
1. Explain your rationale for animal use. (The rationale should include reasons why non-animal models cannot be used.)

2. Justify the appropriateness of the species selected.

3. Justify the number of animals to be used. (Describe how the number of animals to be used was determined, and why that number is necessary to achieve the goals of this project. If possible, summarize this information in a table giving 1) the number of different experiments, 2) the number of groups per experiment, and 3) the number of animals per group. Whenever possible, justify the number of animals statistically.)

G. DESCRIPTION OF EXPERIMENTAL DESIGN AND ANIMAL PROCEDURES:
Briefly explain the experimental design and specify all animal procedures. This description should allow the IACUC to understand the experimental course of an animal from its entry into the experiment to the endpoint of the project. Specifically address the following:
• Animal Identification Methods (e.g., ear tags, tattoos, collar, leg band, cage card, implant, etc.)

• Injections or Inoculations (substances, e.g., infectious agents, adjuvants, etc.; dose, sites, volume, route, and schedules). □ Yes □ No

• Blood Withdrawals (volume, frequency, withdrawal sites, and methodology). □ Yes □ No

• Non-Survival Surgical Procedures (Provide details of survival surgical procedures in Section I)
  □ Yes □ No

• Radiation (dosage and schedule) □ Yes □ No

• Methods of Restraint (e.g., restraint chairs, collars, vests, harnesses, slings, etc.) □ Yes □ No

• Resultant Effects, if any, the animals are expected to experience (e.g., pain or distress, ascites production, etc.) □ Yes □ No

• Other potential stressors (e.g., food or water deprivation, noxious stimuli, environmental stress) and procedures to monitor and minimize distress. If a project is Category D, indicate any non-pharmaceutical methods to minimize pain and distress. □ Yes □ No

• Other Procedures (e.g., behavioral studies, tail biopsies, etc.) □ Yes □ No

• Experimental Endpoint Criteria (e.g., tumor size, percentage body weight gain or loss, inability to eat or drink, behavioral abnormalities, clinical symptomatology, or signs of toxicity) must be specified when the administration of tumor cells, biologics, infectious agents, radiation or toxic chemicals are expected to cause significant symptomatology or are potentially lethal. List the criteria to be used to determine when euthanasia is to be performed. Death as an endpoint must always be scientifically justified. □ Yes □ No

H. RECORDS:
Records should include animal or group identification, type of procedure (blood collection (amount, method), kind of surgery, euthanasia (method), administration of drugs (name, dose, route), etc.), initials of personnel, date, and observations relating to animal health and welfare. Describe your records or attach a copy for the IACUC to review:

I. SURVIVAL SURGERY: □ Yes □ No If no, go to Section J.

Minor Surgery (cut-downs, needle aspirations, tail biopsies) Specify.

Major Surgery (entering a body cavity or producing substantial impairment of physical or physiologic functions (such as laparotomy, thoracotomy, craniotomy, joint replacement, or limb amputation). Specify.
1. Identify and describe the surgical procedure(s) to be performed. Include preoperative procedures (e.g., fasting, analgesic loading), and anesthetic monitoring (e.g., corneal and pedal reflexes, heart and respiratory rates, etc.), and supportive care (ophthalmic ointment, methods to prevent dehydration and hypothermia, etc.) during surgery. Include the aseptic methods (e.g., animal and human preparations, sterile instruments and field, etc.) to be utilized.

2. Who will perform surgery and what are their qualifications and/or experience?

3. Where will surgery be performed (Building and Room)?

4. Are paralytic agents used during surgery? If yes, please describe how ventilation will be maintained and how pain will be assessed.

5. If survival surgery, describe post-operative care required, including location, frequency of observation, consideration of the use of post-operative analgesics, and identify the responsible individual(s), and duration of survival after surgery. What impairment can be expected from the surgery and describe any post-operative complications that may develop and your plans to handle them.

6. Has major survival surgery been performed on any animal prior to being placed on this project? □ Yes □ No
   If yes, please explain:

7. Will more than one major survival surgery be performed on an animal while on this project? □ Yes □ No
   If yes, please justify:

J. PAIN OR DISTRESS CATEGORY AND CONSIDERATION OF ALTERNATIVES

1. Pain or Distress Categories

<table>
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<tr>
<th>Species (common name)</th>
<th>Category* A, B, C or D</th>
<th>Number of animals used each year</th>
<th>3-year total number of animals</th>
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Total number of animals (should equal total from Section B):
* Categories and Examples

**Category A:** Animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery, but not yet used for such purposes.

**Examples:**
- Breeding colonies of any animal species. Breeding colony includes parents and offspring.
- Newly acquired animals that are held in proper caging and handled in accordance with applicable regulations.
- Animals held under proper captive conditions or wild animals that are being observed.

