FORMAT 1

Submit original with signatures + 1 copy + electronic copy to Faculty Senate (Box 7500).
See http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures-/ for a complete description of the rules governing curriculum & course changes.

TRIAL COURSE OR NEW COURSE PROPOSAL

SUBMITTED BY:

Department	Developmental Education	College/School	Interior~Aleutians Campus, CRCD
Prepared by	Sandra Wildfeuer	Phone	907 474 1931
Email Contact	sjwildfeuer@alaska.edu	Faculty Contact	Sandra Wildfeuer

1. ACTION DESIRED (CHECK ONE):   Trial Course [x]   New Course [ ]

2. COURSE IDENTIFICATION: Dept **DEVM**   Course # **094**   No. of Credits **5**

Justify upper/lower division status & number of credits:
This is a lower division math class designed to prepare students for DEVM 105 or DEVM 106. It covers the material in DEVM 050 and 060 in an accelerated format.
Five credits for this course to increase instructor and student contact time, and to increase time on task.

3. PROPOSED COURSE TITLE: Mathematical Literacy

4. To be CROSS LISTED? YES/NO   No   If yes, Dept: Course #
(Requires approval of both departments and deans involved. Add lines at end of form for additional required signatures.)

5. To be STACKED? YES/NO   No   If yes, Dept.   Course #

Stacked course applications are reviewed by the (Undergraduate) Curricular Review Committee and by the Graduate Academic and Advising Committee. Creating two different syllabi—undergraduate and graduate versions—will help emphasize the different qualities of what are supposed to be two different courses. The committees will determine: 1) whether the two versions are sufficiently different (i.e. is there undergraduate and graduate level content being offered); 2) are undergraduates being overtaxed?; 3) are graduate students being undertaxed? In this context, the committees are looking out for the interests of the students taking the course. Typically, if either committee has qualms, they both do. More info online – see URL at top of this page.

6. FREQUENCY OF OFFERING: Every semester

Fall, Spring, Summer (Every, or Even-numbered Years, or Odd-numbered Years) — or As Demand Warrants

7. SEMESTER & YEAR OF FIRST OFFERING
(AY2013-14 if approved by 3/1/2013; otherwise AY2014-15)
Fall 2013

8. COURSE FORMAT:

NOTE: Course hours may not be compressed into fewer than three days per credit. Any course compressed into fewer than six weeks must be approved by the college or school's curriculum council. Furthermore, any core course compressed to less than six weeks must be approved by the core review committee.

COURSE FORMAT: (check all that apply)	[ ] 1	[ ] 2	[ ] 3	[ ] 4	[ ] 5	[x] 6 weeks to full semester

OTHER FORMAT (specify)

Mode of delivery (specify lecture, field trips, labs, etc)   Lecture, Distance course

9. CONTACT HOURS PER WEEK: **5** LECTURE hours/weeks   [ ] LAB hours /week   [ ] PRACTICUM hours /week

Note: # of credits are based on contact hours. 800 minutes of lecture=1 credit. 2400 minutes of lab in a science course=1 credit. 1600 minutes in non-science lab=1 credit. 2400-4800 minutes of practicum=1 credit. 2400-8000 minutes of internship=1 credit. This must match with the syllabus. See http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures-/guidelines-for-computing-/ for more information on number of credits.

OTHER HOURS (specify type)

10. **COMPLETE** CATALOG DESCRIPTION including dept., number, title, credits, credit distribution, cross-listings and/or stacking (50 words or less if possible):

Example of a complete description:

FISH F487 W, O Fisheries Management
   3 Credits   Offered Spring
   Theory and practice of fisheries management, with an emphasis on strategies utilized for the management of freshwater and marine fisheries. *Prerequisites: COMM F131X or COMM F141X; ENGL F111X; ENGL F211X or ENGL F213X; ENGL F414; FISH F425; or permission of instructor.* Cross-listed with NRM F487. (3+0)

> **DEVM 094**   Mathematical Literacy
>   5 credits   Offered every semester
> Mathematical Literacy is a one semester course integrating numeracy, proportional reasoning, algebraic reasoning, and functions. It integrates the concepts from DEVM 050 & DEVM 060. Students will develop conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts. Throughout the course, college success content will be integrated with mathematical topics. Upon completion, students may take a placement test to demonstrate that they are ready to take DEVM 105 or DEVM 106. Prerequisite: Placement in DEVM 050 or equivalent.

