

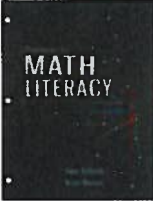
ATTACH COMPLETE SYLLABUS (as part of this application).

DEVM 068 Mathematical Literacy Syllabus Spring 2016 Professor Wildfeuer

Title: Mathematical Literacy
Number: DEVM 068 UI1 CRN XXXXX
Credits: 4 credits
Prerequisite: Placement in DEVM 054 or equivalent
Location: Face to face, synchronous distance, or asynchronous distance
Meeting time: Four hours a week for face to face and synchronous distance.
N/A for asynchronous distance.
Instructor: Sandra Wildfeuer, sjwildfeuer@alaska.edu
Math Tutor: XXX, xxx@alaska.edu
Address: Harper Building 101D, 4280 Geist Road,
Interior~Aleutians Campus, Fairbanks, AK 99709
Office Hours: by appointment
Phone: 907-474-1931
FAX: 907-451-4079 (local) or 877-553-9916 (toll free)
Textbook: Pathways to Math Literacy with 18 Weeks ALEKS Access Card

PATHWAYS TO MATH LITERACY WITH 18 WEEKS ACCESS CARD

Developmental Math



Assessment and Learning in Knowledge Spaces is a Web-based, artificially intelligent assessment and learning system. ALEKS uses adaptive questioning to quickly and accurately determine exactly what a student knows and doesn't know in a course. ALEKS then instructs the student on the topics she is most ready to learn. As a student works through a course, ALEKS periodically reassesses the student to ensure that topics learned are also retained. ALEKS courses are very complete in their topic coverage and ALEKS avoids multiple-choice questions. A student who shows a high level of mastery of an ALEKS course will be successful in the actual course she is taking.

\$184.00

ADD TO CART

ISBN/SKU: 9781259278723
Author: David Sobeckl
Publication Date: 2013-12-03
Publisher: McGraw-Hill Science/Engineering/Math

Supplies: Guided Notes, Computer, Internet, Folder or 3 ring binder for Workbook

Course description:

Teaches the concepts of basic arithmetic and introductory algebra. Includes operations and properties on real numbers, ratio, proportion, percent, scientific notation and variation, topics from consumer mathematics, evaluation of literal expressions, solution and graphs of linear equations and inequalities; radicals and exponents, polynomials, factoring and special products, fundamental operations with algebraic fractions, solution of quadratic equations, and elementary systems of equations. Geometric formulae are presented on a case-by-case basis as needed. Student success strategies and college readiness skills are emphasized.

Course Goals (general):

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. Math Literacy is a one-semester course integrating numeracy, proportional reasoning, algebraic reasoning, and functions.

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.

Student Learning Outcomes (more specific):

- Perform basic operations with integers, fractions and decimals.
- Express and simplify numbers in exponential form (whole number exponents).
- Use the order of operations to simplify expressions.
- Convert between fractions, decimals and percents.
- Solve percent problems.
- Solve ratio and proportion problems.
- Simplify and evaluate basic algebraic expressions.
- Identify and solve linear equations involving whole numbers, integers, decimals and fractions.
- Utilize basic properties of geometry involving perimeter, area and circumference.
- Find the mean, median, and mode of a list of numbers.
- Graph integers, fractions and decimals on a number line.
- Read, interpret, and make decisions based upon data from line graphs, bar graphs, and charts.
- Use estimation skills.
- Apply understanding of exponent rules.
- Solve and graph linear inequalities in one variable.
- Graph and interpret linear equations.
- Determine the slope of a line.
- Determine equations of lines.
- Solve a basic system of linear equations.
- Perform operations on polynomials.
- Factor polynomials.
- Solve quadratic equations by factoring.
- Solve applied problems.
 - Translate problems from a variety of contexts into a mathematical representation and vice versa.

Student success and Mathematical success

- Develop written and verbal skills in relation to course content.
- Evaluate personal learning style, strengths, weaknesses, and success strategies that address each.
- Apply time management and goal setting techniques.
- Develop the ability to use mathematical skills in diverse scenarios and contexts.
- Use technology appropriately including calculators and computers.
- Demonstrate critical thinking by analyzing ideas, patterns, and principles.
- Demonstrate flexibility with mathematics through various contexts, modes of technology, and presentations of information (tables, graphs, words, equations).

