BASIC INFORMATION

Requester(s):  Ted Coskey  
               Mindy Ursino  
College:  South Seattle Community College  
Division/Dept:  Academic Programs  
Dean:  Laura Kingston  
Peer Reviewer(s):  Rick A Downs

COURSE INFORMATION

Proposed Course Number:
Prefix: MATH  
Number: 111

☐ Request a new Prefix  
☐ This will be a common course

Full Title:  Applied Mathematics I  
Abbreviated Title:  Applied Mathematics I

Catalog Course Description:
To be taken in conjunction with a related trades program. Topics include: numeracy skills, proportions and ratios, applied algebra, and dimensional analysis. Topics may also include: geometry, trigonometry, fundamental physics principles, scientific notation, radicals, and first degree equations.  
Prerequisite: Satisfactory performance on placement test, or permission by program manager.

Course Length:  11 Weeks  
☐ Request an Exception

Course Prerequisite(s):
Student must take either the COMPASS or CASAS placement exam with the cut-off score determined by program; or obtain permission from program manager.

Course Corequisite(s):
N/A

Topical Outline:

Topics May Include:

1. Numeracy Skills
2. Proportions and Ratios

3. Dimensional Analysis: English and Metric Units

4. Plane Geometry

5. Physics

6. Trigonometry

7. Algebra Concepts

COURSE CODING

Funding Source: 1..................State
Institutional Intent: 21..................Vocational Preparatory

This Course is a requirement for the following program(s):

<table>
<thead>
<tr>
<th>Program Title</th>
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<tbody>
<tr>
<td>ENGINEERING TECH (642)</td>
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</tbody>
</table>

Will this course transfer to a 4-year university? No

Is this course designed for Limited English Proficiency? No

Is this course designed for Academic Disadvantaged? No

Does this course have a Workplace Training component? No

CIP Code: 27.9998

EPC Code: 892

Credits:

Will this course be offered as Variable Credit? Yes

List Course Contact Hours

- Lecture (11 Contact Hours : 1 Credit) 0 to 55
- Lab (22 Contact Hours : 1 Credit) 0 to 0
- Clinical Work (33 Contact Hours : 1 Credit) 0 to 0
- Other (55 Contact Hours : 1 Credit) 0 to 0

Total Contact Hours 0 to 55
COLLEGE SUPPLEMENTAL

Proposed Quarter of Implementation: Winter 2015

Class Capacity: 35

Modes of Delivery: (Check all that apply)
- [x] Fully On Campus
- [ ] Fully Online
- [x] Hybrid
- [ ] Other

Class Schedule Description:
This course is to be taken in conjunction with a related trades program. Topics include: numeracy skills, proportions and ratios, applied algebra, and dimensional analysis. Topics may also include: geometry, trigonometry, fundamental physics principles, scientific notation, radicals, first degree equations, and applications.
Prerequisite: Satisfactory performance on placement test, or permission by program manager.

Student Learning Outcomes:

Communication
Read and listen actively to learn and communicate

Computation
Use arithmetic and other basic mathematical operations as required by program of study

Apply quantitative skills for academic and career purposes

Human Relations
Use social interactive skills to work in groups effectively

Critical Thinking and Problem-Solving
Think critically in evaluating information, solving problems, and making decisions

Technology
Select and use appropriate technological tools for academic and career tasks

Personal Responsibility
Uphold the highest standard of academic honesty and integrity

Respect the rights of others in the classroom, online and in all other school activities
Attend class regularly, complete assignments on time and effectively participate in classroom and online discussions, group work and other class-related projects and activities.

Abide by appropriate safety rules in laboratories, shops and classroom.