11. COURSE CLASSIFICATIONS: Undergraduate courses only. Consult with CLA Curriculum Council to apply S or H classification appropriately; otherwise leave fields blank.

H = Humanities [ ]   S = Social Sciences [ ]

Will this course be used to fulfill a requirement for the baccalaureate core? If YES, attach form.   YES: [ ]   NO: [X]

IF YES, check which core requirements it could be used to fulfill:

O = Oral Intensive, Format 6 [ ]   W = Writing Intensive, Format 7 [ ]   Natural Science,("X" for Core) Format 8 [ ]

11.A Is course content related to northern, arctic or circumpolar studies? If yes, a "snowflake" symbol will be added in the printed Catalog, and flagged in Banner.

YES [ ]   NO [X] |

12. COURSE REPEATABILITY:
   Is this course repeatable for credit?   YES [ ]   NO [X]

   Justification: Indicate why the course can be repeated (for example, the course follows a different theme each time). [ ]

   How many times may the course be repeated for credit?   [ ] TIMES

   If the course can be repeated for credit, what is the maximum number of credit hours that may be earned for this course?   [ ] CREDITS

   If the course can be repeated with <u>variable</u> credit, what is the maximum number of credit hours that may be earned for this course?   [ ] CREDITS

13. GRADING SYSTEM: Specify only one. Note: Later changing the grading system for a course constitutes a Major Course Change.
   LETTER: [X]   PASS/FAIL: [ ]

RESTRICTIONS ON ENROLLMENT (if any)

14. PREREQUISITES | Placement into DEVM 050 or equivalent.

These will be *required* before the student is allowed to enroll in the course.

15. SPECIAL RESTRICTIONS, CONDITIONS | None

16. PROPOSED COURSE FEES | $0

Has a memo been submitted through your dean to the Provost for fee approval?
Yes/No

No

17. PREVIOUS HISTORY

Has the course been offered as special topics or trial course previously?
Yes/No

No

If yes, give semester, year, course #, etc.:

18. ESTIMATED IMPACT

WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.

No impact on budget, facilities/space. The instructor is developing this course as part of her workload.

19. LIBRARY COLLECTIONS

Have you contacted the library collection development officer (kljensen@alaska.edu, 474-6695) with regard to the adequacy of library/media collections, equipment, and services available for the proposed course? If so, give date of contact and resolution. If not, explain why not.

No	x	Yes		Library collections are not needed for this course.

20. IMPACTS ON PROGRAMS/DEPTS

What programs/departments will be affected by this proposed action?
Include information on the Programs/Departments contacted (e.g., email, memo)

The Department of Developmental Education will be impacted because this class is an option for students designed to prepare students for core courses faster while emphasizing student's mathematical understanding, college readiness and conceptual knowledge.

21. POSITIVE AND NEGATIVE IMPACTS

Please specify **positive and negative** impacts on other courses, programs and departments resulting from the proposed action.

A positive impact for departments is that students can move through the math sequence and begin taking core math courses sooner, decreasing time toward graduation.
Negative impact is that this is a five credit class and students may need to limit the number of other classes that they take concurrently.
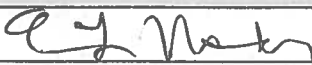
JUSTIFICATION FOR ACTION REQUESTED

The purpose of the department and campus-wide curriculum committees is to scrutinize course change and new course applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. Use as much space as needed to fully justify the proposed course.

A Mathematical Literacy course provides the powerful tools that students need in their preparation for basic science, technology, and college mathematics classes. One goal is to move students into core math coursework sooner in their academic career, while reducing the number of developmental courses students need to take. This course is modeled after a similar course being developed and piloted at other colleges in the nation. It focuses on developing successful college readiness skills, as students become more comfortable and knowledgeable in solving mathematical problems in real world contexts. Students are active participants in the construction of their mathematical knowledge. Students learn how to work online and develop time management skills as they participate in the class.
This class will be developed synchronously (using Elluminate Live and Blackboard). The class will also be developed in an asynchronous format.

