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Assessment of Student Learning Reports

Assessment of Student Learning Committee
(Inactive)

Spring 2017

Mathematics Discipline Assessment PSLO's Spring 2017

Mathematics Discipline

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Math PSLO Suggested Topics to Assess

1. Students will be able to employ basic mathematical knowledge and quantitative literacy skills to explain and understand applications and issues facing society.

Math 1001 Excursions in Math

amortization, minimum wage, consumer price index, fair division, elections

Math 1101 Calculus I & Math 1021 Survey of Calculus

related rates of change, optimization

Math 1102 Calculus II

application of integration, population growth models with differential equations

2. Students will be able to apply algorithmic mathematical techniques and methods to demonstrate competence in problem-solving.

Math 1101 Calculus I & Math 1021 Survey of Calculus

differentiation techniques, integration techniques.

Math 1102 Calculus II

volumes of rotation formulas, arclength, integration techniques, testing series for convergence

Math 2401 Differential Equations

classifying and solving DEs using appropriate techniques.

Math 3111 Linear Algebra

Math 3211 Geometry

Math 3401 Operations Research

Math 4401 Numerical Methods

3. Students will be able to apply mathematical intuition and abstract reasoning to analyze and solve mathematical problems.

Math 2101 Calculus III

Math 2202 Mathematical Perspectives

Math 2212 Introduction to Knot Theory

Math 3111 Linear Algebra

Math 3221 Real Analysis I

Math 3231 Abstract Algebra I

Math 3411 Discrete Math

Math PSLO Suggested Topics to Assess

Math 4201 Complex Analysis
Math 4211 Real Analysis II
Math 4221 Topology
Math 4231 Abstract Algebra II
Math 4241 Number Theory
Math 4401 Numerical Methods
Math 4452 Math Modeling
Math 4901 Senior Seminar

4. Students will be able to integrate their mathematical knowledge from different areas to prepare them for more in-depth mathematical study.

Any course with an in-depth project that is more open-ended in nature which will require students to make connections between different areas or apply techniques in new situations.

Math 2401 Differential Equations
Math 3111 Linear Algebra
Math 3211 Geometry
Math 3401 Operations Research
Math 4401 Numerical Methods
Math 4452 Math Modeling
Math 4901 Senior Seminar

5. Students will be able to communicate mathematical concepts clearly and persuasively in written reports and oral presentations.

Any course with presentations and papers. Presentations can be at a variety of levels, from short homework solution presentations to presentation of more advanced topics in senior seminar. Similar for papers, from more open-ended assignments requiring a formal write-up of a page or two in lower level classes to senior seminars.

Math 1021 Survey of Calculus
Math 1101 Calculus I
Math 2211 History of Math
Math 2401 Differential Equations
Math 3111 Linear Algebra
Math 3401 Operations Research
Math 4401 Numerical Methods
Math 4452 Math Modeling
Math 4901 Senior Seminar