Outcomes Assessment Plan - DRAFT

Department of Mathematics, University of Rhode Island

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1 Introduction

2 Definition of terms

1. Objectives Statements that describe what students are expected to know and able to
do by the time of graduation

2. Performance Criteria Specific, measurable statements identifying the performance(s)
required to meet the outcome; confirmable through evidence.

3. Assessment Process that identify, collect, use and prepare data that can be used to
evaluate achievement.

4. Evaluation Process of reviewing the results of data collection and analysis and making
a determination of the value of findings and action to be taken.
3 Mission of the University of Rhode Island

The University of Rhode Island is the principal public research and graduate institution in the State of Rhode Island with responsibilities for expanding knowledge, for transmitting it, and for fostering its application. Its status as a land grant, sea grant, and urban grant institution highlights its traditions of natural resource, marine, and urban related research. The University is committed to providing strong undergraduate programs to promote students’ ethical development and capabilities as critical and independent thinkers. To meet student and societal needs, it offers undergraduate professional education programs in a wide range of disciplines. Graduate programs provide rigorous advanced study and research opportunities for personal and professional development. With undergraduate and graduate programs in the liberal arts and sciences and focus programs in the areas of marine and environmental studies; health; children, families, and communities; and enterprise and advanced technology, the University strives to meet the rapidly changing needs of the State, the country, and the world.

To help achieve the teaching, research, and service objectives referred to above and to extend intellectual, cultural, and social horizons, the University offers a variety of special programs, including opportunities for learning outside the classroom and for community service. Committed to effective learning, the University encourages close student-faculty interaction. Distinctive programs such as interdisciplinary research partnerships involving faculty, students, and practitioners from within and outside the University are supported. It collaborates with governmental and other agencies, with other educational institutions, and with industry. It maintains extensive outreach and continuing education programs. The University sponsors an extensive array of concerts, performances, and exhibitions in music, theater, and other fine arts, and maintains significant recreational facilities and notable programs in intramural and intercollegiate athletics.

The University seeks talented undergraduate and graduate students, faculty, and staff from a wide array of cultural, economic, and ethnic backgrounds who collaborate in an intellectual and social community of mutual respect to learn, to be enriched, and to produce significant research and scholarly and creative works. Its students in all their diversity from Rhode Island, across the country, and around the globe are expected to be active participants both in and beyond the classroom. Their performance, potential, and commitment mark them as capable of advanced study and as future leaders.

To fulfill its special obligations to the State of Rhode Island, the University cooperates in offering programs with other Rhode Island institutions of higher education, public and private. It is committed, through cooperative governance, to an on-going evaluation of programs, priorities, and processes in order to improve existing programs and to anticipate changing needs and new challenges. Aspiring to have a quality and extent of influence beyond the state, with breadth of vision and boldness of approach, the University of Rhode Island strives for excellence for Rhode Island and for the country.
4 Mission of the Department of Mathematics

The interlocking aims of the Mathematics Department are to provide high quality, forward-looking instruction in mathematics for all students, at all levels; to encourage and develop the mathematical skills and talents of those undergraduates with a special intellectual and professional interest in mathematics; to train, at the graduate level, a corp of accomplished mathematical teacher/researchers; to advance the field of mathematics in our focused research areas; and to serve as a principal resource in mathematics for the University community.

5 Objectives of the program

By the time of graduation, students of undergraduate mathematics programs at URI will

1. Develop depth and breadth in mathematical knowledge essential to the degree/program.
2. Learn or strengthen fundamental concepts of calculus and linear algebra.
3. Apply mathematical reasoning based in definitions, axioms and theorems to read and write mathematical proofs.
4. Read and understand mathematical language and symbols.
5. Formulate and evaluate mathematical conjectures.
6. Use technology to do calculations, visualizations, and test hypotheses.
7. Communicate mathematical ideas in written, oral, and electronic form.
8. Apply mathematical concepts and techniques to solving applied problems.
9. Read appropriate mathematical literature and write an expository paper.
10. Be able to treat a large, complex mathematical problem.
11. Become an independent learner.
12. Explore advanced perspectives in mathematics and appreciate its beauty.

References