

**2017-2018 Annual Report on the Implementation of the
Academic Quality Assessment and Development
October 10, 2018**

**College of Arts and Sciences
AQAD Reviews**

During Academic Year 2017-2018, the College of Arts and Sciences (CAS) undertook two AQAD reviews: (1) the Department of Biology, which offers a BS in Biology, a BS with a Marine Biology option, an MS in Biology and an MS in Marine Biology; (2) the Department of Economics, which offers a BA in Economics, both in person and online, and a BA in Economics-Healthcare Services Administration both in person and online as a completion program. Each AQAD review is now complete.

All College of Arts and Sciences' departments have learning outcomes, curriculum maps, and established assessment plans. The assessment process in CAS has been designed to allow flexibility for each program to identify, develop, and assess learning within the major, while also providing guidance, parameters, and timelines aimed toward appropriate curriculum assessment and revision. During AY 2017-2018, a College Coordinator of Assessment worked with a designated faculty coordinator in each department to develop an assessment plan using a "best practices" approach. To ensure that departments continue to make progress and collect significant data for efficient and effective review, each department submits an annual assessment report to the Dean's Office that aligns with The New England Commission of Higher Education (NECHE) (formerly The New England Association of Schools and Colleges (NEASC), and the University of Massachusetts' Academic Quality Assessment and Development (AQAD) assessment criteria.

Department of Biology

The Department of Biology completed its final draft of the self-study in April 2018 and the external reviewers' site visit was conducted on May 7, 2018. The reviewers were Dr. Jacqueline Webb, Professor and George and Barbara Young, Chair in Biology, University of Rhode Island and Dr. Richard Kesseli, Professor and Chair, Department of Biology, University of Massachusetts Boston.

The Department has clearly articulated learning outcomes and approaches assessment in a comprehensive way. For the undergraduate program, a Major Field Test (MFT) was developed based on the content outcomes targeted across the curriculum; for the graduate program, a rubric was developed to assess students at the proposal defense and the thesis defense. That rubric was revised as part of the present AQAD review. Going forward, assessment of analytical skills of undergraduates will be accomplished using lab reports for two cohorts of freshmen at the end

of the first semester (BIO 131) and at the end of the two-year core (BIO 211). Improvements to the MFT and graduate assessment regimes will be ongoing.

In their report, received in July 2018, Drs. Webb and Kesseli noted several significant strengths of the Biology programs. Among these are the quality and productivity of the department's faculty as well as their scholarly standing in the state, region, and beyond; the faculty's dedication to teaching; the completeness and level of rigor of the undergraduate program; the undergraduate assessment initiatives and the use of those initiatives to make substantive changes to the undergraduate curriculum.

While commenting positively on the overall curriculum, the reviewers also indicated some areas for improvement. They noted that the department uses "standard practices to monitor individual student progress" in its graduate programs. These include success in course work; regular updates and reviews by a student's advisor and thesis committee; publication records of students from their work during the graduate program; success obtaining jobs in the field; and entrance into more advanced graduate programs after graduation. While these are good measures of student success, our external accrediting agency, The New England Commission of Higher Education (NECHE) (formerly The New England Association of Schools and Colleges (NEASC) has indicated that additional formal learning objectives are required. Interim Dean Shapiro charged the department with continuing to build formal learning outcomes and assessment processes for its graduate programs.

Drs. Webb and Kesseli also commented on the limited extent to which the Biology Department formally tracks alumni. Interim Dean Shapiro asked the department to assist the Office of University Advancement and the Alumni Association as they develop a plan to formally track Biology alumni. She further encouraged the department to work more closely with the Career Development Center to create opportunities for students to contact potential employers.

During September 2018, the Department of Biology submitted a final action plan that addresses Interim Dean Shapiro's concerns. The plan primarily details the program's plan of action as they work toward implementing and then improving their graduate assessment.

Department of Economics

The Department of Economics completed the final draft of its self-study in March 2018. External reviewers, Dr. Monica Galizzi, Chair of the Department of Economics at the University of Massachusetts Lowell, and Dr. Vasilios (Bill) Kostas, Chair of the Department of Economics, at Cleveland State University, visited the University of Massachusetts Dartmouth campus on Monday, April 23, 2018. They submitted a review subsequent to their site visit.

The Department has clearly articulated learning outcomes and approaches assessment in a comprehensive way. The department's assessment key questions are embedded in ECO300 Mathematical Economics, ECO301 Intermediate Microeconomics, and ECO311 Intermediate Macroeconomics. As well, the faculty evaluate papers from 400-level courses and oral presentations from 200-level courses. The department continues to develop new assessment instruments that will best gather the needed information to move the program forward.