APPROVALS: *Add additional signature lines as needed.*

Signature [handwritten]	Date	2/27 13
Signature, Chair, Program/Department of: Dev. Ed		

Signature [handwritten] Jan Maier	Date	2/27/2013
Signature, Chair, College/School Curriculum Council for:		

Signature [handwritten] Peter R.	Date	3/3/13
Signature, Dean, College/School of: CLCD		

Offerings above the level of approved programs must be approved in advance by the Provost.

	Date	
Signature of Provost (if above level of approved programs)		

ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE

	Date	
Signature, Chair Faculty Senate Review Committee: ___Curriculum Review ___GAAC		

___Core Review ___SADAC

ADDITIONAL SIGNATURES: (As needed for cross-listing and/or stacking)

	Date	
Signature, Chair, Program/Department of:		

	Date	
Signature, Chair, College/School Curriculum Council for:		

	Date	
Signature, Dean, College/School of:		

SYLLABUS   Mathematical Literacy

1. Course information:

Title: Mathematical Literacy
Number: DEVM 094
Credits: 5 credits
Prerequisite: Placement in DEVM 050 or equivalent
Location: Synchronous: Elluminate Live and Audio
Meeting time: Tues & Thurs 5-7:30 pm

2. Instructor (and if applicable, Teaching Assistant) information:

Instructor: Sandra Wildfeuer, sjwildfeuer@alaska.edu
Math Tutor: Amber Bohart ajbohart@alaska.edu
Address: Harper Building 101D, 4280 Geist Road, Interior~Aleutians Campus, Fairbanks, AK 99709
Office Hours: Wednesday 3 – 4pm and by appointment
Phone: 907-474-1931
FAX: 907-451-4079 or   877-553-9916

3. Course readings/materials:

Required reading: Math Lit by K.Almy & H. Foes ISBN-13: 9780321818454
Required online access: MyMathLab software
Required supplies: Computer, Internet access, Scientific Calculator,
                           Wacom digital ink tablet (will be loaned during the semester)

4. Course description:

Mathematical Literacy for College Students is a one semester course integrating numeracy, proportional reasoning, algebraic reasoning, and functions. It integrates the concepts from DEVM 050 & DEVM 060. Students will develop conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts. Throughout the course, college success content will be integrated with mathematical topics. Upon completion, students may take a placement test to demonstrate that they are ready to take DEVM 105 or DEVM 106. Prerequisite: Placement in DEVM 050 or equivalent.

5. Course Goals (general):

1.   Apply the concepts of numeracy in multiple contexts.
2.   Recognize proportional relationships and use proportional reasoning to solve problems.
3.   Use the language of algebra to write relationships involving variables, interpret those relationships, and solve problems.
4.   Interpret and move flexibly between multiple formats including graphs, tables, equations, and words.
5.   Demonstrate student success skills including perseverance, time management, and appropriate use of resources.
6.   Develop the ability to think critically and solve problems in a variety of contexts using the tools of mathematics including technology.

6. Student Learning Outcomes (more specific):

Upon successful completion of this course, the student will be able to:

Numeracy

1. Demonstrate operation sense and the effects of common operations on numbers in words and symbols.
2. Demonstrate competency in the use of magnitude in the contexts of place values, fractions, and numbers written in scientific notation.
3. Use estimation skills.
4. Apply quantitative reasoning to solve problems involving quantities or rates.
5. Demonstrate measurement sense.
6. Demonstrate an understanding of the mathematical properties and uses of different types of mathematical summaries of data.
7. Read, interpret, and make decisions based upon data from line graphs, bar graphs, and charts.

Proportional reasoning
8. Recognize proportional relationships from verbal and numeric representations.
9. Compare proportional relationships represented in different ways.
10. Apply quantitative reasoning strategies to solve real-world problems with proportional relationships.

Algebraic reasoning
11. Understand various uses of variables to represent quantities or attributes.
12. Describe the effect that changes in variable values have in an algebraic relationship.
13. Construct and solve equations or inequalities to represent relationships involving one or more unknown or variable quantities to solve problems.

Functions
14. Translate problems from a variety of contexts into a mathematical representation and vice versa.
15. Describe the behavior of common types of functions using words, algebraic symbols, graphs, and tables.
16. Identify the reasonableness of a linear model for given data and consider alternative models.
17. Identify important characteristics of functions in various representations.
18. Use appropriate terms and units to describe rate of change.
19. Understand that abstract mathematical models used to characterize real-world scenarios or physical relationships are not always exact and may be subject to error from many sources.

