

Student Learning Outcomes for MATH 41

Precalculus I: Theory of Functions

Team Members:

Team Leader:

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Additional team members/notes about team:

Charlie Klein, Iaroslav Kryliouk,
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Additional Notes:

Outcomes:

Outcome 1 Phase I: Statement

Investigate, evaluate, and differentiate between algebraic and transcendental functions in their graphic, formulaic, and tabular representations.

Outcome 1 Phase II: Assessment Strategy Used:

Assessment Quarter: Winter 2011

Assessors: Iaroslav Kryliouk, Iaroslav Kryliouk

Assessment Tools: • • Projects

Outcome 1 Phase III: Reflect & Enhance

Number of people involved in Phase III: 2

Changes:

There are no prior assessments for this course. This course is new in the 2010-2011 academic year.

Methods:

Problems were assigned on exams to assess students understanding of the material.

Findings and Conclusions:

The students did better on symbolic representation of functions as compared to graphical representations of functions. This was not surprising to us. Some students experienced difficulty in interpretations of slope, inverse functions in the context. Some students had difficulty with domain or range and asymptotes of logarithmic or exponential functions. Almost all areas could use improvement.

Enhancement (Planned Actions)**Part I:**

In the future, we will attempt to use more examples with functions in the context (word problems).

Part II:

Not really much more resources. We just need to come up with more examples to present in class. Such examples can be found other textbooks already available and online.

Outcome 2 Phase I: Statement

Synthesize, model, and communicate real-life applications and phenomena using algebraic and transcendental functions.

Outcome 2 Phase II: Assessment Strategy Used:

Assessment Quarter: Winter 2011

Assessors: Iaroslav Kryliouk

Assessment Tools: • • Projects

Sections being assessed: 03, 08

Outcome 2 Phase III: Reflect & Enhance

Number of people involved in Phase III: 2

Changes:

This is a new course in Academic year 2010-2011 and does not have an prior assessments for this course.

Methods:

Problems were asked on exams to assess students understanding of this material.

Findings and Conclusions:

Some students experienced difficulties translating word problems in mathematical models and giving conceptual interpretations of parameters in the models. However some students did well in modeling applications. Almost all areas need improvement on the part of some students in order to meet expectations. Continuing attention needs to be paid to helping students translate problems into mathematical models consistently throughout the topics in this course.

Enhancement (Planned Actions)**Part I:**

Part II:

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