Project and Assessments in Math for the Liberal Arts

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Topics in MA103

Instructors choose five topics:

- Set Theory
- Logic
- Linear Programming*
- Financial/Consumer Mathematics*
- Geometry
- Probability
- Statistics

* denotes a required topic
# From My Syllabus

## Evaluation:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>LP Project</td>
<td>10%</td>
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<tr>
<td>M3 Project</td>
<td>10%</td>
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<tr>
<td>Geometry Project</td>
<td>10%</td>
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<tr>
<td>Research Presentation</td>
<td>10%</td>
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<tr>
<td>Homework</td>
<td>20%</td>
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<tr>
<td>Midterm</td>
<td>15%</td>
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<tr>
<td>Final Exam</td>
<td>15%</td>
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<tr>
<td>Active Learning</td>
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Sample Problem: (worth 30 points)
The Pizza Palace can make a maximum number of 125 large pizzas a day. The pizza chef estimates that, at most, he will prepare 100 large cheese pizzas and 75 large pepperoni pizzas. The restaurant charges $12 for a cheese pizza and $14 for a pepperoni pizza. How many pizzas of each type must the Pizza Palace sell to maximize sales?
Linear Programming Project

In groups (of 2 or 3)
- They choose 160 points worth of similar problems
- They also create an original problem and solve it (worth 40 points)
- Rubric is given on how they will be graded
- I emphasize correctness and classiness
Geometry Project

They have to calculate the cost of painting our math common area.

They work in groups, but submit individual diagrams and calculations.
Geometry Project
Geometry Project
Mortgage Project

- In pairs, find jobs/salaries of chosen careers
- Find a house they want to buy
- Find a lender (current interest rates) for 15 and 30 year mortgages
- Fill in worksheets
- Write a short paper on ARMS
Projects

- **Research Presentation** and **Rubric**
- **Grade Your Teammates**

To recap, projects are my major way to assess my students.

This way, they leave the course with fond memories and a better outlook on mathematics.*
Assessment of Student Learning

- Background
- How We Did It
- What We Learned
- Discussion
Background

- Maryland Higher Education Commission
- Middle State Accreditation
  - Standard 12
  - Standard 14
How We Did It

- Link each assessment question to a specific General Education competency;
- Work with FCC Institutional Effectiveness Department.
  - Design a webportal to submit data
  - Analyze the data for us
What We Learned

- Our students struggle to utilize quantitative reasoning skills.
- Share the assessment results and ask for feedback
- Continuous discussions enhances student learning.