Student success
20. Develop written and verbal skills in relation to course content.
21. Evaluate personal learning style, strengths, weaknesses, and success strategies that address each.
22. Research using print and online resources.
23. Apply time management and goal setting techniques.

Mathematical success
24. Develop the ability to use mathematical skills in diverse scenarios and contexts.
25. Use technology appropriately including calculators and computers.
26. Demonstrate critical thinking by analyzing ideas, patterns, and principles.
27. Demonstrate flexibility with mathematics through various contexts, modes of technology, and presentations of information (tables, graphs, words, equations).
28. Demonstrate and explain skills needed in studying for and taking tests.

The MLCS "Spinne Model": http://dm-live.wikispaces.com/Mathematical+Literacy+for+College+Students
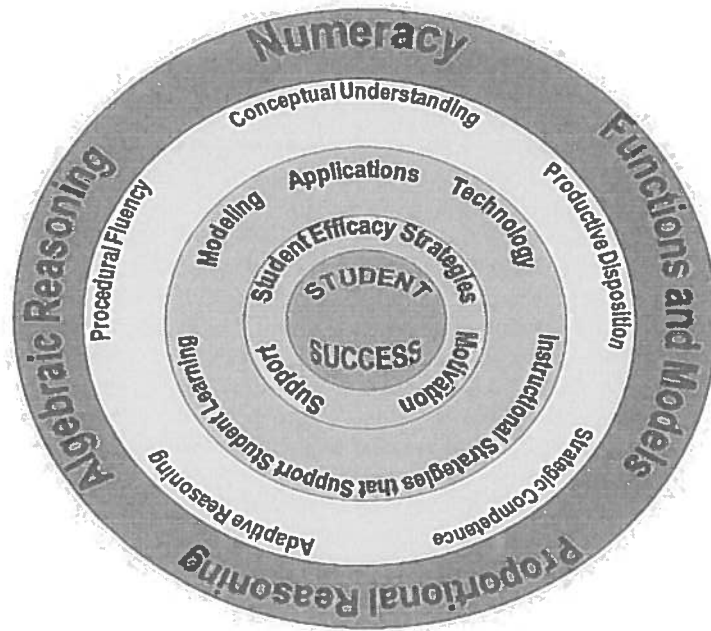
7. Instructional methods:

- Lectures occur during Elluminate Live class scheduled times and also are recorded for viewing outside of class.
- Whole class and small group discussion occurs in real time, and via email and discussion boards.
- Students participate in active and interactive learning strategies.
- Students are expected to take notes and to contribute to solving problems on the whiteboard during class using digital ink technology.
- Students are expected to complete assigned readings in a timely manner.
- Students experience high impact learning practices including:
  - o time on task in and outside of the classroom
  - o interaction with faculty and peers
  - o frequent feedback
  - o connections between the learning context and the real world
  - o academic challenge.

Course Components include:
- Online Homework via Carnegie Learning Cognitive Tutor: The software was developed around an artificial intelligence model that identifies weaknesses in each individual student's mastery of mathematical concepts. It then customizes prompts to focus on areas where the student is struggling, and sends the student to new problems that address those specific concepts.
- Lecture Notes - PDFs of the whiteboard slides from class are posted in Blackboard as a resource. They contain the power points, as well as any notes written on them. The PDFs contain solutions of problems worked out during class. Use these as a model for how to write a complete solution.
- Blackboard – Announcements, handouts, quizzes, math help resources, and other important course information is posted in Blackboard. Check your grades here.
- UA email will be used to communicate. Please check your @alaska.edu address on a regular basis, or forward it to the one you prefer.
- Weekly assessments in the form of quizzes, proctored exams and a final exam.
- Corrections may be submitted on missed problems on quizzes and exams to earn back half the points that were missed. You should write corrections on a separate piece of paper, and include a sentence explaining what you did wrong. It is expected that this reflection will help you clarify your understanding and be more successful on the final exam.

