

# Assessment Report - Four Column

## Eastern Oregon University Program (CAS) Mathematics

**Catalog Description:** The BA/BS in Mathematics is based on the recommendations of the Committee on the Undergraduate Program in Mathematics (CUPM), a working committee of the Mathematical Association of America. These recommendations acknowledge the need for people trained in disciplined, logical reasoning and who understand the basic methods and models of the mathematical sciences and who are able to convey their mathematical knowledge orally and in writing. The result is a program that provides broad coverage of the main branches of mathematics and yet includes opportunities for elective examination of special topics such as probability and statistics, discrete mathematics, geometry, and areas of applied mathematics.

**How Program serves the Mission:** The mathematics program supports the mission of the university by providing the necessary mathematical and statistical support courses for students in many disciplines. These disciplines come from both the liberal arts and professional programs and include computer science, the physical and biological sciences, the social sciences, business and economics, multimedia, education, and health. We also offer courses that support students in EOU partner programs such as the OSU agricultural business program and the OHSU nursing degree. The program also plays a major role in the preparation of highly qualified teachers of mathematics for elementary, middle, and secondary schools. Graduates also find employment in the private sector. The program serves the region by promoting outreach activities. These include hosting the annual Regional High School Mathematics Contest and assisting in events such as Girls in Science and the Lego Robotics Competition.

Program Outcomes	Means of Assessment & Benchmark / Tasks	Data Analysis	Closing the Loop & Follow-Up
Program (CAS) Mathematics - Content Knowledge - Graduates will demonstrate a broad-based knowledge of mathematical content and technique. <b>Year(s) to be Assessed:</b> 2009-2010 2013-2014  <b>Outcome Status:</b> Active	<b>Description of Assessment:</b> Probability: 6 questions taken from 3 exams	07/12/2011 - Though one target goal was not met on this problem, it was through a misunderstanding of a single student, which was easily rectified. Students generally performed well on this question. <b>Benchmark Met:</b> Yes <b>Reporting Year:</b> 2009-2010 <b>Related Documents:</b> <a href="#">Fall 2009 Assessment</a>	07/12/2011 - With a few exceptions students performed at or above target goals. Students seemed to have a solid grasp of concepts as all goals were met for the two ?conceptual problems? that were assessed. Three target goals failed to be met among the ?computational problems?. However two of these targets were missed due to a single student with an unsatisfactory performance. The third showed a deficiency in understanding how to apply Bayes? Theorem. An end-of-term assessment showed that further work on such applications seems to have been

Program Outcomes	Means of Assessment & Benchmark / Tasks	Data Analysis	Closing the Loop & Follow-Up
<p>Program (CAS) Mathematics - Problem Solving - Graduates will demonstrate problem-solving skills in the context of mathematics, and the ability to apply techniques learned in the study of specific topics in new areas.</p> <p><b>Year(s) to be Assessed:</b> 2010-2011 2014-2015</p> <p><b>Outcome Status:</b> Active</p>	<p><b>Description of Assessment:</b> Modeling: modeling project, written paper</p>	<p>07/12/2011 - All targets were met for all four performance criteria. Of the ten students evaluated, only one showed unsatisfactory results for organization and quality and depth of problem. All ten students had satisfactory accuracy of content. The strongest results were in ?depth of content? for which eight of the ten students were judged to be excellent.</p> <p><b>Benchmark Met:</b> Yes</p> <p><b>Reporting Year:</b> 2010-2011</p> <p><b>High Impact Practice (HIP) - only choose one:</b> University Writing Requirement</p> <p><b>Related Documents:</b> <a href="#">Math Fall 2010 Assessment</a></p>	<p>07/12/2011 - We appear to be doing a fine job helping students achieve the ?problem solving? outcome. This is verified not only by our assessment within the course, but externally, as three of the students from this course received an ?Outstanding? award for their efforts in the COMAP Mathematical Modeling Contest. No changes are deemed necessary based on these results.</p>
<p>Program (CAS) Mathematics - Inquiry and Analysis - Graduates will be able to employ the skills of independent, careful analysis of mathematical exposition.</p> <p><b>Year(s) to be Assessed:</b> 2011-2012 2015-2016</p> <p><b>Start Date:</b> 07/01/2011</p> <p><b>Outcome Status:</b> Active</p>	<p><b>Description of Assessment:</b> Structures: TBD</p>		
<p>Program (CAS) Mathematics - Communication - Graduates will be able to use written and oral communication skills appropriate to mathematical exposition.</p>	<p><b>Description of Assessment:</b> Seminar presentations and written paper</p> <p><b>Assessment Type:</b> Capstone Assignment/Project</p>	<p>07/12/2011 - While all students completed the course with passing grades, the purposes of this assessment require a different standard, insofar as we use the assessment to push for improvements in our</p>	<p>07/12/2011 - Students do well on content depth, but we clearly have room for improvement in overall quality of their final products. We have made</p>