**Category B:** Animals upon which teaching, research, experiments, or tests will be conducted involving no pain, distress, or use of pain-relieving drugs.

**Examples:**
- Procedures performed correctly by trained personnel such as the administration of electrolytes/fluids, administration of oral medication, blood collection from a common peripheral vein per standard veterinary practice or catheterization of same, standard radiography, parenteral injections of non-irritating substances, restrictions of food/water intake for less than equivalent to periods of abstinence in nature.
- Euthanasia performed in accordance with the recommendations of the most recent AVMA Panel on Euthanasia, utilizing procedures that produce rapid unconsciousness and subsequent humane death.
- Manual restraint that is no longer than would be required for a simple exam; less than 12 hours of physical restraint for an adapted animal.

**Category C:** Animals upon which experiments, teaching, research, surgery, or tests will be conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs will be used.

**Examples:**
- Surgical procedures conducted by trained personnel in accordance with standard veterinary practice such as biopsies, gonadectomy, exposure of blood vessels, chronic catheter implantation, laparotomy or laparoscopy.
- Blood collection by more invasive routes such as intracardiac or peri-orbital collection from species without a true orbital sinus such as rats and guinea pigs.
- Administration of drugs, chemicals, toxins, or organisms that would be expected to produce pain or distress but which will be alleviated by analgesics.

**Category D:** Animals upon which teaching, experiments, research, surgery, or tests will be conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs will adversely affect the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests.

**Examples:**
- Procedures producing pain or distress unrelieved by analgesics such as toxicity studies, microbial virulence testing, radiation sickness, and research on stress, shock, or pain.
- Surgical and postsurgical sequella from invasion of body cavities, orthopedic procedures, dentistry or other hard or soft tissue damage that produces unrelieved pain or distress.
- Negative conditioning via electric shocks that would cause pain in humans.
- Physical restraint of animals not conditioned to the procedure for the time period used or in excess of 12 hours.

**Note Regarding Category D:** An explanation of the procedures producing pain or distress in these animals and the justification for not using anesthetic, analgesic or tranquilizing drugs must be provided below. For USDA (Animal Welfare Act) AWA-covered animals, this information is required to be reported to the USDA, will be available from USDA under the Freedom of Information Act.
1. Consideration of Alternatives

The project director must provide a written assurance that the activities do not unnecessarily duplicate research projects/courses and that there are no alternatives (such as less sentient animal species, computer models, tissue culture, etc.) to the use of live animals. This narrative should include adequate information for the IACUC to assess that a reasonable and good faith effort was made to determine the availability of alternatives or alternative methods. If the database search or other source identifies a bonafide alternative method (one that could be used to accomplish the goals of the animal use proposal), the written narrative should justify why this alternative was not used.

If any procedures fall into Categories C or D, causing more than momentary or slight pain or distress to the animals, 1) describe your consideration of alternatives and your determination that alternatives are not available and 2) involve the Attending Veterinarian in planning. ☐ Yes ☐ No

Alternatives include methods that (1) refine existing tests by minimizing animal distress, (2) reduce the number of animals necessary for an experiment, or (3) replace whole-animal use with in vitro or other tests. Note that you must certify in Section R.5. that no valid alternative was identified to any described procedures which may cause more than momentary pain or distress, whether relieved or not. Delineate the methods and sources used in the search. Database references must include databases (2 or more) searched, the date of the search, period covered, and the keywords used.

☐ Medline ☐ Agricola ☐ Biosis ☐ Embase ☐ AWIC ☐ CAB Abstracts
☐ CAB Vet & Medica ☐ Index Medicus ☐ Federal Research in Progress
☐ NML ☐ Science Citation Index ☐ Current Contents
☐ National Agricultural Library ☐ PubMed
☐ Periodicals: (names of periodicals or journals read on a regular basis)
☐ Meetings or conferences: (names and dates of meetings attended)
☐ Consultation with colleagues (names and credentials of colleagues (i.e., M.D., Ph.D.), dates of consultations and nature of discussions)
☐ Other. Specify.