The reviewers considered assessment a strength of the department and commented on the department's willingness to make curricular changes based on information gathered through the assessment process. In particular, they lauded the department for the innovative nature of its intermediate writing course. They felt it was extremely important to offer this course in discipline specific writing skills prior to 400-level courses that require significant research papers. Further, the reviewers found the department's commitment to value-added student experiential learning opportunities like internships, service learning, research collaborations, and study abroad programs quite impressive.

Drs. Galizzi and Kostea made several curricular recommendations for overall improvement of the Economics Program. First, they felt it was necessary for the Department to standardize the material taught in foundation courses so that all students entered upper division courses with the same knowledge base. Second, they called for increased development of data and statistical software skills for economics majors. Finally, they thought some improvements in the mathematics, statistics and econometrics curriculum are achievable.

The reviewers also made some recommendations vis-à-vis the professional development of economics majors. They proposed an exit survey for graduating seniors as part of a network-building regime for the program. In addition, they encouraged the department to formalize contact with alumni and to gather data about job market outcomes. Finally, they encouraged the department to work more closely with the Career Development Center to create opportunities for students to contact potential employers.

Interim Dean Amy Shapiro shared the reviewers' concerns and concurred with their recommendations. She charged the department with producing an action plan that addressed each concern and provided a timeline for activities to address those concerns.

During September 2018, Department of Economics submitted a final action plan that addresses all of Interim Dean Shapiro's concerns. The plan details the program's actions for each academic year through AY 2023 – 2024.

Retention and Graduation Rates

The tables below present the first-year retention rates and six-year graduation rates for the University, the College of Arts and Sciences, and each department that conducted an AQAD review during the 2017-2018 Academic Year.

University Total

<i>First Year Retention Rate</i>	
Fall 2014 Cohort	75.0%
Fall 2013 Cohort	79.4%
Fall 2012 Cohort	76.1%
Fall 2011 Cohort	74.2%
Fall 2010 Cohort	74.1%
Fall 2009 Cohort	70.3%

<i>Six Year Graduation Rate</i>	
Fall 2009 Cohort	45.8%
Fall 2008 Cohort	47.5%
Fall 2007 Cohort	49.0%
Fall 2006 Cohort	49.9%
Fall 2005 Cohort	48.2%
Fall 2004 Cohort	48.2%

College of Arts and Sciences

<i>First Year Retention Rate</i>	
Fall 2014 Cohort	71.7%
Fall 2013 Cohort	75.3%
Fall 2012 Cohort	68.4%
Fall 2011 Cohort	70.0%
Fall 2010 Cohort	73.8%
Fall 2009 Cohort	68.2%

<i>Six Year Graduation Rate</i>	
Fall 2009 Cohort	42.2%
Fall 2008 Cohort	42.4%
Fall 2007 Cohort	40.8%
Fall 2006 Cohort	43.0%
Fall 2005 Cohort	43.6%
Fall 2004 Cohort	43.4%

Department of Biology

<i>First Year Retention Rate</i>	
Fall 2014 Cohort	84.1%
Fall 2013 Cohort	74.7%
Fall 2012 Cohort	79.5%
Fall 2011 Cohort	74.1%
Fall 2010 Cohort	73.8%
Fall 2009 Cohort	72.2%

<i>Six Year Graduation Rate</i>	
Fall 2009 Cohort	43.0%
Fall 2008 Cohort	47.2%
Fall 2007 Cohort	44.9%
Fall 2006 Cohort	49.3%
Fall 2005 Cohort	51.7%
Fall 2004 Cohort	37.5%

Department of Economics

<i>First Year Retention Rate</i>	
Fall 2014 Cohort #	85.7%
Fall 2013 Cohort	75.0%
Fall 2012 Cohort #	77.8%
Fall 2011 Cohort #	100.0%
Fall 2010 Cohort #	0.0%
Fall 2009 Cohort #	60.0%

<i>Six Year Graduation Rate</i>	
Fall 2009 Cohort #	40.0%
Fall 2008 Cohort #	66.7%
Fall 2007 Cohort #	33.3%
Fall 2006 Cohort #	50.0%
Fall 2005 Cohort #	50.0%
Fall 2004 Cohort #	50.0%

*Beginning cohort was less than 10 students.*

School for Marine Science and Technology and Intercampus Marine Science Program AQAD Review

During Academic Year 2017-2018, the School for Marine Science and Technology (SMAST) facilitated the AQAD review for the University of Massachusetts Intercampus Marine Science (IMS) graduate program. This review is now complete.