8. Course calendar:

	Tuesday	Thursday	Assessment
	3-Sep	**5-Sep**	

	1.1 Focus Problem, Step 1: Understand the Problem
	
	 • Exposure to an open-ended problem on a medical error
	     o Previews the use of rates and units and Polya's problem solving process
		1.4 Getting Started: Groups
		
		 • Personality test to improve group dynamics
		     o Develops knowledge of the Cartesian coordinate system
		     o Develops the ability to plot and read ordered pairs
		     o Exposes students to the term variable
			Weekly HW in MyMathLab corresponds to section numbers

	1.2 Getting Started: Syllabus
	
	 • Group activity to learn course policies
	     o Develops critical reading skills
		1.5 A Tale of Two Numbers
		
		 • Exploration of ratios and rates used in daily life
		     o Previews scaling fractions
		     o Develops ratio and rates concepts including notation	

	1.3 Getting Started: Skills
	
	 • Venn diagrams are used to explore prerequisite knowledge
	     o Reviews prerequisite skills
	     o Develops Venn diagrams		

	10-Sep	**12-Sep**	

	1.6 Part and Whole
	
	 • Conceptual review of fraction operations
	     o Reviews fraction concepts and operations
	     o Develops the skill of drawing a picture
		1.8 Two by Two
		
		 • Visualizing situations with scatterplots
		     o Develops scatterplots
		     o Applies pie graphs and plotting points
			Quiz One 1.1-1.9

	1.7 The Elusive A in Math
	
	 • Assess traits necessary to success in mathematics
	     o Develops pie and bar graphs
	     o Connects equivalent fractions and scaling
	     o Previews working with axes and increments on them
		1.9 Multiply or Divide?
		
		 • Daily situations that involve unit conversions by multiplying or dividing
		     o Develops unit conversions
		     o Applies student success knowledge from 1.7	

	17-Sep	**19-Sep**	

	1.10 Focus Problem, Step 2: Devise a Plan
	
	 • Revisit focus problem and develop a plan to solve it
	     o Applies knowledge gained to
		1.12 The X Factor
		
		 • Important algebraic vocabulary
		     o Develops the terms equation, expression, constant, variable, term
			Quiz Two 1.10-1.13

	date	- Applies Venn diagrams - Reviews pi	
	1.11 Higher or Lower? - Compare two pay structures with graphs, tables, and Excel - Previews integers, equations, like terms, and the commutative property - Develops percent calculations, the concept of a function, and generalizing a calculation - Applies scaling	**1.13 Take Two and Call Me...** - Interpreting a graph that accompanies a medicine - Connects scaling with units and rates - Develops understanding of rates and units - Applies independent/dependent variables, function concepts, and reading ordered pairs	
	24-Sep	**26-Sep**	
	1.14 Good Eats - Understanding nutrition labels and nutrition guidelines - Develops the concept of proportionality - Applies fraction and percent skills	**1.17 The Social Network** - Exploration of viral growth on the internet - Previews order of operations and slope concepts - Develops the concepts of linear and exponential growth - Applies the idea of generalizing a pattern - Exposes students to building a mathematical model - Connects exponential growth and percent of increase	Quiz Three 1.14-1.18
	1.16 Up and Down - Percent situations from daily life - Previews integers - Develops the concept of percent change - Applies the skills of finding the percent of a number and increasing or decreasing a number by a percent	**1.18 Focus Problem, Step 3: Carry Out the Plan** - Revisit focus problem and solve it - Applies knowledge gained to date	
	1-Oct	**3-Oct**	
	1.19 Cookie Monster - Recipe conversion to decrease its size - Connects conversions with scaling - Applies fraction skills	**1.21 Infinity and Beyond** - Exploration of Sierpinski triangles and their patterns - Connects area and perimeter to generalizing a pattern - Applies concepts of area	Quiz Four 1.19-1.23

○ Applies unit conversion skills	and perimeter ○ Exposes students to Sierpinski triangles ○ Connects proportionality to similar triangles	

1.20 Picture This
 	
• Matching scenarios with graphs
  ○ Exposes students to fitting data with a curve
 	
  ○ Connects scatterplots and types of change
	1.23 Focus Problem, Step 4: Look Back
	
	• Reflect on focus problem and cycle as a whole
	  ○ Debriefs the focus problem solution	

8-Oct	**10-Oct**	

2.1 Focus Problem, Step 1: Understand the Problem
 	
• Exposure to an open-ended problem on baseball's magic number
  ○ Previews the use of expressions, formulas, and integers
	2.3 Sign and Size, Part 1
	