Program Outcomes	Means of Assessment & Benchmark / Tasks	Data Analysis	Closing the Loop & Follow-Up
<b>Year(s) to be Assessed:</b> 2008-2009 2012-2013  <b>Outcome Status:</b> Active		<p>curriculum and pedagogy. The assessment made clear the need for improvements, most particularly with increasing the quality of submitted papers, and with verbal communication in presentations.</p> <p><b>Benchmark Met:</b> Yes</p> <p><b>Reporting Year:</b> 2008-2009</p> <p><b>Related Documents:</b>  <a href="#">Math Spring 2009 Assessment</a> </p>	<p>adjustments to the course structure for 2009-2010 based on this assessment. The primary change will be to establish the beginning of research presentations several weeks earlier, by the fourth week of winter term. In addition, we will spend more time discussing the rubric for presentations, and provide more feedback to students from their weekly updates.</p>
	<b>Description of Assessment:</b> Due to assess Communication 12-13		

# Curriculum Map

## Eastern Oregon University

### Program (CAS) Mathematics

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**Content Knowledge - Graduates will demonstrate a broad-based knowledge of mathematical content and technique.**

- \* MATH 251 - MATH 251 - Calculus I\*SMI
- \* MATH 252 - MATH 252 - Calculus II\*SMI
- \* MATH 253 - MATH 253 - Calculus III\*SMI
- \* MATH 311 - MATH 311 - Advanced Calculus
- \* MATH 341 - MATH 341 - Linear Algebra
- \* MATH 344 - MATH 344 - Modern Algebra I
- \* MATH 382 - MATH 382 - Structures Abstract Math
- \* STAT 243 - STAT 243 - Elementary Statistics

**Problem Solving - Graduates will demonstrate problem-solving skills in the context of mathematics, and the ability to apply techniques learned in the study of specific topics in new areas.**

- \* MATH 251 - MATH 251 - Calculus I\*SMI
- \* MATH 252 - MATH 252 - Calculus II\*SMI
- \* MATH 341 - MATH 341 - Linear Algebra
- \* STAT 243 - STAT 243 - Elementary Statistics

**Inquiry and Analysis - Graduates will be able to employ the skills of independent, careful analysis of mathematical exposition.**

- \* MATH 253 - MATH 253 - Calculus III\*SMI
- \* MATH 311 - MATH 311 - Advanced Calculus
- \* MATH 344 - MATH 344 - Modern Algebra I
- \* MATH 382 - MATH 382 - Structures Abstract Math
- \* MATH 407 - MATH 407 - Seminar

**Communication - Graduates will be able to use written and oral communication skills appropriate to mathematical exposition.**

- \* MATH 311 - MATH 311 - Advanced Calculus
- \* MATH 341 - MATH 341 - Linear Algebra
- \* MATH 344 - MATH 344 - Modern Algebra I
- \* MATH 382 - MATH 382 - Structures Abstract Math
- \* MATH 407 - MATH 407 - Seminar
- \* STAT 243 - STAT 243 - Elementary Statistics

## Program Outcomes - Assessment Cycle

Year(s) to be Assessed	Program Outcome Name	Unit Name
2008-2009	Communication	Program (CAS) Mathematics
2009-2010	Content Knowledge	Program (CAS) Mathematics
2010-2011	Problem Solving	Program (CAS) Mathematics
2011-2012	Inquiry and Analysis	Program (CAS) Mathematics
2012-2013	Communication	Program (CAS) Mathematics
2013-2014	Program Review - No Assessment	Program (CAS) Mathematics
2014-2015	Content Knowledge	Program (CAS) Mathematics
2015-2016	Problem Solving	Program (CAS) Mathematics
2016-2017	Inquiry and Analysis	Program (CAS) Mathematics