The IMS graduate program has clearly articulated learning outcomes, curriculum maps, and established assessment plans. As noted in the IMS AQAD Self-study, the assessment process considers various metrics including performance in the coursework, documentation of regular meetings with advisor and student, maintaining student progress tracking sheets that reflect completion of programmatic requirements, meetings with the student advisory committee, defense of dissertation proposal, successful completion of comprehensive exams, writing of thesis or dissertation, and public and closed defense of thesis or dissertation. Additional metrics of student outcomes include student presentations at professional meetings, student authored or co-authored publications, and student involvement in service activities. Finally, program effectiveness is reflected in our alumni through tracking of career placement following graduation as well as alumni awards or other recognition.

Consistent with UMass Dartmouth's role as the lead campus for the IMS program, the SMAST Dean coordinates the assessment of the IMS program across the various participating campuses. At the recommendation of the external review committee, beginning in fall 2018, the SMAST Dean will also request that each participating campus submits to the SMAST Dean's Office an annual assessment report that includes the following information: (1) annual student enrollments and number of graduates; (2) educational opportunities for students (courses offered, etc.); (3) placement of graduates; (4) role of the University in marine science policymaking; (5) annual grants and contracts expenditures; (6) percent of time faculty spend on IMS; (7) number of faculty in IMS; and (8) funding sources that support students.

In addition to the committee's recommendation relating to assessment, many other constructive recommendations were provided by the committee in their report. What follows is a summary of the IMS AQAD review along with the committee's recommendations and associated responses and Action Plan provided by the IMS faculty.

The IMS AQAD Review

The SMAST and IMS faculty completed the final draft of the IMS AQAD self-study in January 2018, and this was submitted to the external reviewers who then conducted their site visit on February 25-26, 2018. The reviewers were Dr. Megan Davis, Associate Executive Director for Academic Affairs and Economic Development, Florida Atlantic University, Harbor Branch Oceanographic Institute; Dr. Christopher F. D’Elia, Dean and Professor, College of the Coast and the Environment, Louisiana State University; Dr. Mary C. Fabrizio (Chair), Professor of Marine Science, Department of Fisheries Science, Virginia Institute of Marine Science; and Dr. James O’Donnell, Professor of Marine Sciences and Executive Director, Connecticut Institute for Resilience and Climate Adaptation, University of Connecticut.

In the committee’s report, received in late April 2018, they affirmed many strengths of both IMS and SMAST, including relevance of the programs to institutional mission and goals and to regional needs, opportunities for students to be involved in high-impact research and engage with multiple “agencies, corporations, non-profits, research, and academic organizations,” and the wide range of academic foci available to students through the intercampus nature of the IMS program. The committee also identified some weaknesses that should be addressed. These included lack of centralized administrative authority over the IMS program and stronger linkages between the IMS graduate program and undergraduate education. Various concerns of the graduate students were also noted. The committee offered many recommendations, which were detailed in their report. Plans to address these were given in the IMS AQAD Response and Action Plan submitted on June 28, 2018. Those recommendations that pertain specifically to the IMS graduate program included the following: (1) improve overall administrative structure of the IMS program; (2) reevaluate the areas of specialization within the IMS program; (3) standardize the methods of tracking progress and assessment of the academic programs across the four participating campuses; (4) expand opportunities for non-thesis degree students; (5) form program advisory committees; (6) expand funding opportunities for students; and (7) improve academic quality of core courses.

The committee offered various other recommendations that alluded to operational and administrative aspects of SMAST. These included development of a strategic implementation plan, improved communication between the SMAST faculty and UMass Dartmouth administration, establishment of an affiliation with an undergraduate program on the UMass Dartmouth campus, implementation of procedures to enhance safety and security of SMAST students, increasing the diversity of faculty and students, addressing needs for replacement of faculty in key areas, and articulating clear expectations for faculty workload. These, along with additional recommendations not summarized here, were addressed in the IMS AQAD Response and Action Plan.

The IMS faculty and the SMAST Dean generally accepted the committee’s conclusions and recommendations. The responses are briefly summarized below:

- The consensus of all the participating campuses was that the current administrative structure of the IMS program should be retained. Although we understand the committee’s reasoning for favoring a more centralized program administration, the reality

is that each campus is expected to administer to its own students within the framework of the IMS. Intercampus policies and administration are handled through the coordinating and program oversight committees. We agree with the external committee that the website should be improved, and we have made progress in that area as a result of the committee's recommendation, including upgrading the IMS program website, and providing a central web repository for documents and guidance for participating faculty and students. We also agree that more efforts should be made to increase cross-campus coordination, interactions, and opportunities for IMS faculty and students.