	• Real-life situations to develop signed number addition/subtraction rules
	  ○ Develops integer operations of addition and subtraction
	  ○ Applies integer concepts and operations to realistic scenarios
		Exam One Cycle One

2.2 It's All Relative
 	
• Work with atoms and ions to develop integer concepts
  ○ Develops integer concepts
  ○ Previews integer operations
	2.4 Sign and Size, Part 2
	
	• Use of patterns to develop signed number multiplication/division rules
	  ○ Develops integer operations multiplication and division
	  ○ Defines real numbers
	  ○ Exposes students to imaginary numbers
	  ○ Reviews the concept of square roots	

15-Oct	**17-Oct**	

2.5 An Ounce of Prevention
 	
• Grades situations to understand means
  ○ Develops means conceptually and numerically
  ○ Previews order of operations
	2.7 Count Up
	
	• Common situations with like terms
	  ○ Develops like terms
	  ○ Applies knowledge of formulas
	  ○ Exposes students to polynomial terminology and addition/subtraction
		Quiz Five 2.1-2.8

2.6 Measure Up
 	
• Geometric formulas with units to develop exponent rules
  ○ Develops whole number exponent properties
  ○ Applies geometric formulas
  ○ Applies the use of units in
	2.8 Focus Problem, Step 2: Devise a Plan
	
	• Revisit focus problem and develop a plan to solve it
	  ○ Applies knowledge gained to date	

calculations		

22-Oct	24-Oct	

2.9 Order Up
 	
• Order of operations and their use in formulas
  o Develops the order of operations
  o Applies order of operations to evaluating formulas
  o Previews inverse operations necessary for equation solving
	2.11 Fair Share
	
	• Development and application of the distributive property
	  o Develops the distributive property and mental math skills
	  o Applies the commutative property
	  o Applies the distributive property to multiplying polynomials
	  o Reviews like terms and whole number exponent properties
		Quiz Six
		2.9-2.12

2.10 Does Order Matter?
 	
• Uses of the commutative and associative properties in algebra and mental math
  o Develops the commutative and associative properties
  o Develops mental math skills
  o Applies percent skills and adding like terms
	2.12 Seat Yourself
	
	• Pattern recognition using a tables and chairs situation
	  o Applies the distributive property and connects it to like terms
	  o Develops the ability to write expressions	

29-Oct	31-Oct	

2.13 Punt, Pass, Kick
 	
• Pythagorean Theorem off a grid
  o Develops the Pythagorean Theorem
  o Develops conceptual and numeric approaches to equation solving
  o Previews concepts related to solving equations
  o Connects Pythagorean triples to similar triangles
	2.16 Focus Problem, Step 3: Carry Out the Plan
	
	• Revisit focus problem and solve it
	  o Applies knowledge gained to date
		Quiz Seven
		2.13-2.20

2.14 Ramp Up
 	
• Slope on and off a grid
  o Develops slope concepts and calculations
  o Connects slope to linearity
  o Applies Pythagorean Theorem and unit conversions
	2.17 Parts of Speech
	
	• Operations vs. operators
	  o Applies the distributive property
	  o Develops understanding of operations	

	2.20 Focus Problem, Step 4: Look Back • Reflect on focus problem and cycle as a whole ○ Debriefs the focus problem solution	
5-Nov	**7-Nov**	
3.1 Focus Problem, Step 1: Understand the Problem • Exposure to an open-ended problem about comparing e-readers ○ Previews the use of linear equations	3.6 Separate but Equal • Real-life scenarios that can be solved numerically and with one-step equations ○ Develops one-step equations and understanding of equation solving ○ Connects algebraic and numeric methods of equation solving	Exam Two Cycle Two
3.2 Rule of Thumb • Explore weighted means with grade situations ○ Applies means and rates in a new context ○ Develops weighted means	3.7 On the Rise • Analyze an article about food packaging using algebra, geometry, and statistics ○ Applies mean, median, standard deviation, and bar graphs ○ Develops Pareto charts ○ Applies writing and solving one-step equations	
3.3 Working Hard for the Money • Correlation between profession and income, unemployment rate ○ Applies means and weighted means ○ Applies making scatterplots ○ Develops correlation, median, and mode ○ Previews finding the trend line ○ Previews slope-intercept form ○ Applies scaling concepts ○ Connects measures of center to geometry		
12-Nov	**14-Nov**	
3.8 Focus Problem, Step 2: Devise a Plan • Revisit focus problem and develop a plan to solve it ○ Applies knowledge gained to date	3.10 Quarter Wing Night • Determine the number of buffalo wings in varying scenarios ○ Applies equation solving techniques ○ Applies percent concepts	Quiz Eight 3.1-3.7

