# **Nautical Archaeology Program**

## **Degree Requirements**

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## **Mission Statement**

The Nautical Archaeology Program (NAP) mission is to acquire and disseminate knowledge about seafaring and maritime activity through time.

## Faculty

The seven NAP faculty are: <u>Deborah Carlson</u>, <u>Kevin Crisman</u>, <u>Christopher Dostal</u>, <u>Donny L</u>. <u>Hamilton</u>, <u>Cemal Pulak</u>, <u>Filipe Vieira de Castro</u> and <u>Shelley Wachsmann</u>. Other professors in the Department of Anthropology work regularly with NAP faculty and students, and serve on graduate committees. NAP is part of the Anthropology Department at Texas A&M University (TAMU) specializes in training graduate students in the archaeology and history of ships and seafaring. Courses focus primarily, although not exclusively, on maritime activity in the ancient Mediterranean and medieval Europe, as well as world-wide seafaring in the historic period. The seven faculty members of NAP are united in their scientific approach and share common interests in the following four themes:

## **I. Ship Construction**

Focuses on the evolution of wooden-planked water transport including the development of building techniques and the underlying philosophies guiding design and construction practices. All time periods, including ancient, medieval, and early modern, are topics of study. **Professors:** Castro, Crisman, Dostal, Pulak **Emphases**: Development of technology over time; Transfer of technology

### **II. Old World Seafaring**

Covers seafaring in the Mediterranean and Black Sea from the earliest evidence of maritime activity to the end of the medieval period (circa A.D. 1450).

Professors: Carlson, Pulak, Wachsmann

**Emphases**: Material culture analyses; Trade, commerce and economy; Subsistence and diet; Environmental reconstruction; Iconography of Ships; Ancient Technology; Textual Evidence of Seafaring; Naval Warfare

## **III. World Seafaring**

Covers the half-millennium from the Age of Exploration to the present, with an emphasis on the post-1500 spread of Western European culture and seafaring practices around the globe. Maritime activity in the western hemisphere is a major area of concentration, particularly in the North American lakes and rivers, the Gulf Coast, and the Caribbean Sea.

Professors: Castro, Crisman, Dostal, Hamilton

Emphases: Shipboard life; Seafaring technology; Social organization; Subsistence and diet;

Material culture analyses; Trade, commerce and economy; Culture change; Cognitive archaeology; Role of ships in warfare

#### IV. Conservation and Recording of Archaeological Material

Emphasizes the stabilization of archaeologically-recovered objects, particularly from underwater sites.

#### Professors: Dostal, Hamilton

**Emphases**: Development of new conservation technologies; Scientific application of new conservation techniques; Recording of archaeological data; 3-D scanning; material analysis

Within these four broad areas of study, some faculty members focus on the seafaring of different time periods and cultures. Knowledge of different ship construction techniques, maritime technologies, economics, iconography, archival sources, as well as the use of photography and 3-D visualization all play a role in interpreting the past.

Our faculty and students direct and participate in projects around the world including many in Mediterranean countries, Africa, eastern Asia, northern Europe and the Americas. NAP students work in the field as well as in the classroom and are encouraged to pursue individual projects that will help define nautical archaeology's future.

#### Affiliated Centers, Resources, and Facilities

Our interdisciplinary, scientific approach to nautical archaeology is coordinated with the <u>Center for Maritime Archaeology and Conservation (CMAC)</u> and the <u>Institute of Nautical</u> <u>Archaeology (INA)</u>. Each brings a variety of resources and strengths that can be utilized for field projects, laboratory studies, and archival research. In addition, the vast research and scientific resources of TAMU, one of the major research universities in the United States, add immeasurably to the program's mission.

Center for Maritime Archaeology and Conservation Laboratories

Old World Laboratory World Seafaring Laboratory Steffy Ship Reconstruction Laboratory Ship Model Laboratory Analytical Archaeology Laboratory Conservation Research Laboratory

Additional support is provided by <u>Helen Dewolf</u>, Glenn Grieco, <u>James Jobling</u>, Peter Fix, John Hamilton, Karen Martindale, and other CMAC staff.

