Ph.D. in Marine Science

42 Credit Hours

Curriculum Map
Fall 2025

Core Curriculum (15-17 Credits)

*Students must pass all Batten School & VIMS core courses with a B- or better, **before** the end of Year 2 in the program.*

Fundamental Core (8-9 credits)

Choose four courses from the following options:

- MSCI 501A – Physical Oceanography (2)
- MSCI 501B – Chemical Oceanography (2)
- MSCI 501C – Marine Geology (2)
- MSCI 501D – Biological Oceanography (2)
- MSCI 501E – Aquatic Health (2)
- MSCI 501F – Fisheries Science (2)
- MSCI 521 – Adv. Marine Geology (3)
  (in lieu of MSCI 501C, but not both)

Interdisciplinary Core (2 credits)

- MSCI 503 – Interdisciplinary Research in Estuarine & Coastal Systems (2)

Quantitative Core (3 credits)

Choose one course from the following options:

- MSCI 504 – Fundamentals of Statistical Methods & Data Analysis (3)
- MSCI 554 – Princ of Numerical Computing (3)
- MSCI 556 – Statistics & Data Science (3)

Science Communication Core (2-3 credits)

Complete MSCI 505 during first year, preferably in semester of matriculation:

- MSCI 505 – Fundamentals of Science Communication (1), **and**

Choose one course from the following options:

- MSCI 506 – Scientific Communication Skills (2)
- MSCI 508 – College Science Teaching (1)
- MSCI 509 – Communicating Science to Diverse Audiences (2)
- MSCI 548 – Scientific Illustration (1)

Electives (13-18 Credits)

Any Batten School & VIMS grad course ≥ MSCI 500 (except courses used to fulfill the core curriculum)

Dissertation (9-12 Credits)

Original research in field of discipline. Projects are chosen in consultation with the student's academic advisor or co-advisors.

- MSCI 699 – Dissertation (1-12)

Expanding Your Curricular Options

With the permission of the academic advisor(s) and Batten School & VIMS Associate Dean for Academic Affairs, up to nine credit hours of relevant non-Batten School & VIMS graduate-level coursework, including courses on the Williamsburg campus or through cross-registration agreements with other institutions (e.g., Old Dominion University), may be counted as electives toward the degree.

See Next Page for Course Sequencing Suggestions

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Course Sequencing Suggestions – Based on Fall Matriculation, 60-Month Timeline

Full-time enrollment requires at least 9 credit hours during fall or spring and 3 credit hours during summer.

Year 1 – Fall Semester	Year 1 – Spring Semester	Year 1 – Summer Semester
• Fundamentals – 1 course (2-3 cr) • Quantitative – 1 course (3 cr) • MSCI 505 (1 cr) • Electives (2-3 cr)	• Fundamentals – 2 courses (4 cr) • MSCI 503 (2 cr) • Science Communications (2 cr) • Electives (1 cr)	• Electives (0-2 cr) • Dissertation (3 cr)
Year 2 – Fall Semester	**Year 2 – Spring Semester**	**Year 2 – Summer Semester**
• Fundamentals – 1 course (2-3 cr) • Electives (6-7 cr)	• Electives (4-6 cr) • Dissertation (3-5 cr)	• Electives (0-2 cr) • Dissertation (3 cr)
Year 3 – Fall Semester	**Year 3 – Spring Semester**	**Year 3 – Summer Semester**
• Electives (0-2 cr) • Dissertation (7-9 cr)	• Dissertation (9 cr)	• Dissertation (3 cr)
Year 4 – Fall Semester	**Year 4 – Spring Semester**	**Year 4 – Summer Semester**
• Dissertation (9 cr)	• Dissertation (9 cr)	• Dissertation (3 cr)
Year 5 – Fall Semester	**Year 5 – Spring Semester**	**Year 5 – Summer Semester**
• Dissertation (9 cr)	• Dissertation (9 cr)	• Dissertation (3 cr)

See Next Page for M.S. Bypass Course Sequencing Suggestions

Ph.D. in Marine Science

42 Credit Hours

M.S. Bypass Course Sequencing – Based on Fall Matriculation, 72-Month Timeline

Full-time enrollment requires at least 9 credit hours during fall or spring and 3 credit hours during summer.

Year 1 – Fall Semester	Year 1 – Spring Semester	Year 1 – Summer Semester
• Fundamentals – 1 course (2-3 cr) • Quantitative – 1 course (3 cr) • MSCI 505 (1 cr) • Electives (2-3 cr)	• Fundamentals – 2 courses (4 cr) • MSCI 503 (2 cr) • Science Communications (2 cr) • Electives (1 cr)	• Electives (0-2 cr) • Thesis (1-3 cr)
Year 2 – Fall Semester	**Year 2 – Spring Semester**	**Year 2 – Summer Semester**
• Fundamentals – 1 course (2-3 cr) • Electives (6-7 cr)	• Electives (4-6 cr) • Thesis (3-5 cr)	• Electives (0-2 cr) • Thesis (1-3 cr)

Students complete M.S. Bypass by the end of Year 2, according to expected timeline.
Degree program changes to the Ph.D. program at the start of Year 3.

Year 3 – Fall Semester	Year 3 – Spring Semester	Year 3 – Summer Semester
• *Fundamentals – 1 course (2-3 cr)* • *Electives (0-2 cr)* • Dissertation (6-9 cr)	• Dissertation (9 cr)	• Dissertation (3 cr)

Suggested course sequence, if 4th Fundamentals course for Ph.D. program needs completion in Year 3.

Year 4 – Fall Semester	Year 4 – Spring Semester	Year 4 – Summer Semester
• Dissertation (9 cr)	• Dissertation (9 cr)	• Dissertation (3 cr)
Year 5 – Fall Semester	**Year 5 – Spring Semester**	**Year 5 – Summer Semester**
• Dissertation (9 cr)	• Dissertation (9 cr)	• Dissertation (3 cr)
Year 6 – Fall Semester	**Year 6 – Spring Semester**	**Year 6 – Summer Semester**
• Dissertation (9 cr)	• Dissertation (9 cr)	• Dissertation (3 cr)