3.9 Game On
 	
• Use pictures and algebra to solve two-step and multi-step equations
   o Develops solving of linear equations
   o Develops identities and contradictions
	3.11 Eastbound and Down
	
	• Analyzing gas price scenarios
	   o Applies equation solving techniques
	   o Connects linear equation solving and graphing
	   o Reviews linearity, slope, and rate of change
	   o Previews systems of equations	

19-Nov	**21-Nov**	

3.12 Get in Line
 	
• Explore linear situations algebraically and on a graph
   o Develops slope-intercept form and its uses in graphing
   o Connects linearity between tables, graphs, and equations
   o Exposes students to the concept of domain
	NO Class	Quiz Nine
		3.8-3.14

3.14 Focus Problem, Step 3: Carry Out the Plan • Revisit focus problem and solve it o Applies knowledge gained to date		
26-Nov	**28-Nov**	

4.1 Focus Problem, Step 1: Understand the Problem
 	
• Exposure to an open-ended problem about making sense of a large number
   o Previews dimensional analysis
	4.3 Little Giants
	
	• Explores very large and very small numbers
	   o Develops scientific notation
	   o Connects dimensional analysis to scientific notation
	   o Applies Pareto charts and medians
	   o Previews negative exponents and compound inequalities
		Exam Three
		Cycle Three

4.2 A Matter of Change
 	
• Work with more involved conversion problems
   o Develops dimensional analysis
   o Previews scientific notation
	4.4 Outwit and Outlast
	
	• Situations with proportionality, explored numerically and algebraically
	   o Develops solving proportions algebraically
	   o Connects scaling with algebraic methods of solving
	   o Applies rates
	   o Exposes students to	

- The originals of all final examinations shall be retained by the instructor for at least one year. Students may be allowed to copy their exams.

10. Evaluation:

Your grade in this course will depend upon the following:

Homework	20%
Participation	5%
Quizzes	30%
Chapter Exams	30%
Final Exam	15%
	100%

Grading Scale:		
95 – 100 %	A
90 – 94 %	A-
87 – 89 %	B+
83 – 86 %	B
80 – 82 %	B-
77 – 79 %	C+
73 – 76 %	C
70 – 72 %	C-
65 – 69 %	D+
60 – 64 %	D
below 60%	F

Homework (20%)
Homework is assigned in Carnegie Learning Cognitive Tutor.
Please set a time each week that you designate for your mathematics homework, so you do not get behind. Doing homework is where you learn mathematics.

Participation (5%)
Attendance is mandatory so that we can continue our mathematical discussions. Together as a class, we will build a learning environment where we will discuss mathematical concepts and build upon your own understanding. You need to be present in class to express what you do not understand, and also to contribute to what you do understand. Many concepts become clearer after we discuss them in class. Students that do not attend class are less likely to succeed in the class. PLEASE ATTEND CLASS. Five points a day are given for attendance. If you miss class, you may listen to the Elluminate Live recording and ask a specific question about something that was discussed in class (via email or FAX) and earn back your five points for the class you missed. So you have the potential to earn 100% in Participation.

Quizzes (30%)
Quizzes will be open book and open notes. Quizzes are an important source of information for both of us. This is where I will be able to evaluate your written work. This is where I can check your understanding. I will return quizzes by scanning them and sending them to your UA email. Please read my comments. I spend a lot of time reviewing your handwritten work to see if I can follow the process of your solution. Please make sure you make corrections & understand the mathematics topics on the quizzes *before* you take the exams.

Exams (30%)
All exams will be cumulative. All exams in this class are closed book. Exams are expected to be completed in one attempt. Graphing calculators will be allowed on tests, but you shouldn't need one to solve the problems (and you should prepare for tests as if you won't be able to use your calculator). It will be important to show your work, since the method of solution is just as important as the final answer.