#### Institute of Nautical Archaeology (INA)

INA is a 501(c)3 non-profit research organization founded in 1972 by Dr. George F. Bass. In 1976, INA moved to TAMU and NAP was established as an independent academic, graduate program. In the early 1990s, financial gifts made by INA Directors and matched by TAMU led to the establishment of eight NAP faculty endowments and two NAP graduate student scholarships. Many NAP faculty are INA officers.

INA awards approximately \$150,000 annually in support of archaeological fieldwork and publications. INA-excavated shipwrecks are published in the Ed Rachal Nautical Archaeology Series of TAMU Press, and interim reports appear in the *INA Quarterly*, and on the INA website (www.nauticalarch.org). INA also funds several graduate research assistantships (archivist, assistant editor, webmaster), which routinely go to NAP students.

NAP students receive field training on INA-sponsored shipwreck excavations all over the world often directed by NAP faculty or by INA's more than 50 Research Associate; many INA Research Associates are NAP graduates. INA's Bodrum Research Center (BRC) in Turkey, is home to administrative offices, conservation laboratories, a 10,000-volume research library, a residence hall and kitchen for students and visiting scholars, INA's archaeological research vessel *Virazon II*, and a wide variety of excavation equipment, including recompression chambers and remote sensing gear. NAP faculty and graduate students utilize the BRC on a regular basis.

#### Department of Anthropology

Center for the Study of the First Americans Palynology Laboratory Zooarchaeology Laboratory Paleoethnobotany Laboratory Geoarchaeology Laboratory Lithics Laboratory Archaeological Ecology Laboratory Anthropology Research Collections Ancient DNA Laboratory

NAP graduate student training is theoretically and methodologically based. All students are expected to become proficient in a range of archaeological field and laboratory techniques. Development of technical skills in the areas of ship reconstruction, artifact conservation, and archaeological recording and analysis is strongly encouraged. Anthropology Department courses in geoarchaeology, lithic analysis, bioarchaeology, paleobotany, and zooarchaeology can provide students with areas of specialization. Each student is expected to become proficient in the archaeology and history of seafaring of a time period or culture, and must be able to design and complete original research that is theoretically grounded and methodologically sound. Graduate students are expected to participate in archaeological field projects; however, thesis or dissertation research need not be field-based.

## Academics

NAP, which is part of the Department of Anthropology is responsible for establishing the degree requirements and the courses required to provide well-rounded training in the discipline of nautical and maritime archaeology. NAP is a graduate program and does not grant baccalaureate degrees; however, a variety of undergraduate courses are taught by NAP faculty.

## **Undergraduate Curriculum**

NAP faculty teach a number of undergraduate courses dealing with terrestrial archaeology, maritime archaeology, seafaring, and material culture for students pursuing a bachelor's degree. The courses are designed to fill a range of needs from providing a general background in the field of archaeology to in-depth training to prepare students for graduate studies. For a specific list of requirements for the B.A. or B.S. degrees in Anthropology and a complete list of the undergraduate courses taught in Anthropology, see the <u>TAMU undergraduate catalog</u>.

## Nautical Archaeology-Oriented Undergraduate Courses

ANTH 313 Introduction to Historical Archaeology ANTH 316 Introduction to Nautical Archaeology ANTH 317 Introduction to Biblical Archaeology ANTH 318 Nautical Archaeology of the Americas ANTH 323 Nautical Archaeology of the Ancient Mediterranean ANTH 330 Field Research in Anthropology ANTH 353 Archaeology of Ancient Greece ANTH 354 Archaeology of Ancient Italy ANTH 402 Conservation of Archaeological Materials ANTH 417 Naval Warfare and Warships in Ancient Greece and Rome ANTH 418 Romans, Arabs, and Vikings: Mediterranean Seafaring during the Early Christian Era ANTH 436 Ancient Egypt ANTH 444 Classical Archaeology ANTH 485 Directed Studies

