

School of Marine Science

Graduate Catalog 2005-2006



**The College of
William and Mary**

August 2005

NOTE: This catalog provides announcements for the 2005-2006 academic year. It is current until August 2006. The College reserves the right to make changes in the regulations, charges, and curricula listed herein at any time.

Catalogs are issued for College programs as follows:

Undergraduate
School of Business Administration
School of Education
Graduate Studies in Arts and Sciences
School of Marine Science
Marshall-Wythe School of Law
Summer Sessions
Special Programs

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The College of William and Mary
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The policies in this catalog apply to students who matriculate into the School of Marine Science graduate program in the academic year 2005-2006.

*Cover Photograph: Sunrise over a Spartina marsh on the Eastern Shore of Virginia.
Photo by Rochelle Seitz.*

School of Marine Science

***Graduate Catalog
2005 - 2006***



www.vims.edu

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Sue N. Presson Graduate Registrar

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Calendar

Fall Semester 2005

August

22	Mon.	Tuition and Fees for 2005 Fall Semester Due
22-23	Mon.-Tues.	Orientation Period
22-23	Mon.-Tues.	General Registration & Registration for Incoming SMS Students
24	Wed.	FIRST DAY OF CLASSES: 8:00 am
24	Wed.	Beginning of Add/Drop Period for 2005 Fall Semester

September

2	Fri.	Last Day to Add/Drop a Class for Fall 2005 Semester
3	Sat.	Beginning of Period for Withdrawal from a Class with Grade "W"
5	Mon.	Labor Day (classes meet)

October

1	Sat.	NOTICE OF CANDIDACY FOR GRADUATION Forms due to SMS Registrar for May and August 2006 candidates
8-11	Sat.-Tues.	Fall Break
28	Fri.	Last Day to Withdraw from a Class with a Grade of "W" for 2005 Fall Semester
31	Mon.	Begin Advanced GRADUATE STUDENT REGISTRATION PERIOD FOR SPRING 2006 - Session 1

November

6	Sun.	End Advanced GRADUATE STUDENT REGISTRATION PERIOD FOR SPRING 2006 - Session 1
17	Thurs.	Begin Advanced GRADUATE STUDENT REGISTRATION PERIOD FOR SPRING 2006 - Session 2
23-27	Wed.-Sun.	Thanksgiving Holiday: 8:00 am

December

2	Fri.	END OF CLASSES: 5 pm
2	Fri.	End Make-up of Spring 2005 "I's" (Change to "F" after this date)
2	Fri.	End Advanced GRADUATE STUDENT REGISTRATION PERIOD FOR SPRING 2006 - Session 2
3-4	Sat.-Sun.	Reading Period
5-6	Mon.-Tues.	Examinations
6	Tues.	LAST DAY TO SUBMIT THESES AND DISSERTATIONS FOR DECEMBER 2005 CONFERRAL OF DEGREES
7	Wed.	Reading Period
8-9	Thurs.-Fri.	Examinations
10-11	Sat.-Sun.	Reading Period
12-15	Mon.-Thurs.	Examinations
21	Wed.	OFFICIAL DECEMBER GRADUATION

Spring Semester 2006

January

2	Mon.	Fall Semester Grades Due
9	Mon.	Tuition and Fees for 2006 Spring Semester Due to SMS/VIMS Cashier
17	Tues.	Beginning of Add/Drop Period for 2006 Spring Semester
18	Wed.	FIRST DAY OF CLASSES: 8 a.m.
18	Wed.	General SMS Graduate Student Registration
27	Fri.	Last Day to Add/Drop a Class for 2006 Spring Semester
28	Mon.	Beginning of Period for Withdrawal from Course with Grade of "W."

March

4-12	Sat.-Sun.	Spring Break
10	Fri.	Mid-Semester (for grading purposes only)
13	Mon.	Begin Registration for Continuing Students for Summer 2006- Session 1
24	Fri.	Last Day to Withdraw from Course with Grade "W" for 2006 Spring Semester
29	Mon.	Begin Advanced GRADUATE STUDENT REGISTRATION PERIOD FOR FALL 2006
31	Wed.	End Registration for Continuing Students for Summer 2006- Session 1

April

2	Sun.	End Advanced GRADUATE STUDENT REGISTRATION PERIOD FOR FALL 2006
14	Fri.	NOTICE OF CANDIDACY FOR GRADUATION Forms due to SMS Registrar for December 2006 candidates
17	Mon.	Begin Registration for Continuing Students for Summer 2006- Session 2
28	Fri.	END OF CLASSES: 5 pm
28	Fri.	End Make-up of Spring 2006 "I's" (Chg to "F" after this date.)
29-30	Sat.-Sun.	Reading Period