Final Exam (15%)
The final exam must be completed by Dec 2013.

		concepts of apportionment	
3-Dec		**5-Dec**	

4.6 A Model Approach
 	
• Working with numbers in scientific notations from science scenarios
  ○ Develops negative exponents
  ○ Connects scientific notation to exponent rules
  ○ Applies exponent rules, unit conversions, and solving proportions algebraically
		4.8 Chain, Chain, Chain
		
		• Linear relationships in alkanes
		  ○ Exposes students to domain
		  ○ Develops writing linear models using $y = mx + b$
		  ○ Connects equation solving to linear models
			Quiz Ten 4.1-4.9

4.7 Focus Problem, Step 2: Devise a Plan
 	
• Revisit focus problem and develop a plan to solve it
  ○ Applies knowledge gained to date
		4.9 Hot and Cold
		
		• Analyzing and developing temperature formulas
		  ○ Develops factoring the greatest common factor
		  ○ Develops solving equations for a variable
		  ○ Applies slope-intercept form and equation solving	

10-Dec		**12-Dec**	
Review for Final Exam		**Final Exam**	

Cycle & section numbers from the text:
Math Lit, 1/e. *by* Kathleen Almy & Heather Foes   ISBN-13: 9780321818454

9. Course policies:

- You are expected to attend ALL class meetings. If you miss class, you are expected to watch the Elive recording before the next class meeting. This way you will be connected with the class. We will have ongoing discussions and when you miss part of it you are missing important material.
- Homework and quizzes need to be completed in a timely manner. If you are more than three weeks behind, it is a possibility that you will be dropped or withdrawn from the course. At some point it is hard to catch up. You will also have a hard time understanding what we discuss in class if you have not attempted the homework or read the textbook.
- You may be withdrawn from the course if you have not taken the first exam and made corrections on it by the withdrawal date.
- Incomplete (I) will only be given in Mathematics courses in cases where the student has completed the majority (normally all but the last three weeks) of a course with a grade of C or better, but for personal reasons beyond his/her control has been unable to complete the course during the regular term. Negligence or indifference are not acceptable reasons for the granting of an incomplete grade. It is much harder to finish the class on your own than it is to put in the extra time to succeed during the semester.
- Academic Honesty - Students will be required to conduct themselves honestly and responsibly, and will be expected to respect the rights of others.
- UAF students are subject to the Student Code of Conduct. In accordance with board of regents' policy 09.02.01, UAF will maintain an academic environment in which freedom to teach, conduct research, learn and administer the university is protected. See the full document at:
  http://www.uaf.edu/catalog/catalog_10-11/pdf/04_Academics.pdf
- Mid–term and Final Grades are posted in UAOnline.

Proctored Exams

Students are responsible for finding an exam proctor, and completing exams in a timely manner. Please go to Blackboard to obtain the Proctor Agreement Letter. Please ask your proctor to respond to me ASAP. Failure to do so may result in you being withdrawn from the class.

11. Support Services:

- **IAC Math Tutor available for one to one and small group tutoring.**
- **UAF MATH HOTLINE Sunday – Thursday 5 – 10 pm**
  - **866-823-6284 (866-UAF-Math)**   The MATH HOTLINE offers LIVE, toll-free telephone math tutoring for any UAF student taking math courses by distance (audioconferenced, web-based, correspondence, etc.). The HOTLINE is staffed by knowledgeable, helpful, personable tutors who are standing by to assist students with their math courses.
- Math Help Websites are posted in Blackboard.

12. Disabilities Services:

The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. I will work with the Office of Disabilities Services (208 WHITAKER BLDG, 474-5655, or http://www.uaf.edu/disability) to provide reasonable accommodation to students with disabilities.

UNIVERSITY
of ALASKA

Crystal Frank <cafrank@alaska.edu>

Phlebotomy

Cathleen Winfree <cmwinfree@alaska.edu>

Wed, Feb 27, 2013 at 8:10 AM

To: Crystal Frank <cafrank@alaska.edu>

Hello Crystal,
I can come up this morning and sign or bring copy from here signed.
I think Michele needs to sign also.
I can try to catch her and then come up.
Does that work?
Thanks much,
Cathy

On Tue, Feb 26, 2013 at 1:26 PM, Crystal Frank <cafrank@alaska.edu> wrote:
[Quoted text hidden]