## Graduate Curriculum Graduate Courses in Nautical Archaeology

Required MS	Required PhD	Elective	Course	Course Name	
	Х		ANTH 601	Biological Anthropology	
	Х		ANTH 602	Archaeological Method and Theory	
		Х	ANTH 603	Seafaring Life and Maritime Communities	
	Х		ANTH 604	Cultural Methods and Theory	
Х	Х		ANTH 605	Conservation of Archaeological Resources I	
		Х	ANTH 606	Conservation of Archaeological Resources II	
		Х	ANTH 607	Historical Archaeology	
Х			ANTH 608	Skills in Maritime Archaeology	
		Х	ANTH 610	Outfitting and Sailing the Wooden Ship 1400-1900	
Х	Х		ANTH 611	Introduction to Nautical Archaeology	
		Х	ANTH 612	Pre-Classical Seafaring	
		Х	ANTH 613	Classical Seafaring	
		Х	ANTH 614	Books and Treatises on Shipbuilding	
Х	Х		ANTH 615	History of Wooden Shipbuilding	
Х	Х		ANTH 616	Research and Reconstruction of Ships	
		Х	ANTH 617	Conservation of Organic Materials	
		Х	ANTH 618	Medieval Seafaring in the Mediterranean	
		Х	ANTH 628	New World Seafaring Post-Medieval Seafaring	
		Х	ANTH 629		
		Х	ANTH 633	Deep Submergence Archaeology	
	Х		ANTH 642	Research Design in Anthropology (or STAT 651) Field Archaeology Bridging Themes Seminar	
		Х	ANTH 660		
	Х		ANTH 670		
		Х	ANTH 685	Directed Studies	
		Х	ANTH 689	Special Topics	
Х	Х		ANTH 691	Research	

Directed Studies (ANTH 685) are independent study courses in which the student develops a research project in consultation with a professor and pursues that project throughout the semester. The student is expected to produce a paper or other tangible result, and is expected to consult regularly with the professor.

Research Hours (ANTH 691) are appropriate for students actively engaged in the research and writing of their thesis or dissertation. Students are expected to enroll in ANTH 691 under the direction of their committee chair in order to meet university enrollment requirements.

## **Relevant Courses Taught in the Anthropology Department**

#### **Undergraduate Courses**

ANTH 403 Anthropology of Religion ANTH 439 Gender, Ethnicity, and Class in Archaeological Research

#### **Graduate Courses**

ANTH 624 Geoarchaeology ANTH 625 Zooarchaeology ANTH 632 Archaeology of Death ANTH 634 Palynology ANTH 637 Paleoethnobotany ANTH 639 Gender, Ethnicity, and Class in Archaeological Research ANTH 640 Anthropological Ethics and Professionalism ANTH 640 Anthropological Ethics and Professionalism ANTH 642 Research Design in Anthropology ANTH 644 Classical Archaeology ANTH 645 Cultural Resource Management ANTH 646 Ceramic Artifact Analysis ANTH 647 Lithic Artifact Analysis ANTH 652 First American Archaeology ANTH 689 Special Topics

#### **Degree Requirements**

This document sets forth the requirements for all students pursuing a graduate degree in NAP. A Bachelor's degree in a related field is the minimum prerequisite for admission; a bachelor's degree in anthropology, archaeology, history, geography, foreign languages, or various science degrees is preferred but not required. Applications are considered on a case-by-case basis, after examination of each applicant's academic transcripts, admissions essay, Graduate Record Examination (GRE) scores, and letters of recommendation. Students admitted into NAP follow one of three tracks to complete their graduate degree.

**TRACK 1**: Master of Science (M.S.) in Maritime Archaeology and Conservation. Total Credits: 32 credit hours. The curriculum is designed to allow students to complete the M.S. in a two-year timeframe. All students are required to write a thesis and complete an internship or participate in field work in order to receive a degree.

**TRACK 2**: Students entering the Ph.D. program with a Master's degree. For students entering with a thesis-option Master's, 64 credits are required to earn the Ph.D. Students entering with a non-thesis option Master's will be required to satisfy additional requirements. University rules stipulate that all Ph.D. degree requirements must be completed within ten years from the first semester of enrollment.