K. ANESTHESIA, ANALGESIA, TRANQUILIZATION PROJECT: ☐ Yes ☐ No If no, go to Section L.

For animals indicated in Section J, Category C, specify the anesthetics, analgesics, sedatives or tranquilizers that are to be used. Include the name of the agent(s), the dosage, route and frequency of administration. Describe tracking and security of controlled drugs (Drug Enforcement Agency requirements).

L. METHOD OF EUTHANASIA OR DISPOSITION OF ANIMALS AT END OF PROJECT

What will happen to the animals at the conclusion of the experiment or demonstration? Techniques for euthanasia must follow the guidelines established by the latest report by the AVMA Panel on Euthanasia. Deviations must be justified for scientific reasons and approved by the IACUC. If euthanasia will be used, provide details: the proposed method, and if a chemical agent is used, specify the dosage and route of administration. Indicate the method of carcass disposal if not described in Section M. below.

☐ Anesthetic injection overdose (state drug/dose per body weight/route of administration of drug).
☐ Exsanguination under anesthesia (state name/dose (per body weight)/route of administration of drug).
☐ Inhalation of carbon dioxide from a compressed gas cylinder.
Cervical dislocation.
Decapitation.
Other. (Describe.)

Note: In some animals exposed to gas, heartbeat can be maintained after visible respiration has ceased, and the animal might eventually recover. A thoracotomy or other physical method is recommended to assure death of animals after gas exposure. At minimum, check for both respiratory and cardiac arrest prior to discarding the carcass. Describe how death is verified.

M. HAZARDOUS AGENTS IN ANIMALS □ Yes □ No  If no, go to Section N.

Use of hazardous agents requires the approval of the institutional biosafety specialist. Registration Documents for the use of recombinant DNA or potential human pathogens may be attached at the discretion of the IACUC.

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<th>YES</th>
<th>NO</th>
<th>List Agents &amp; Registration Document # (if applicable)</th>
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<tr>
<td>Radionuclides</td>
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<td>Biological Agents</td>
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<td>Recombinant DNA</td>
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Project conducted at Animal Biosafety Level:

Describe the practices and procedures required for the safe handling and disposal of contaminated animals and material associated with this project. Also describe methods for removal of radioactive waste and, if applicable, the monitoring of radioactivity.

Additional safety considerations:

N. BIOLOGICAL MATERIAL/ANIMAL PRODUCTS FOR USE IN ANIMALS (e.g., cell lines, antiserum, etc.):
□ Yes □ No  If no, go to Section O.

1. Specify Material

2. Source Material Sterile or Attenuated □ Yes □ No

3. If derived from rodents, has the material been MAP/RAP/HAP tested?
□ Yes (Attach copy of results) □ No

4. I certify that the MAP/RAP/HAP tested materials to be used have not been passed through rodent species outside of the animal facility in question and/or the material is derived from the original MAP tested sample. To the best of my knowledge the material remains uncontaminated with rodent pathogens.
   Initials of Project Director.
O. TRANSGENIC AND KNOCKOUT ANIMALS: ☐ Yes ☐ No  If no, go to Section P.
Describe any phenotypic consequences of the genetic manipulations to the animals. Describe any special care or
monitoring that the animals will require.

P. FIELD STUDIES AND WILD CAUGHT ANIMALS: ☐ Yes ☐ No  If no, go to Section Q.
If animals in the wild will be used, describe how they will be observed, any interactions with the animals, whether the
animals will be disturbed or affected, and any special procedures anticipated. Indicate if Federal and/or state permits
are required and whether they have been obtained.

Q. PERSONNEL:
List the name(s), title(s) and qualifications for each research person working with animals. Who will perform the
procedures. Please include the number of years of experience working with the species listed in Section B. If the
person needs to be trained, please indicate who will do the training.

<table>
<thead>
<tr>
<th>Last Name</th>
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<th>Title</th>
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All live animal work conducted under teaching/classroom projects must be supervised at all times by University faculty or staff listed above. It is the Project Director’s responsibility to assure that all participants are properly trained in animal handling and the procedures conducted as part of this project. Keep a list of all such participants with the protocol.