May

1	Mon.	LAST DAY TO SUBMIT THESES AND DISSERTATIONS FOR MAY 2006 CONFERRAL OF DEGREES
1-5	Mon.-Fri.	Examinations
6-7	Sat.-Sun.	Reading Period
8-10	Mon.-Wed.	Examinations
12	Fri.	Graduating Student Spring Semester 2006 Grades Due
14	Sun.	COMMENCEMENT
14	Sun.	NOTICE OF CANDIDACY FOR GRADUATION Forms due to SMS Registrar for May 2007 Candidates
17	Wed.	Semester Grades Due - Spring 2006
30	Tues.	End Registration for Continuing Students for Summer 2006- Session 2

Summer Sessions 2006

SESSION I: May 30 - June 30 (Tues.-Fri.)

SESSION II: July 3 - August 4 (Mon.-Fri.)

The College of William and Mary

The College of William and Mary in Virginia, founded in 1693, is the nation's second oldest institution of higher education. During its long history, the College has built an eminent reputation for excellence in education. The College's commitment to a thorough, well rounded education through exploration, innovation and involvement is the source of institutional coherence. Today the College is national and international in its character and contributions. Students and faculty from diverse backgrounds are attracted to both the undergraduate programs and the various schools offering graduate studies.

The College of William and Mary is a small, residential university currently enrolling approximately 5,400 undergraduate and 2,300 graduate students. The School of Arts and Science offers Masters and Doctorate degrees in several departments. Graduate degrees may also be pursued in four professional schools: Marshall-Wythe School of Law, the School of Business Administration, the School of Education and the School of Marine Science.

The College is accredited by the Southern Association of Colleges and Schools. In keeping with the College's mission as a state institution, a wide range of courses, seminars and programs both for credit and noncredit are offered on all campuses.

School of Marine Science/ Virginia Institute of Marine Science

Since its founding in 1940, the Virginia Institute of Marine Science has functioned under a tripartite mission: to conduct independent research, to provide advisory services to the state and nation, and to provide education in Marine Science. The School of Marine Science is the academic program within the Virginia Institute of Marine Science. It is one of four graduate and professional schools of the College of William and Mary. The School of Marine Science awarded its first Masters degree in 1943 and inaugurated a Doctoral program in 1964. More than 500 marine scientists have earned graduate degrees from the School of Marine Science.

At present the School of Marine Science has 122 graduate students; about one-half are working on their Masters theses and one-half are working on Doctoral dissertations. The School receives approximately 150 applications per year from prospective students. Approximately 25 enter the program each academic year.

Statement of Purpose for the School of Marine Science

The purpose of the School of Marine Science is to provide a quality interdisciplinary education and opportunities in scholarly research to students pursuing advanced degrees in marine science.. This is accomplished both by classroom instruction in the basic principles of marine science and through student involvement in basic and applied field and laboratory research under faculty supervision. Interdisciplinary research is encouraged.

Facilities

School of Marine Science students participate in graduate studies at an active, year round research facility with approximately 450 scientists, support technicians and staff. The 35-acre main campus of the School of Marine Science/Virginia Institute of Marine Science (SMS/VIMS) is located in Gloucester Point at the mouth of the York River, a major tributary and natural passageway to the Chesapeake Bay and Atlantic Ocean. Various service centers and special programs at the SMS/VIMS complement and enhance the student's experience.

Eastern Shore Field Laboratory (ESL): ESL offers access to coastal lagoons, salt marshes, barrier islands and coastal waters. Located in Wachapreague, about 2 hours from Gloucester Point, this facility is an important center for research in bivalve aquaculture and houses a hatchery, a nursery facility, a seawater flume and nearby bivalve grow-out sites. It has a well-equipped laboratory, small boat facility, and dormitory.

William J. Hargis, Jr. Library: The collections of Hargis Library are focused on the spectrum of literature which supports the major programs of studies of the School of Marine Science as well as the research and advisory service programs of the Institute. These specialized collections are a blend of books, technical reports, online and print based journals as well as topographic maps and nautical charts. Many of the VIMS scientific reports have been digitized and are available for viewing by connecting to the library's website at www.vims.edu/library.