**TRACK 3**: For students entering the Ph.D. program without a Master's degree, 96 credits are required, and all requirements must be completed within ten years from the first semester of

enrollment. Students entering the Ph.D. program without a Master's degree will be expected to complete a Master's of Arts degree (M.A.) along the way. The student must be approved by the office of Graduate and Professional Studies (OGAPS) to pursue both degrees concurrently. Note: language courses are not included in the total number of credit hours required for graduation.

The student's graduate committee has the ultimate authority as to what is required. Students should work closely with their committee chair and the department's Graduate Academic Advisor when developing a degree plan. Preparation of a thesis or dissertation is a demanding task, and students are advised to find a research topic in which they have a strong inherent interest.

Each student must complete a thesis or dissertation based on independent research. All theses and dissertations must be submitted in electronic format to OGAPS and a digital copy put on file in the Department of Anthropology. For NAP theses and dissertations, examples of accepted reference styles include: the *American Journal of Archaeology*, the *Journal of the Society for Historical Archaeology*, the *Journal of the Society for American Archaeology*, and the *International Journal of Naval History*.

#### TRACK I: Master of Science Degree in Maritime Archaeology and Conservation

Total Credits: 32 credit hours

Required Courses (15 credit hours):

ANTH 605	Conservation of Archaeological Resources I (3 credit hours)
ANTH 608	Skills in Maritime Archaeology (3 credit hours)
ANTH 611	Introduction to Nautical Archaeology (3 credit hours)
ANTH 615	History of Wooden Shipbuilding (3 credit hours)
ANTH 616	Research and Reconstruction of Ships (3 credit hours)

During their first year, M.S. students will form a committee consisting of three TAMU faculty: the Chair (a NAP professor) and two members (one from NAP or ANTH, and one from a TAMU department outside of Anthropology). The committee chair will serve as the student's principal advisor, and can assist with finding the other members of the committee, selection of coursework, the selection of a suitable thesis topic, and the filing of a degree plan. Students must form their committee and file a degree plan during their second semester of coursework.

#### Internship Requirements

Students will complete an internship during the summer after their first year in the program. The internship might involve work at the Conservation Research Laboratory (CRL), fieldwork on an underwater archaeological excavation, or an internship at a museum, archive or archaeological research institution. Students should have their plans for the internship approved by the chair of their graduate committee. The internship requirement is mandatory, although this requirement can be fulfilled without formally registering for university credit. Should a student wish to formally register for the internship, the following courses are available:

ANTH 660	Field Archaeology (optional)
ANTH 684	Anthropological Internship (optional)

#### Thesis Requirement

All students write a thesis in order to complete the M.S. degree. The completion of a thesis is essential for obtaining certain types of positions as professional archaeologists and also to be listed on the Registry of Professional Archaeologists (RPA). Students should start working on the thesis during their first year, and the thesis proposal should be filed with OGAPS by the end of the second semester. Students will enroll for a minimum of 1 and no more than 3 credit hours ANTH 691 during the course of their graduate studies in the M.S. degree program.

ANTH 691 Research Hours (1-3 credit hours maximum)

In addition to the 15 hours of core courses and 1-3 hours of ANTH 691, M.S. students will complete 14-16 credit hours of electives from the table on page 5.

## **Doctoral Degree Requirements**

#### TRACKS 2 AND 3: DOCTORAL DEGREE PROGRAM

#### Admission to the Doctoral Degree Program

Students may be admitted to the NAP doctoral program with either a Master's degree (Track 2) or a Bachelor's degree (Track 3). The research interests of the student should overlap with one of the NAP research themes. In the admission essay, students must state their interests and the faculty members with whom they would like to work. A majority vote of the NAP faculty is needed to admit a student. Every student must demonstrate to his/her advisory committee an ability to undertake research and produce a well-written, publishable product.

In order to be admitted into NAP via Track 2 or 3, the following requirements must be fulfilled.