R. PROJECT DIRECTOR CERTIFICATIONS:

1. I certify that all personnel, including myself in this project will attend the IACUC training course.
2. I certify that I have determined that the research proposed herein is not unnecessarily duplicative of previously reported research.
3. I certify that all individuals working on this project who are at risk are participating in the CCSU’s Occupational
Health and Safety Program.

4. I certify that the individuals listed in Section Q. are authorized to conduct procedures involving animals under this project, have attended the institutionally required investigator training course, and received training in: the biology, handling, and care of this species; aseptic surgical methods and techniques (if necessary); the concept, availability, and use of research or testing methods that limit the use of animals or minimize distress; the proper use of anesthetics, analgesics, and tranquilizers (if necessary); and procedures for reporting animal welfare concerns.

5. For all Category C and Category D projects (see Section J): I certify that I have reviewed the pertinent scientific literature and the sources and/or databases (2 or more) as noted in Section J.2, and have found no valid alternative to any procedures described herein which may cause more than momentary pain or distress, whether it is relieved or not.

6. I certify that I will obtain approval from the IACUC before initiating any significant changes in this project.

7. I certify that I will notify the IACUC regarding any unexpected project results that impact the animals. Any unanticipated pain or distress, morbidity or mortality will be reported to the attending veterinarian and the IACUC.

8. I certify that copies of the approved protocol will be made available to all laboratory personnel.

9. I certify that I shall on a monthly basis, monitor drugs used in my laboratory and shall insure that outdated drugs are promptly discarded.

10. I certify that I shall maintain complete, up-to-date, and accessible records of procedures for the animals used in this project.

11. I will comply with the procedures described in the Guide for the Care and Use of Laboratory Animals (National Academy of Sciences, 1996), with PHS Policy, the Animal Welfare Act, and applicable University policies.

Project Director: Signature __________________________ Date __________

S. CONCURRENCES: PROJECT NUMBER:
For all projects housing animals:

Animal Facility Supervisor certification of resource capability in the indicated facility to support the proposed project.

Facility ______ Name __________________________ Signature __________________________ Date _______

COMMENTS:

For all Category C and Category D projects (see Section J):

Attending Veterinarian certification of review and concurrence.

Name __________________________ Signature __________________________ Date _______

COMMENTS:
For all projects using hazardous agents (see Section M):

**Safety Representative** certification of review and concurrence.

Name __________________________ Signature __________________________ Date _________

COMMENTS:

______________________________

T. **FINAL APPROVAL:**
Certification of review and approval by the CCSU IACUC Chairperson.

IACUC Chairperson __________________________ Signature __________________________ Date
Appendix I

Approval of Thesis Proposal

CENTRAL CONNECTICUT STATE UNIVERSITY
New Britain, Connecticut

TO: Assoc. V. P. Academic Affairs/
    Dean, School of Graduate Studies

FROM: Primary Thesis Advisor: ________________________________

SUBJECT: Approval of Thesis Proposal

Attached you will find a copy of the approved thesis proposal prepared by:

Name of Student ____________________ Degree Program ________________

Title of Approved Thesis Proposal: ____________________________________

____________________________________________________________________

If human or animal subjects are involved, your approval letter from the HSC _____or IACUC__________
should be attached.

Signed: ___________________________ Printed: ___________________________
(Primary Thesis Advisor) (Primary Thesis Advisor)

______________________________ ______________________________
(Committee Member) (Committee Member)

______________________________ ______________________________
(Committee Member) (Committee Member)

______________________________ ______________________________
(Committee Member) (Committee Member)

Date approved by Advisor and Committee Member(s)____________________

Accepted by: ______________________
Assoc. V.P. for Academic Affairs/Dean, School of Graduate Studies Date
Appendix J

Approval of Thesis

CENTRAL CONNECTICUT STATE UNIVERSITY
New Britain, Connecticut

TO: Assoc. V. P. for Academic Affairs/
    Dean, School of Graduate Studies

FROM: ____________________________________________
       Primary Thesis Advisor
       Program

SUBJECT: Approval of Thesis

Attached you will find an original and a copy of the approved thesis, five (5) copies of the abstract, and a
digitized version prepared by:

__________________________________________
       Name of Student

__________________________________________
       Degree Program

Title of Approved Thesis: ____________________________

__________________________________________

If human or animal subjects were involved, have you included HSC or IACUC Approval in the
Appendix of Thesis______________________________.