- Regarding areas of specialization within the IMS, this action will be considered by the intercampus coordinating committee and would require involvement of the faculty across the four participating campuses. Any formal changes will require appropriate levels of academic review.
- For purposes of assessment, the SMAST Dean, who chairs the intercampus coordinating committee, will request that each campus submits an annual assessment report to the Dean's Office with the information listed previously in this summary.
- The IMS external committee provided a recommendation regarding non-degree seeking students, but in the narrative, the committee referenced the Professional Science Master's (PSM) program, which is an IMS non-thesis degree program. There is also a non-thesis MS degree option. The IMS faculty agree that these programs, as well as developing new certificate programs and encouraging non-degree students to take courses, should be encouraged.
- Furthermore, as recommended by the committee, we have now formed a PSM external advisory board to provide guidance in seeking external partnerships with different organizations to broaden the range of opportunities for our students and ideally provide for internship opportunities as well as engagement of external professionals as student advisors.
- The committee recommended that additional funding for IMS graduate students be identified to expand the opportunities for students in the program. Since the external committee's visit, the UMass system office has announced that it will gradually phase out the central funding for the IMS program. The phasing out of these funds makes it even more imperative that alternative sources be identified. Currently, students are supported through a diverse range of sources, with the central IMS funds accounting for about 12% of all funding, as detailed in the IMS AQAD Self-study.
- In response to the recommendation to improve core course quality, the SMAST faculty have formed an ad hoc committee to review student feedback in core course evaluations and to examine and implement strategies to enhance the content and delivery of course material.

Various activities are underway to address the administrative and operational recommendations of the external committee including development of a strategic implementation plan which will build on the Action Plan summarized below, as well as establishing regular communication between SMAST faculty and the UMass Dartmouth administration. Faculty teaching workload issues must be addressed through increased contribution to the expansion of undergraduate programming. Related to this is a need to develop a hiring plan for SMAST faculty to assure critical mass in fundamental areas essential to the program as well as to advance new initiatives in emerging areas.

An Action Plan was developed that identified several major goals organized around four major themes including academic, undergraduate instruction, curriculum, and leadership and administration of the IMS program. The goals are as follows:

Academic

1. Improve enrollment and retention
2. Set clear expectations for faculty workload

Undergraduate Instruction

3. Increase the contributions by SMAST faculty to undergraduate instruction

Curriculum

4. Take steps to ensure that students have access to a coherent curriculum that meets programmatic needs and is delivered with high quality

Administration and Leadership

5. Continually evaluate and improve IMS administrative processes and maintain a clearly defined leadership structure

Specific actions associated with each of these goals are detailed in the IMS AQAD Action Plan. These goals will be the foundation for the development of a more detailed strategic implementation plan. SMAST faculty and administration have already begun this development process and will be reviewing this with the UMass Dartmouth administration in the fall 2018 semester.

The IMS AQAD review was a highly constructive process and has already resulted in many positive changes as well as putting in motion a mechanism for continuous assessment and improvement. We are very grateful to all who participated in and contributed to this effort and are excited about the future prospects for the IMS program.

Retention and Graduation Rates

For the UMass Dartmouth IMS students, average time to degree over the course of the program for full-time students was 3.1 years for MS students and 5.7 years for Ph.D. students.

Regarding retention, the self-study reported an overall student retention for the IMS program at UMass Dartmouth of about 77% (23% of students leaving the program prior to degree completion). Further analysis of retention data was conducted by considering only students at SMAST, excluding those who left for medical or health reasons, and including students that returned and completed their degrees. In that case, the retention rate of SMAST students was considerably higher (~85% retention). Nevertheless, it was agreed that ensuring timely progress towards degree and addressing student well-being and satisfaction with the program must be a priority. Efforts are being made to ensure that student progress is being tracked on a regular basis. Results from the fall 2017 student survey as well as recommendations from the AQAD

external committee will also be considered in efforts to improve student satisfaction with the program.

More detailed retention results as of 2017 are given in the table below.

Year Enrolled	Degree	One Year Retention	Five Year Retention	Graduation Rate
2012	MS	100.0%	N/A	100.0%
2013	MS	100.0%	N/A	66.7%
2014	MS	100.0%	N/A	50.0%
2015	MS	100.0%	N/A	N/A
2016	MS	91.7%	N/A	N/A
2017	MS	100.0%	N/A	N/A
2012	PhD	50.0%	33.3%	N/A
2013	PhD	100.0%	80.0%	40.0%
2014	PhD	100.0%	N/A	N/A
2015	PhD	100.0%	N/A	N/A
2016	PhD	100.0%	N/A	N/A
2017	PhD	100.0%	N/A	N/A

Generally, retention has been high with the exception of the Ph.D. program in 2012.