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OFFICE OF THE ACADEMIC DEAN AND PROVOST
UNITED STATES NAVAL ACADEMY
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ACDEANINST 1531.79B
2/ADP
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ACADEMIC DEAN AND PROVOST INSTRUCTION 1531.79B

From: Academic Dean and Provost

Subj: MIDSHIPMAN RESEARCH COURSES

Ref: (a) ACDEANINST 1531.68C
(b) ACDEANINST 1531.50B
(c) ACDEANINST 1531.59B

Encl: (1) Research Proposal Template

1. Purpose. To establish procedures for midshipman research courses.
2. Cancellation. USNAINST 1531.79A.
3. Background.
 - a. The opportunity to engage in research under the guidance of a faculty member can enrich the educational experience of a midshipman, while providing the student an opportunity to study independently in an area of special interest and to make an original intellectual or creative contribution to the discipline. In a research course, a midshipman often seeks to investigate that which is new or unexplored, or to examine previously reported research results within a new context or via a new approach. Research by midshipmen contributes significantly to the Naval Academy's goal of promoting habits of lifelong learning among its graduates.
 - b. This instruction provides guidance and direction to midshipmen interested in enrolling in research courses at the Naval Academy. A more extensive research opportunity exists for selected midshipmen under the Trident Scholar Program described in reference (a).
4. Course Designators and Credits.
 - a. Research courses shall normally be three credits, designated as XX495 (fall) and XX496 (spring). Typically, for Science, Technology, Engineering, and Mathematics STEM-based research courses, this equates to 0-6-3 for the recitation-lab-credits distribution. For Humanities and Social Sciences (HUM/SS) research courses, the 3-0-3 distribution (recitation-lab-credits) may be more appropriate with additional out-of-class time devoted to reading, writing, and reflection. Normally, no research

course shall carry fewer than three credits and no midshipman shall be permitted to carry more than one research project course in a semester. The course designators XX495 and XX496 shall be reserved for research courses, and not used for seminar, reading, or capstone courses. Some departments may offer research courses for their honors majors with slightly different number designations (i.e., SO506 is independent research for honors oceanography majors).

- b. Research courses may be offered by any department.
 - c. One or two credit research preparation courses (previously designated as XX491 through XX494) may be offered as upper-level seminar or special topics courses, using the appropriate XX48# designator. Additional information about these courses is available in reference (b).
 - d. Research courses for greater than 3 credits require department chair and Associate Dean for Academic Affairs (ADAA) approvals. These courses cannot be used to reach the 15 credit minimum requirement, and would only be considered in special cases. Course designators include XX497 (4 credits, fall), and XX498 (4 credits, spring).
 - e. Trident Scholar research courses follow different policies as defined in reference (a).
5. Eligibility.
- a. Since research courses in any discipline are expected to be at an advanced level (hence the course number of 495 or 496), they will normally be restricted to 1/C and 2/C midshipmen who have had more than an introductory course in the subject area being studied. With the approval of the ADAA, 3/C midshipmen with extraordinary academic preparation resulting from significant validation or overloading may enroll in a research course.
 - b. Additional eligibility requirements or limits on the number of research courses that may be counted for a midshipman will be specified by the midshipman research course policy statement of the department concerned. Departmental midshipman research course policy statements must be approved by the Academic Dean and Provost prior to implementation and on file at the USNA Research Office. Changes to research course policies must be reported to the Associate Director of Midshipman Research (ADMR).
6. Completion of Matrix Requirements.
Research courses may be used to satisfy the requirements of an academic major or to meet the requirements of a free elective in the core curriculum. Departments with majors programs may determine how these courses will count to satisfy the requirements of their majors.
7. Actions Required.

a. Midshipmen:

(1) Proposal and Registration. Midshipmen must register for research courses during the announced registration period within the semester preceding that in which the research course is to take place. A midshipman intending to register in such a course must consult with a prospective faculty mentor to plan the research project. Once the specifics of the project have been determined and the faculty mentor(s) identified, the midshipman must develop and submit to the chair of the sponsoring department a research proposal that describes the planned project. The format for the research proposal is described in Enclosure (1); use of this form is suggested unless directed otherwise by your department. All research proposals are due to the chair according to the deadline (typically before Registration starts) and format defined by the departmental research course policy statement. If a student is enrolling in a subsequent semester of research and continuing his/her project, a new research proposal is not required unless the project has changed. The rules for dropping or adding a research course are the same as for other courses. These can be found in reference (c).

(2) Project Requirements:

(a) Written Reports. Each midshipman enrolled in a research course must produce a final, well-written report describing the project goals, methodologies and outcomes. An electronic copy of the final report (in pdf format) is due to the department chair (or departmental research coordinator) prior to the first day of final exams. The format, style and content requirements for the final report will be set by each department in its midshipman research course policy statement, and these requirements must be promulgated, in writing or as a web posting, to the midshipman at the start of the research project. The midshipman's report should include an abstract, introduction or background for the project, statement of the goals of the project, description of the methodology employed in the research effort, analysis of the work accomplished and the results obtained, and a conclusion. This report must be endorsed by the faculty mentor prior to submission to the department chair.

(b) Oral Summaries. Each student enrolled in a research course must present an oral summary or presentation of his or her research at the end of the semester in which the project was undertaken. Effective communication of research results is an important aspect of research. These presentations shall be open to all faculty, staff, and midshipmen, as well as to invited guests from outside of the Naval Academy. It is suggested that the presentation be in the form of a poster presentation or slideshow presentation followed by a question-and-answer period. Requirements concerning the format, style and content of the presentation will be set by each department in its midshipman research course policy statement, and these requirements must be promulgated, in writing or as a web posting, to all interested parties at the start of each semester. When participating in the Yard-wide Poster Session or Capstone Day, midshipmen must adhere to the specified

printing and administrative deadlines. The Registrar is available to assist in scheduling poster presentations during the first day of the final examination period, if the use of that time is desired. The chair of the sponsoring department will advise research students and their faculty mentors of the scheduled times for their presentations.