Date Approved: ____________________________

Signed: _____________________________________
       (Primary Thesis Advisor)

Printed: _____________________________________
       (Primary Thesis Advisor)

__________________________________________
       (Committee Member)

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       (Committee Member)

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       (Committee Member)

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       (Committee Member)

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       (Committee Member)

Accepted by: ________________________________
             Assoc. V. P. for Academic Affairs/Dean, School of Graduate Studies
             (Date)
Appendix K

Sample Thesis Cover Page

Non-governmental Organization (NGOs) and Tourism:
A Partnership for Poverty Reduction in Developing Countries

Kathleen M. Kennedy

A Thesis
Submitted in Partial Fulfillment of the
Requirements for the Degree of
Master of Science in Geography
Department of Geography

Central Connecticut State University
New Britain, Connecticut

March 2008
Thesis Advisor:
Dr. D’Arcy Dornan
Department of Geography
Appendix L

Sample Abstract Cover Page

Multivariate Normal Finite Mixture Clustering – An Approach to Distributive Computing and Overcoming Local Optimum Solutions Using Stratified Datasets

Eric W. Taylor

An Abstract of a Thesis
Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Science in Data Mining
Department of Mathematical Sciences Central Connecticut State University New Britain, Connecticut

April 2005
Thesis Advisor
Dr. Daniel Larose

Department of Mathematical Sciences

Key Words: Multivariate Normal, Finite Mixture Models, Bayes’ Theorem
Appendix M

Sample Abstract

The following sample abstract is taken from:  Phoenix, Kathryn (2008).

The Role of Activation of AMP-dependent Kinase (AMPK) in Endothelial Cell Proliferation

AMP-dependent kinase (AMPK) is a primary energy sensor that controls energy use and production during metabolic cellular stress, such as hypoxia and nutrient deprivation. AMPK activation results in inhibition of anabolic processes and promotion of catabolic processes. AMPK has also been shown to be a target of metformin, a first line therapy for type 2 diabetes. Treatment with metformin has been shown to potently decrease cell proliferation. Preliminary studies revealed that metformin promoted angiogenesis and vascular stability in an in vivo breast tumor model. Importantly, clinical studies have revealed that type 2 diabetic patients treated with metformin experienced improved vascular function when compared to those on other treatments. The major aim of this study was to evaluate the in vitro effects of metformin on endothelial cell proliferation as a possible mechanism for increased cell survival and angiogenesis. Human umbilical vein endothelial cells were treated with metformin and evaluated for cell proliferation, viability and kinase activation. Metformin treatment resulted in decreased cell numbers without affecting viability. AMPK activity was increased with metformin treatment. Interestingly, mitogen activated protein kinase (MAPK), a kinase involved in proliferation control, was increased with metformin treatment despite the significant reduction in cell numbers. Additionally, AMPK activation has been shown to promote the expression of a major angiogenic cytokine vascular endothelial growth factor (VEGF) VEGF expression was
increased in response to metformin treatment. Since endothelial cells express VEGF receptors, the promotion of mitogenic signaling possibly resulted from autocrine signaling with increased VEGF expression. Stimulation of this pathway promotes angiogenesis. This study demonstrates that while metformin decreases proliferation of endothelial cells, it is not through the repression of the MAPK pathway. The combination of these events could lead to the improved angiogenesis seen in vivo with metformin treatment and result in improved vascular stability and function patients with diabetes.
Appendix N

Sample Biographical Statement

Mr. João C. Aleixo is Vice President of the Latin America region for World Business Capital, Inc., a Hartford based commercial finance company specializing in providing financing to companies in emerging markets around the world. Prior to completing his Master’s Degree in International Studies at Central Connecticut State University, he earned a B.S. in Air Transportation Management at the University of New Haven. Mr. Aleixo is married with two children and makes his home in West Hartford, CT.
Appendix O
Elihu Burritt Library Thesis Reproduction Approval Form

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Last     First     Middle     Year of Birth*

Document Type: _____ Master’s Thesis     _____ Dissertation

Document Title: ____________________________________________

_________________________________________________________________

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Student Signature                     Date

Thesis advisor’s signature is required for posting to the digital library and for having the thesis available through Interlibrary Loan.

Thesis Advisor Signature             Date

Dean, School of Graduate Studies               Date

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