<table>
<thead>
<tr>
<th>Program Outcomes:</th>
<th>Included in Course Objective Number</th>
<th>Included in Course Objective Number</th>
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<tbody>
<tr>
<td>SLO 1.1</td>
<td>4</td>
<td>Communication - Read and listen to learn and communicate.</td>
</tr>
<tr>
<td>SLO 1.2</td>
<td></td>
<td>Communication - Speak and write effectively for academic and career purposes.</td>
</tr>
<tr>
<td>SLO 2.1</td>
<td>1, 2, 3, 5</td>
<td>Computation - Use arithmetic and other basic mathematical operations as required by program of study.</td>
</tr>
<tr>
<td>SLO 2.2</td>
<td>1, 2, 3, 5</td>
<td>Computation - Apply quantitative skills for academic and career purposes.</td>
</tr>
<tr>
<td>SLO 3.1</td>
<td>4</td>
<td>Human Relations - Use social skills to work in groups effectively.</td>
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<tr>
<td>SLO 3.2</td>
<td></td>
<td>Human Relations - Have knowledge of the diverse cultures represented in our multicultural society.</td>
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<tr>
<td>SLO 4.1</td>
<td>1 - 5</td>
<td>Critical Thinking - Think critically in evaluating information, solving problems, and making decisions.</td>
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<tr>
<td>SLO 5.1</td>
<td>5</td>
<td>Technology - Select and use appropriate technological tools for personal, academic, and career tasks.</td>
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<tr>
<td>SLO 6.1</td>
<td>1 - 5</td>
<td>Personal Responsibility - Uphold the highest standards of academic honesty and integrity.</td>
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<tr>
<td>SLO 6.2</td>
<td>1 - 5</td>
<td>Personal Responsibility - Respect the rights of others in the classroom, online, and in all other school activities.</td>
</tr>
<tr>
<td>SLO 6.3</td>
<td>1 - 5</td>
<td>Personal Responsibility - Attend class regularly, complete assignments on time, and effectively participate in classroom and online discussions, group work, and other class-related projects and activities.</td>
</tr>
<tr>
<td>SLO 6.4</td>
<td>1 - 5</td>
<td>Personal Responsibility - Abide by appropriate safety rules in laboratories, shops and classroom.</td>
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<tr>
<td>SLO 7.1</td>
<td></td>
<td>Information Literacy - Independently access, evaluate, and select information from a variety of appropriate sources.</td>
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<tr>
<td>SLO 7.2</td>
<td></td>
<td>Information Literacy - Have knowledge about legal and ethical issues related to the use of information.</td>
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<tr>
<td>SLO 7.3</td>
<td></td>
<td>Information Literacy - Use information effectively and ethically for a specific purpose.</td>
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By the end of the course, a student will be able to:
1. Apply the fundamental math skills needed to solve problems related to their field of study.
2. Apply dimensional analysis and convert units related to their field of study.
3. Identify and apply the necessary geometry, trigonometry and/or fundamental physics to solve problems arising in the student's area of study.
4. Demonstrate their ability to work effectively with others on group projects.
5. Demonstrate the proper use of the tools of their trade requiring math skills. This may include reading semi-precision and precision measurement tools, and applying tolerances.

Explain the student demand for the course and potential enrollment:
The class has repeatedly enrolled successfully due to our trade partnerships. The enrollment should fall between 15 - 25 depending on the quarter.

Explain why this course is being revised:
This is a course revision.

Each trades program has its own set of outcomes. The math topics in the revision are detailed enough to provide instruction guidelines, but also allow flexibility.

What challenges, if any, do you foresee in offering this course:
The challenge is allowing the course to be adaptable to the specific trade. This course will satisfy the math requirements for the Engineering Design Technology program, Composite Technician program, and other trade programs.

If the course is offered in the hybrid mode, computer lab time will be scheduled.
This is to certify that the above criteria have all been met and all statements are accurate to the best of my knowledge.

Faculty involved in originating this program:

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
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<tbody>
<tr>
<td>Ted Coskey</td>
<td></td>
<td>6/6/2014</td>
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<tr>
<td>Mindy Ursino</td>
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<td>6/6/2014</td>
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Dean:

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<tr>
<th>Name</th>
<th>Signature</th>
<th>Date</th>
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<tr>
<td>Mark D Baumann (Admin)</td>
<td></td>
<td>4/8/2014</td>
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Results of SSCC Curriculum Coordinating Council Findings

Participating Faculty Response and Remarks

- [X] Recommended for approval
- [ ] Not recommended for approval

Chairman, Curriculum Coordinating Council:

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<tr>
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<tbody>
<tr>
<td>Diane Schmidt</td>
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<td>6/10/2014</td>
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Vice President for Instruction:

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<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Donna Miller-Parker</td>
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<td>6/11/2014</td>
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