(c) Quad Charts (optional). Quad charts are one page summaries of research work meant to convey information efficiently. It is commonly used in engineering disciplines or for program evaluations. If your department requires quad charts, submit these by their stated deadlines.

b. Faculty Mentors:

(1) Faculty members are urged to support midshipman research by encouraging qualified students to enroll in such courses, by suggesting appropriate projects, and by serving as project advisers. Mentoring midshipmen in directed study or research supports the academic mission of the Naval Academy and the administration views these teaching efforts very favorably.

(2) Faculty mentors are expected to serve as expert academic guides, critics, editors, and role models for their research students. From the initial stage of proposal preparation through the completion of the research and the submission and delivery of a well-written final report and presentation, advisers are expected to actively nurture their research students and foster their development as independent scholars. It is very strongly recommended that faculty research mentors have regular weekly (or biweekly) contact with their research students. Faculty research mentors must also ensure that their midshipman research advisees comply with all Naval Academy and departmental administrative and safety requirements pertaining to their research projects. Midshipmen who work in laboratories must have proper safety training prior to working in this environment. Research involving human subjects must have Human Research Protection Program (HRPP) approval prior to conducting the research.

(3) Faculty members who agree to mentor a midshipman in a research project course will endorse the midshipman's research proposal to the chair of the sponsoring department.

(4) Grades for a research course will be determined and submitted via the Midshipmen Information System (MIDS) by the midshipman's faculty mentor(s). The semester timeline for grade submission will follow the same schedule that applies to all other courses. Faculty research mentors are encouraged to consider the assessments of other faculty members as they assign interim and semester grades in these courses.

c. Departments and Department Chairs:

(1) Departments will formulate their own research course policy statements for the administration of midshipman research courses. The department chairs must then forward the proposed policy statements to the Associate Director of Midshipman Research (ADMR) for Academic Dean and Provost approval. These policies must address (a) eligibility requirements; (b) formats and deadlines for the proposal, final report, and end-of-semester presentation; (c) the maximum number of research courses that may be allowed to satisfy requirements in the department's academic program (major or minor); (d) determination of grades; and (e) midshipman requests for material, financial, and/or labor support necessary for the research project. In addition, the proposed policy statement must define a departmental process for the evaluation of a midshipman's research proposal, and a departmental process for the evaluation of final reports and presentations.

(2) Following the research course policy statements formulated by each department and approved by the Academic Dean and Provost, departments will approve or disapprove applications for research by midshipmen. In a timely fashion, department chairs will inform midshipmen and their faculty mentor(s) if the research project proposal has been approved or not prior to the registration period. Departmental resources, feasibility of the project, faculty workload, and other considerations may factor into these decisions.

(3) The department chair (or the departmental scheduling officer) will work with the Registrar's Office, if necessary, to develop schedules and sections for research students.

(4) The department chair (or departmental research coordinator) shall forward the electronic research report files to the ADMR prior to the end of final exams.

(5) To aid in coordination of midshipman research courses, each department should assign a midshipman research coordinator or midshipman research liaison to communicate with the ADMR on issues involving midshipman research courses (research requirements, poster session dates, funding inquiries, collection of reports, etc.).

d. **Naval Academy Research Office.**

The Naval Academy Research Office will maintain a public web page of "Midshipman Research" information, including highlights of student research and dates of Yard-wide poster sessions.

8. **Involvement of External Research Scientists and Sponsors.**

Only Naval Academy faculty may serve as a midshipman's project mentor. However, the involvement of other scholars as project consultants or collaborators is encouraged and welcomed.

9. **Funding Issues.**

Each proposal must be accompanied by a budget, which is included as part of Enclosure (1). If funds are required from departmental resources, the budget must be routed through the department chair and appropriate financial officers. If the proposal requests expenditure of reimbursable funds (such as Office of Naval Research funds), the budget must be routed through the Research Office. Note that all funds are subject to availability and projects should not be dependent solely on external funding. All research reports and presentations should acknowledge the funding sources used to support the projects.



A. T. Phillips

Distribution:
All Non-Mids (electronically)

4. The project ***does/does not (*delete as appropriate)** involve human subject research. If your research involves human subject research, the project must be approved by the Human Research Protection Program (HRPP) before any research is conducted. More information can be found at www.usna.edu/HRPP/.

5. The project ***is/is not (*delete as appropriate)** executable using available facilities and under current Midshipman regulations.

6. Estimate of Costs:

	<u>Fall semester</u>	<u>Spring semester</u>
a. Midshipman travel:	_____	_____
b. Consumable Supplies:	_____	_____
c. Equipment:	_____	_____
f. Other (specify below):	_____	_____
TOTALS:	_____	_____

Proposed Funding source (dept, ONR-Midn, faculty research account, DTRA, etc)?

NOTES:

◆ **Travel:** Possible destination: _____

Probable dates: _____

◆ **Expenditure of funds from department or division accounts:** The budget proposal must be routed via the Department Chair or Division Financial Officer, as appropriate.

◆ **Expenditure of reimbursable funds:** The budget proposal must be routed via the Naval Academy Research Office.

◆ **Total expenditures:** A letter of justification from the adviser **must** be included with this Proposal if the total non-travel costs in either semester exceeds \$500.00.

◆ **Other costs:** _____