

## Student Learning Outcomes for MATH 2A

*Differential Equations*

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### Team Members:

**Team Leader:**

[Hassan Bourgoub](#) (8806) in MATH

**Other members:**

1. [Hassan Bourgoub](#) (x8806) MATH

**Additional team members/notes about team:**

Edwin Njinimbam, Hassan Bourgoub, Bert Lo, Mehrdad Khosravi, Rick Taylor, Farshod Mosh

**Additional Notes:**

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### Outcomes:

**Outcome 1 Phase I: Statement**

Construct and evaluate differential equation models to solve application problems.

**Outcome 1 Phase II: Assessment Strategy Used:**

Assessment Quarter: Winter 2011

Assessors: Hassan Bourgoub, Hassan Bourgoub Farshod Mosh, Mehrdad Khosravi

Assessment Tools: • •

**Outcome 1 Phase III: Reflect & Enhance**

**Number of people involved in Phase III:** 2

**Changes:**

Changes were made to one of the long-term assessment tools. The tests were re-formatted and new questions were added to the test, along with some questions removed, to account for what we learned about student understanding.

**Methods:**

Over the first two tests and class project students were given real life situations and were asked to write a differential equation to model the situation.

**Findings and Conclusions:**

Most students were able to construct and evaluate differential equations to solve application problems. Those student who were not able to perform as expected felt more comfortable with the process after the solution was presented on the board thus they were more confident when given similar problems later in the quarter.

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

To help those students who had difficulty following the projects and problems we adjusted those projects and added more steps to help them understand the process better.

**Part II:**

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**Outcome 2 Phase I: Statement**

Classify, solve and analyze differential equation problems by applying appropriate techniques and theory.

**Outcome 2 Phase II: Assessment Strategy Used:**

Assessment Quarter: Winter 2011

Assessors: Hassan Bourgoub Farshod Mosh, Merhdad Khosravi

Assessment Tools: *No tools assigned.*

**Outcome 2 Phase III: Reflect & Enhance**

**Number of people involved in Phase III:** 2

**Changes:**

We changed couple of the tests and added/removed some questions to assess this outcome.

**Methods:**

We gave two tests and designated some of the questions where the students were asked to recognize different types of differential equations and using techniques taught in class, solve each type of equation.

**Findings and Conclusions:**

Students were able to classify, solve, and analyze differential equations problems by applying appropriate techniques and theory. Most students were able to recognize different types of differential equations and know what particular technique to apply in solving them. Some students had difficulty with the solving part but after seeing the solution they seemed to understand the perform better.

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

We changed the questions and broke them into more parts so students could follow the problem and find the solutions step by step. .

**Part II:**

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**Outcome 3 Phase I: Statement****Outcome 3 Phase II: Assessment Strategy Used:**

Assessment Quarter: Winter 2011

Assessors: Hassan Bourgoub

Assessment Tools: *No tools assigned.*

**Outcome 3 Phase III: Reflect & Enhance**

**Number of people involved in Phase III:** 1

**Changes:**

There are only two SLOs. Delete Outcome #3.

**Methods:**

There are only two SLOs. Delete Outcome #3.

**Findings and Conclusions:**

There are only two SLOs. Delete Outcome #3.

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

There are only two SLOs. Delete Outcome #3.

**Part II:****General Notes for Outcome 3**

There are only two SLOs. Delete Outcome #3.

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