- Students holding a Master's degree in an approved subject are accepted via Track 2. 64 credit hours will be required for students who have completed their Master's degree with a thesis. Students who enter with a non-thesis-option Master's degree must satisfy a research project requirement by submitting to the entire NAP faculty a thesis-length paper or a peer-reviewed paper published in a top-tier journal.
- 2. Students holding a baccalaureate degree who are accepted to enter via Track 3 must complete 96 credit hours within a 10-year time limit. Before being formally accepted into the doctoral program, the student must complete the research paper requirement in #1.
- 3. All Ph.D. students must formally establish an advisory committee, consisting of three members from the Department of Anthropology (with the majority being from NAP) and

one member from outside the Department of Anthropology. Track 3 and Track 2 students without a thesis M.A. are strongly encouraged to form their committee by the end of their third semester to commence work on the research paper requirement.

<u>Courses required by NAP for the Ph.D. degree (12 credit hours):</u> ANTH 605 Conservation of Cultural Resources I ANTH 611 Nautical Archaeology ANTH 615 History of Wooden Shipbuilding ANTH 616 Research and Reconstruction of Wooden Ships

<u>Courses required by the Department of Anthropology for the Ph.D. degree (15 credit hours):</u> ANTH 601 Biological Anthropology ANTH 602 Archaeological Method and Theory ANTH 604 Cultural Method and Theory ANTH 670 Pro Seminar ANTH 642 or STAT 651- Statistics in Research

Of the remaining 69 credits, students should take at least 12 credit hours in Nautical Archaeology seminars. Additionally, the department requires students to take at least 6 credit hours outside of ANTH in subjects related to their research. Note that courses used to satisfy the language requirement cannot be used towards those 69 credits.

## Foreign Language Requirement

Reading proficiency in at least one modern foreign language (acceptable to the student's graduate committee) is required for NAP Ph.D. students. For some students, Latin or Greek may be required in addition to one or more modern languages. Credits earned at TAMU to fulfill the language requirement do not count toward the credit hours needed for completion of the doctoral degree. In general, the language requirement may be fulfilled by one of the following options:

- Have a B average in a two-year undergraduate language program
- Receive at least a B in a graduate-level reading course in the chosen language (either at TAMU or another university)
- Pass a written examination administered by the Department of International Studies or a NAP faculty member

Students should ask their committee chair to arrange examinations for language requirements.

## **Policy Regarding Field Research Experience**

All Track 2 and Track 3 students in the NAP must graduate with archaeological field experience. It is the responsibility of the student's committee chair to make sure that this is enforced. Ideally, field experience will be on a TAMU-, CMAC-, or INA-sponsored project; students should be aware, however, that in-house field opportunities fluctuate annually, and we cannot guarantee that faculty members will be leading major field projects every year. Nor can

we guarantee that there will be space for every student on a given project, although NAP students are generally given preference when field crews are selected. Students are therefore encouraged to acquire field experience on projects run by other graduate students, or by outside universities and research organizations.

#### **Annual Student Review Process**

Each year, NAP faculty will evaluate students and determine if they are making "satisfactory" or "unsatisfactory" progress towards completion of their degree requirements. Every spring semester, graduate students are required to submit a progress report, a proposed schedule of classes and/or research to be completed in the next year, and a vita to their advisor for review.

Each student's progress is then evaluated by the advisor based on these reports. Student progress reports will also be reviewed by the entire NAP faculty and by the Graduate Program Committee. Before the end of the spring semester, Ph.D. students will receive a letter from the department Director of Graduate Studies (DGS) informing them of the results of the evaluation and expectations for the future. M.S. students will receive a letter from the M.S. Coordinator following a review of progress by the aforementioned faculty committees. Each annual review will be placed in the student's official file and a copy will be given to the student.

In cases where the committee chair, DGS, or NAP faculty deem that the student's progress is "Unsatisfactory," the annual review letter will specify what the student must do (including a time line) to improve his/her status. Failure to follow what is specified in the letter and the receipt of a second "unsatisfactory" review may result in a hold on registration or the student's dismissal from the university.