Current research literature can be identified by using the major scientific research databases such as the Web of Science, Science Direct, ASFA, CSA Biological Sciences, Environmental Sciences and Pollution Management, GeoRef, and Oceanic Abstracts. These and other electronic resources are accessible both on and off campus. Students, faculty and staff can connect to over 200 databases available through main campus connections and VIVA, the Virtual Library of Virginia, as well as materials in the collections of the other William and Mary Libraries. In addition to the College collections, research materials from other institutions can be acquired through Hargis Library's Inter-Library Loan Service. Librarians are available to provide help in locating information and identifying the best tools for research projects. More information on the Hargis Library can be viewed at www.vims.edu/library.

Vessels: SMS/VIMS maintains and operates a fleet of 40 vessels for research. Larger vessels are equipped with flow-through seawater, sample collection-analysis labs and

electronics labs. In addition to the 65-foot R/V *Bay Eagle*, 29-foot *Elis Olsson*, 29-foot R/V *Fish Hawk* and 75-foot *Pelican*, there is a sizable trailerable fleet. State-of-the-art electronic systems can be transferred among the smaller boats. The diving facility includes a diver training room and classroom to support the 40-member dive team.

Information Technology and Networking Services Unit: ITNS provides technical support for Information Technology resources used on campus. Supported desktop and laptop systems are primarily Windows and Macintosh based systems. ITNS maintains a campus-wide backbone network which has a high speed link to the Internet (and Internet II) via NetWork Virginia. ITNS provides a plethora of IT services such as file, print, E-mail, web, database, data storage, high performance computing, and video conferencing. Students have access to up-to-date hardware and software in computing labs, the library and via mobile laptop systems that can be used in any classroom. ITNS assists students in configuring and using personally owned computer systems that meet or exceed minimum requirements.

Aquaculture Genetics and Breeding Technology Center (ABC): ABC operates an experimental shellfish hatchery for genetics and breeding studies of hard clams and oysters. The Gloucester Point Hatchery maintains varieties and stocks of native and non-native oysters. ABC's field operations include experimental farms at Gloucester Point, and six other locations throughout the Virginia portion of the Bay. The new Kauffman Aquaculture Center is a state of the art quarantine facility for brood stock isolation and conditioning.

Analytical Service Center: The Analytical Service Center (ASC) provides nutrient, physical and sediment analyses to students, scientists and governmental agencies managing and developing diversified environmental programs as well as thesis projects. The ASC has researched, refined and developed methodologies for analysis in a wide spectrum of environmental matrices. The quality of data is the result of thorough statistical controls, documentation, and training. ASC instrumentation is state-of-the-art, with computer control interfacing, background correction and optimization for saline matrix.

Nunnally Hall: Completed in 1992, Nunnally houses the extensive fisheries collection that includes approximately 85,000 specimens representing 247 families.

Chesapeake Bay Hall: Completed in spring 1997, this facility provides 60,000 sq. feet of research facilities, including labs for advanced research in chemistry, biogeochemistry, toxicology, pathobiology, microbiology, genetics, physiology, plankton ecology, nutrient cycling and parasitology.

Marine Research Building Complex: This state-of-the-art complex, currently under construction, will include a 71,000 square foot research building and a 43,000 square foot seawater laboratory.

Programs & Centers

Marine Advisory Service/Virginia Sea Grant Program: Provides expert science-based information and assistance to marine industry sectors to maximize efficiency, economy and safety in the judicious utilization of marine resources. Provides for the education of both the public and private sectors as to the importance of our sustainable marine environment and its resources

Chesapeake Bay National Estuarine Research Reserve System: VIMS is the lead agency in Virginia, for this NOAA funded program with four designated sites preserved for estuarine research, monitoring, education, and conservation of key resources.

Center for Coastal Resources Management: Focuses on applied research, advisory service, and outreach activities in support of government agencies and nongovernmental organizations involved in resource management. Continuing work is conducted in tidal and non-tidal wetlands, estuarine and coastal shorelines, geographic and living resource inventories, and watershed management. The Center engages in a wide variety of interdisciplinary projects and provides a forum for multi-investigator and multi-institutional applied research.

Cooperative Marine Education and Research Program (CMER): The CMER Program is a formal agreement between the College of William and Mary and the National Marine Fisheries Service (NMFS) that stations a senior NMFS scientist as a faculty member at VIMS. The program also includes direct research funding that supports graduate students, and offers students a variety of opportunities to participate in NMFS research. Dr. Richard Brill, a noted fish physiologist, serves as director of the VIMS CMER Program.

