MEMORANDUM

From: Enter all students: Rank First MI Last
Section(s): Enter section for students in order listed above, e.g. 326-163

To: Program Officer, Information Sciences Department

Via: (1) Thesis Advisor: Enter title and name
     (2) Choose Co-Advisor or Second Reader: Enter title and name
     (3) Track Academic Associate, Choose Track AA
     (4) Track Director, Choose Track Director
     (5) Chair, Choose Department Chair

Subj: Choose THESIS or CAPSTONE PROPOSAL

Encl: (1) Choose Thesis or Capstone Proposal
     (2) Institutional Review Board (IRB) Student Research Checklist

1. Tentative Title of Proposed Thesis:
2. General Area of Proposed Thesis Research:
3. Enclosure (1) is the Thesis Proposal with a milestone plan (dates/events) for research and thesis completion.
5. I reviewed the Institutional Review Board (IRB) web page concerning the use of humans in research (http://www.nps.edu/research/IRB.html). Enclosure (2) is the completed IRB Student Research Checklist. This research Select One involve Human Subject Research.
6. I anticipate the following travel or other extraordinary requirements: Enter any requirements or "None"

_________________________________________  ________________________________
Student Signature                          Second Student Signature <if joint thesis>

DO NOT SIGN. You will be notified to sign the student’s Thesis Proposal Form (TPF) in Python 2.

1. Forwarded, recommending approval:_________________________ Date
   Thesis Advisor

2. Forwarded, recommending approval:_________________________ Date
   Co-Advisor or Second Reader (Circle one)

3. Forwarded, recommending approval:_________________________ Date
   Track Academic Associate

4. Forwarded, recommending approval:_________________________ Date
   Track Director
5. Forwarded, recommending approval:______________________________ Date
    Department Chair

6. Approved, and retained:______________________________ Date
    Program Officer
Choose Degree  Choose Thesis or Capstone Proposal

A. General Information

1. Name: Enter all students: Rank First MI Last
2. Email: Ordered for all students above: NPS Email if have; else official; else primary
3. Curriculum: Cyber Systems and Operations (326)
4. Thesis Advisor: Enter title and name
5. Co-Advisor or 2nd Reader: Enter title and name
6. Track Academic Associate, , Choose Track AA
7. Track Director, Choose Track Director
8. Chair, Choose Department Chair
9. Date of Graduation:

B. Problem Description

<Provide a clear and concise statement of the problem the thesis or capstone is intended to solve. Identify the proposed area of research in brief terms and state the proposed title of the thesis or capstone. The exact title can be changed as the research and writing progress. A more detailed discussion is required in D below.>

C. Research Questions

<Identify the primary research question and subsidiary research questions. The primary research question should be broad enough that it covers the entire spectrum of the research activity. Subsidiary research questions subdivide the primary research question into manageable research segments. This should be a very explicit statement of the questions the research will seek to answer. While the questions may be redefined later as the research progresses, the initial objectives should be made very specific.>

D. Discussion

<Discuss briefly the background leading up to this study, the major issues and concepts involved, the key problems related to this area, policy and operational considerations and implications, and the theoretical framework within which the study will be conducted.>

E. Benefits of Study

<State the contribution expected from your research efforts, what individuals/organizations will use the results of your thesis and what problems/issues you feel will be addressed/resolved. This section MUST include a discussion of the specific benefits to the Navy, DoD or sponsoring agency>
F. Individual Contributions

<For capstone projects and joint thesis, provide a description of the role of each student in the project. This section must clearly delineate what each team-member will be responsible for and how each contribution fits into the larger project. For individual theses, this paragraph may be deleted.>

G. Scope of the Thesis or Capstone

<Describe the main thrust of the study, what areas will be specifically investigated and what areas will be excluded. Put boundaries around the study. Identify what the study will be (e.g., a case study, implementation guide, development of a model, assessment of a model, policy or management guide). Discuss any limitations of the study.>

H. Methodology

<This section should explain the conceptual foundation or framework within which the questions will be examined and the specific research techniques that will be used to answer the questions. In other words, the study should be conducted within the context of some recognized and valid model of problem solving and should use appropriate methods of collecting and analyzing data relevant to the problem. For example, if the problem were to determine the optimal replacement cycle for lights on navigational buoys, the conceptual foundation (model) might be the present value of life cycle cost. The research method might then include collection of actual data on the amounts of all relevant costs, statistical analysis to determine the expected value of such costs, and discounting to determine the lowest present value of all alternative life cycle cost patterns. Describe the general kinds of information to be used, the sources from which the data will be collected, and the methodology to be used in collecting the data. Be specific in identifying the method(s) of research (e.g., questionnaires, interviews, etc.) why the method(s) selected are appropriate, and what types of individuals/organizations will be approached. Discuss how any limitations identified in Part E above will affect your methodology or data sources. Briefly list the kinds of questions you intend to include in your questionnaire or you expect to use during interviews.>

I. Chapter Outline

<Identify the tentative chapter headings and provide brief discussion of chapter content.>

J. Schedule

<This is a tentative list of target dates for completion of the successive states of the project. You will not be held strictly to this schedule; it is a means of conveying to others when you expect to complete major milestones of the study. It is important to recognize that the various stages of the work must be done in a logical sequence and that these various stages require different amounts of time. (Note that this section of the proposal fulfills the requirements that a schedule be>
attached to Thesis Report No. 1.) Give the dates during which the various stages will be accomplished. Your stages may differ from the sample below.

K. Data Management

-State how the results of this thesis or capstone will be managed upon completion (e.g., publication, report generation, software archiving, etc.>

<table>
<thead>
<tr>
<th>Thesis Stage</th>
<th>Completion Target Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature review</td>
<td></td>
</tr>
<tr>
<td>Draft thesis, Cover through Chapter 2, and initial list of references &lt;to advisor(s) to check background knowledge and problem statement, and to approve proposed plan to conduct research&gt;</td>
<td></td>
</tr>
<tr>
<td>Draft thesis checked by thesis processor for format</td>
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<tr>
<td>Construct research design</td>
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<tr>
<td>Conduct research and any associated travel</td>
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<tr>
<td>Analyze data:</td>
<td></td>
</tr>
<tr>
<td>Draft thesis to advisor(s):</td>
<td></td>
</tr>
<tr>
<td>Final thesis submission for signatures:</td>
<td></td>
</tr>
</tbody>
</table>

-The list of activities/milestones above may be modified as required; however, enough fidelity must exist to give the reviewers a good idea of how you plan to complete your thesis.>

L. Anticipated Travel/Funding Requirements

-List the locations to which you must travel to conduct your research, anticipated length of stay and approximate amount required for travel, per diem and miscellaneous expenses. Be realistic in identifying your needs and do so as early as possible. Your advisor and Curricular Officer can assist in finding sources of funds.>

M. Preliminary Bibliography

- Provide a listing of representative materials consulted during preliminary literature search. This should include references to the problem or issue to be studied, the organizations or other context in which it arises, and the research method(s) to be used. It should include any prior studies of a similar nature. A minimum of three references is required. A Thesis/Dissertation can be one of the three; the other two must then be non-thesis/non-dissertation references. The final bibliography will probably be much more extensive.