MATH111 - Applied Mathematics I

Document Type:	District Master Course Outline
Proposal Type:	Revision
Requester(s):	Ted Coskey Mindy Ursino
College:	South
Origination Approved:	06/11/2014 - 10:22 AM

SEATTLE COMMUNITY COLLEGES
Central
North
South
SVI

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):

Program Title
ENGINEERING TECH (642)

☐ My Course Proposal is a requirement for a program not on this list

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	☐ Request Specific CIP Code
EPC Code:	892	☐ Request Specific EPC Code

Credits:

Will this course be offered as Variable Credit?	Yes	
	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

Total Credits	0 to 5

COLLEGE SUPPLEMENTAL

Proposed Quarter of Implementation: Winter 2015   ☐ Request Provisional Exception

Class Capacity: 35

Modes of Delivery: (Check all that apply)
- ☑ Fully On Campus
- ☐ Fully Online
- ☑ Hybrid
- ☐ Other   Explanation:

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

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Program Outcomes:

Included in Course Objective Number	Included in Course Objective Number	
SLO 1.1	4	Communicatio... communicate.
SLO 1.2		Communicatio... career purpose
SLO 2.1	1, 2, 3, 5	Computation - ... operations as ...
SLO 2.2	1, 2, 3, 5	Computation - ... purposes.
SLO 3.1	4	Human Relatic...
SLO 3.2		Human Relatic... represented in...
SLO 4.1	1 - 5	Critical Thinkin... problems, and...
SLO 5.1	5	Technology - S... personal, acad...
SLO 6.1	1 - 5	Personal Resp... honesty and in...
SLO 6.2	1 - 5	Personal Resp... classroom, onl...
SLO 6.3	1 - 5	Personal Resp... assignments o... online discussi... and activities.
SLO 6.4	1 - 5	Personal Resp... laboratories, sh...
SLO 7.1		Information Lit... information fro...
SLO 7.2		Information Lit... issues related...
SLO 7.3		Information Lit... a specific purp...

Course Outcomes / Objectives:

Course Outcomes

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:

Ted Coskey	*Ted Coskey*	6/6/2014
Print Name	**Signature**	**Date**

Mindy Ursino	*Mindy Ursino*	6/6/2014
Print Name	**Signature**	**Date**

Dean:

Mark D Baumann (Admin)	*Mark D Baumann*	4/8/2014
Print Name	**Signature**	**Date**

Results of SSCC Curriculum Coordinating Council Findings

Participating Faculty Response and Remarks

[**X**] Recommended for approval

[   ] Not recommended for approval

Chairman, Curriculum Coordinating Council:

Diane Schmidt	*Diane Schmidt*	6/10/2014
Print Name	**Signature**	**Date**

Vice President for Instruction:

Donna Miller-Parker	*Donna Miller-Parker*	6/11/2014
Print Name	**Signature**	**Date**