**STLF Report to CWSEI and Mathematics Department**

**STLF:** Joseph Lo  
**Period:** 2011-11-10 – 2012-01-06  
**Submitted:** 2012-01-06

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**Specific activities performed by STLF**

1) **Professional development**
   - Attended the Lunch Series in Teaching and Learning (Nov 22)
   - Discussed in math reading group on “Evaluating student response to WeBWorK” (Nov 28)

2) **Math SEI general meetings/activities**
   - Met with Sarah and Math-SEI group to review current projects and discuss future plans (Nov 14)
   - Attended weekly STLF meetings (Nov 17)
   - Met with Costanza to review current projects and discuss future plans (Nov 21)
   - Met with Math-SEI group to review current projects and discuss future plans (Nov 23)
   - Met with Jim Carolan to review current projects and discuss future plans (Nov 24)

3) **Course-specific meetings/activities**

   **MATH 210 – Introduction to Mathematical Computing**
   - Assignments and tests will be done on computers and submitted through Vista.
   - A diagnostic test on series is given on Jan 6. This is part of the tracking of series skills. Results will be included in the next report.
   - I am currently working on course materials on Maple. More than 3 weeks of materials has been developed at this point. Materials on MATLAB will be prepared by the instructor and the TA.
   - I have been and will be attending all classes and labs. Short discussion with the instructor will be made every class.
   - I will need to substitute for the instructor from Feb 1 to Feb 17.

   **MATH 305 – Applied Complex Analysis**
   - Midterm 2:
     - The test consists of 4 multiple-part questions
     - Results:

     |                      | Overall | ENPH    | MATH    | Other |
     |----------------------|---------|---------|---------|-------|
     | # students           | 62      | 42      | 11      | 9     |
     | MT1 Average (/50)    | 33.5 ± 0.7 | 34.2 ± 0.9 | 30.3 ± 1.7 | 34.4 ± 2.1 |
     | MT2 Average (/50)    | 29.1 ± 1.2 | 30.0 ± 1.4 | 25.6 ± 2.9 | 29.0 ± 3.0 |

   - Math students did worst in the midterm. As mentioned in the previous report, these math students have lower grades on their previous courses than the rest of the class.
   - A survey was given at the end of the term. I will process them soon and include the results in the next report.

   **MATH 110 – Differential Calculus**
December exam (E1):
- The December Exam consists of 10 multiple-part questions and 1 bonus question.
- Results:

<table>
<thead>
<tr>
<th></th>
<th>MT 1 (/40)</th>
<th>E1 (/70)</th>
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</thead>
<tbody>
<tr>
<td># students</td>
<td>268</td>
<td>247</td>
</tr>
<tr>
<td>Average</td>
<td>24.7 /40</td>
<td>31.2 /70</td>
</tr>
<tr>
<td>Average (%)</td>
<td>61.7%</td>
<td>44.6%</td>
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</tbody>
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- This is a difficult exam.
- No questions were similar to workshop problems.

Remedial assignments
- I am responsible for the creation of the weekly remedial assignments on MathXL.
- Remedial assignments consists of two parts:
  - Part A: algebra (for those who failed the algebra part of the diagnostic)
  - Part B: graphs and applications (for those who failed the remaining part of the diagnostic)
- Students in general spent approximately 20 to 30 minutes on each part.
- % of students who are assigned the remedial work actually did the work (got a non-zero mark)

<table>
<thead>
<tr>
<th></th>
<th>1st asmt</th>
<th>2nd asmt</th>
<th>3rd asmt</th>
<th>4th asmt</th>
<th>5th asmt</th>
<th>6th asmt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part A (132 students)</td>
<td>91%</td>
<td>83%</td>
<td>62%</td>
<td>65%</td>
<td>57%</td>
<td>63%</td>
</tr>
<tr>
<td>Part B (103 students)</td>
<td>91%</td>
<td>78%</td>
<td>70%</td>
<td>67%</td>
<td>59%</td>
<td>66%</td>
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- Participation rate dropped in the beginning, but stabilized during the last few weeks of classes.

Workshops
- I am responsible for the observations in the workshops. Each week I will report my feedbacks to the instructor during our regular meeting and to the TAs in weekly TA sessions.

Series Diagnostic Test
- This is part of the series skill tracking project. I am working closely with Greg Mayer who is in charge of the online Infinite Series Module.
- The test consists of 4 open questions. Two involve concepts of general series, two involve concepts of Taylor series.
- The diagnostic test was given to Math 210 during class on Jan 6. Results will be included in the next report. The test was also given to Math 257/316 as an assignment. A post-test will be given at the end of the term.
- This test will be given to Math 300 in February before the chapter on series is covered. A post-test will be given shortly after the chapter is finished.
- Other details will be included in the next report.

Current project status (material prepared by either STLF or other members of the MATH SEI)

MATH 110:
- **Learning Goals:** 3rd draft of learning goals is complete.
- **Assessments:** Workshop survey given at the end of Term 1
- **New Methods/Materials:** New problem-solving based workshops, remedial work on basic skills
MATH 210:
Learning Goals: Complete
Assessments: Series diagnostic test done.
New Methods/Materials: The MATLAB module is new. Course materials on Maple are redeveloped.

MATH 305:
Learning Goals: Complete
Assessments: Final exam done.
New Methods/Materials: None at this point

Plan for immediate future work

MATH 110:
1. Process the responses from the workshop survey.
2. Continue with the creation of remedial assignments.
3. Continue with workshop observations and gather feedback from students.

MATH 210:
1. Continue with the development of course materials (Maple).
2. Prepare lectures when substitute for the instructor.

MATH 305:
1. Process the end-of-term surveys.

Series Diagnostic Test:
1. Code the tests from Math 210 and Math 257/316.
2. Develop some future plans based on the results of the test.