

Modified 12/1/09 by Maxie Inigo

1. Changed boxes to three levels. Descriptions for the proficiency levels begins on page 4.
2. Deleted Gen Ed outcome 2D. Math department does not feel our final exam questions measure this and believe it should be measured in the social and behavioral science block.
3. Grading rubrics are attached.

**2.) Thinking Skills**– Using a variety of inquiry methods, resources, and reasoning skills that support and promote lifelong learning.

- a). Formulate vital questions and problems in a clear and precise manner.

Instrument: Mathematics Common final questions and grading rubric

**Math Outcome 8 - Communicate using the language of mathematics.**

Measure and baseline -

MAT 142 and MAT 151 Common final questions and grading rubric TBD

142	2008-09	2009-10	2010-11
Proficiency Level	Percentage	Percentage	Percentage
Mastery/Consistently Demonstrates	14.3%	%	%
Proficient/ Frequently Demonstrates	38.1%	%	%
Emerging/Rarely Demonstrates	47.6%	%	%

Not measured FY08-09 but will be in the future.

151	2008-09	2009-10	2010-11
Proficiency Level	Percentage	Percentage	Percentage
Mastery/Consistently Demonstrates	%	%	%
Proficient/ Frequently Demonstrates	%	%	%
Emerging/Rarely Demonstrates	%	%	%

- b). Gather, assess, and interpret information within a theoretical framework.

Instrument: Mathematics Common final questions and grading rubric

Measure and baseline -

**Math Outcome 3 - Create and interpret graphical representation**

MAT 142 and MAT 151 Common final questions and grading rubric TBD

MAT 142	2008-09	2009-10	2010-11
Proficiency Level	Percentage	Percentage	Percentage
Mastery/Consistently Demonstrates	82.8%	%	%
Proficient/ Frequently Demonstrates	12.4%	%	%
Emerging/Rarely Demonstrates	4.8%	%	%

151	2008-09	2009-10	2010-11
Proficiency Level	Percentage	Percentage	Percentage
Mastery/Consistently Demonstrates	37.9%	%	%
Proficient/ Frequently Demonstrates	44.8%	%	%
Emerging/Rarely Demonstrates	17.3%	%	%

c). Develop well-reasoned conclusions and solutions to problems.

Instrument: Mathematics Common final questions and grading rubric  
Measure and baseline -

**Math Outcome 1 - Applying mathematics in context using appropriate problem solving skills**

MAT 142 and MAT 151 Common final questions and grading rubric TBD

142	2008-09	2009-10	2010-11
Proficiency Level	Percentage	Percentage	Percentage
Mastery/Consistently Demonstrates	51.4%	%	%
Proficient/ Frequently Demonstrates	12.4%	%	%
Emerging/Rarely Demonstrates	36.2%	%	%

151	2008-09	2009-10	2010-11
Proficiency Level	Percentage	Percentage	Percentage
Mastery/Consistently Demonstrates	56.9%	%	%
Proficient/ Frequently Demonstrates	9.5%	%	%
Emerging/Rarely Demonstrates	33.6%	%	%

The math department does not feel we measure this outcome with our common final questions.

d). Recognize and assess the assumptions, implications, and consequences of different theoretical frameworks.

Instrument: Mathematics Common final questions and grading rubric

**Perform operations on mathematical structures that may include real, complex, matrix, function space**

Measure and baseline -

MAT 142 and MAT 151 Common final questions and grading rubric TBD

142	2008-09	2009-10	2010-11
Proficiency Level	Percentage	Percentage	Percentage
Mastery/Consistently Demonstrates	%	%	%
Proficient/ Frequently Demonstrates	%	%	%

Emerging/Rarely Demonstrates	%	%	%
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151	2008-09	2009-10	2010-11
Proficiency Level	Percentage	Percentage	Percentage
Mastery/Consistently Demonstrates	%	%	%
Proficient/ Frequently Demonstrates	%	%	%
Emerging/Rarely Demonstrates	%	%	%

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## Definitions of Proficiency Levels for Math Program and Gen Ed Outcomes—Fall 2009

**Gen Ed Outcome 2a: Formulate vital questions and problems in a clear and precise manner.**

**Math Outcome 8: Communicate using the language of mathematics.**

**Mastery:** The student can communicate in a clear and precise manner using the language of mathematics.

**Proficient:** The student's mathematical communication does not obscure meaning; however, there are some mathematical language errors.

**Emerging:** The student's mathematical language obscures meaning.

**Gen Ed Outcome 2b: Gather, assess, and interpret information within a theoretical framework.**

**Math Outcome 3: Create and interpret graphical representation.**

**Mastery:** The student can create and interpret graphical representation.

**Proficient:** The student can either create graphical representation or interpret it, but not both.

**Emerging:** The student has minimal understanding of creating and interpreting graphical representation.

**Gen Ed Outcome 2c: Develop well-reasoned conclusions and solutions to problems.**

**Math Outcome 1: Apply mathematics in context using appropriate problem solving skills.**

**Mastery:** The student can recognize a problem, develop a correct mathematical model to solve the problem, and find the correct solution to the problem.

**Proficient:** The student can recognize a problem, develop a reasonable mathematical model to solve the problem, but cannot find the correct solution to the problem.

**Emerging:** The student has minimal understanding of solving a problem.

**Points from common final questions associated with proficiency levels:**

Mastery: 4 or 5 points

Proficient: 2 or 3 points

Emerging: 0 or 1 points