### **Teaching Experience**

During their graduate studies at TAMU, students are strongly encouraged to develop skills and experience teaching undergraduate-level courses. The Department of Anthropology endeavors to assist graduate students with undergraduate teaching as opportunities and funding permit. The decisions are made on a semester-by-semester basis.

#### **Completing the Doctoral Degree Requirements**

#### **Proposal**

Ph.D. students must prepare a dissertation proposal no later than their second year of study. This proposal will specify the intended topic of the dissertation, theoretical framework, the geographic and temporal areas of field work, and methods of research. The proposal is submitted to the student's graduate committee for review and approval and then filed with OGAPS. The student is encouraged to format the proposal in a manner similar to an NSF Dissertation Improvement Grant or similar grant used to apply for research funds. Students are also strongly encouraged to apply for university funds and outside support for their dissertation research.

#### **Examinations**

Preliminary written and oral examinations will be held to assess the student's knowledge in nautical archaeology and related fields. These examinations are typically given after the student has completed all major coursework. The exam will be presided over by the student's graduate committee advisor. The advisor and committee members will provide reading lists in advance of the examinations, and each committee member will prepare written questions for the student. The student must satisfactorily pass both the written and oral preliminary examinations and have an OGAPS-approved dissertation proposal on file before being admitted to Ph.D. candidacy.

#### **Dissertation**

After the Ph.D. preliminary examinations are approved by the student's advisory committee, the student researches and writes the dissertation. The format for NAP dissertations is a comprehensive study, with original data, syntheses, and interpretations presented in multiple chapters. The manuscript should be prepared for publication as a book or monograph using one of the journal formats approved by NAP (see page 7). Early drafts of the manuscript are submitted only to the committee chair for preliminary review, and only after the chair approves are copies to be submitted to other committee members. A defense of the dissertation is held, and once the dissertation is approved by all committee members, the student completes all corrections and submits the final version to OGAPS.

### **Conservation Training Certificate**

A certificate in conservation training, recorded on official TAMU transcripts, is available to any non-degree or degree-seeking student enrolled at TAMU. The certificate is awarded to students who take a minimum of 12 credit hours in conservation or conservation-related courses. There is no guarantee that the required 12 credit hours will be offered in a given academic year.

#### Certificate Requirements

ANTH 605 Conservation of Archaeological Resources I (3 credit hours) ANTH 606 Conservation of Archaeological Resources II (3 credit hours) ANTH 617 Conservation of Organic Materials (3 credit hours) or ANTH 689 Special Topics ANTH 685 Directed Studies (1-4 credit hours)

Independent research may be substituted for ANTH 685. Research may include an internship at the CMAC Conservation Research Laboratory. Depending on a student's previous training and experience, alternative courses can be substituted for ANTH 605 or 617. Admission to the Conservation Training Certificate Program does not guarantee subsequent acceptance to the NAP.

Requirements	<b>TRACK 1</b> MASTER OF SCIENCE DEGREE	TRACK 2 DOCTORAL PROGRAM Entering with a Master's	TRACK 3 DOCTORAL PROGRAM Entering with a Bachelor's
Total Credits Required	32 credits	64 credits	96 credits
Anthropology Core Courses	N/A	15 Credits (5 courses)	15 Credits (5 courses)
NAP Core Courses	15 credits (5 courses)	12 credits (4 courses)	12 credits (4 courses)
Elective Courses	14-16 credits	25-37 Credits	57-69 Credits
ANTH 685 (Directed Studies)	<3 Credits*	<8 Credits	<8 Credits
ANTH 691 (Research Hours)	1-3 Credits*	<6 Credits	<6 Credits
Foreign Language	No	Yes	Yes
Research Paper / Article Required	N/A	N/A	Yes
Degree en route	N/A	N/A	M.A.
Terminal Degree	M.S.	Ph.D.	Ph.D.

\* TAMU does not allow Master's students to accrue more than 12 combined hours of ANTH 685 and 691 (<u>https://catalog.tamu.edu/graduate/academic-expectations-general-degree-requirements/degree-requirements/#limitations</u>)