Time Commitment:

This is a FOUR credit class that meets for four hours per week. University policy says that it is understood that an *average student* will be expected to spend *eight* hours per week of study and preparation outside of class in order to meet the learning objectives for the units of credit in lecture. You should set your sights higher than “average student, average grade”, so expect to spend more than eight hours a week outside of class time to be successful. It will take a large amount of your time and focus to do well in this class and to meet with the tutor, as you need to memorize techniques (how) as well as understand concepts in depth (why), and the course moves at a rapid pace.

Instructional methods:

Instructional Methods	<i>Face to Face</i>	<i>Distance synchronous</i>	<i>Distance asynchronous</i>
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Meeting Times	Twice a week in a classroom = 4 hours	Twice a week in a web meeting = 4 hours	Office hours with instructor
Audio Call in		Phone number and pin code for class: 1-800-570-3591 pin #9454760 Phone line is always open. Call in if internet problems to join class on time, and not miss anything.	
Blackboard (Find student grades, announcements, course documents, quizzes, math help resources, video explanations, and course schedule.)	Main internet site	Main internet site Access Collaborate virtual classroom	Main internet site Access Collaborate virtual classroom
Lecture	Face to face in a classroom	In a virtual classroom with a community of students. Each class session is recorded (names are anonymous in the recordings). PDFs of the whiteboard slides with the lecture notes on them after class are posted as a resource.	Recorded lectures (video, screencasts, Collaborate) PDFs of the whiteboard slides with the lecture notes on them after class are posted as a resource.
Interactive Activity	Complete Guided Student Notes	Complete Guided Student Notes	Complete Guided Student Notes
Homework	ALEKS or other homework	ALEKS or other homework	ALEKS or other homework
Quizzes	Given in class and as take home quiz. Complete by hand.	Complete by hand and scan or fax to turn in	Complete by hand and scan or fax to turn in
Exams	Given and taken in class	Proctored and completed by hand	Proctored and completed by hand
4 hours of in class instructional time	Join class, and watch, listen and participate in whole class, individual, and small group activities. Fill in the Guided Student Notes. Take quizzes and exams.	Join the Collaborate classroom and watch, listen and participate in whole class, individual, and small group activities. Fill in the Guided Student Notes.	Watch recorded lectures and fill in Guided Student Notes. Complete supplemental activities each week, including interactive online practice and readings.
8 hours of outside of class instructional time	ALEKS Homework Fill in any gaps in the Guided Notes Study for quizzes and exams Meet with math tutor	ALEKS Homework Fill in any gaps in the Guided Notes Study for quizzes and exams Complete quizzes Scan or fax quizzes Make arrangements with proctor Take exams Meet with math tutor	ALEKS Homework Fill in any gaps in the Guided Notes Study for quizzes and exams Complete quizzes Scan or fax quizzes Make arrangements with proctor Take exams Meet with math tutor
Communication between instructor and student	Face to face during class or office hours. Check your @alaska.edu address	Email, phone, and tutoring via Collaborate. Check your @alaska.edu address on a regular basis,	Email, phone, and tutoring via Collaborate. Check your @alaska.edu address on a regular basis,

	on a regular basis, or forward it to the one you prefer.	or forward it to the one you prefer.	or forward it to the one you prefer.
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Course Policies:

- University of Alaska Board of Regents have clearly stated in BOR Policy that discrimination, harassment and violence will not be tolerated on any campus of the University of Alaska. If you believe you are experiencing discrimination or any form of harassment including sexual harassment/misconduct/assault, you are encouraged to report that behavior. If you disclose sexual harassment or sexual violence to a faculty member or any university employee, they must notify the UAF Title IX Coordinator about the basic facts of the incident.
Your choices for disclosure include:
 - 1) You may confidentially disclose and access confidential counseling by contacting the UAF Health & Counseling Center at 474-7043;
 - 2) You may access support and file a Title IX report by contacting the UAF Title IX Coordinator at 474-6600;
 - 3) You may file a criminal complaint by contacting the University Police Department at 474-7721.
- 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
- Incomplete (I) grades 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.
- Exams taken outside of class must be proctored. Proctors must be education officials at a university, community college or an administrator at a public school site or library, other governmental or community officials, or, if such persons are unavailable, other people approved in advance by contacting Sandra Wildfeuer at 907-750-0439 or by sending an email to sjwildfeuer@alaska.edu. Relatives and/or friends cannot be proctors.
Proctor responsibilities include:
 - o security of examination until the students presence at the beginning of the exam session;
 - o identification of the student by photo I.D. (or other verification, if necessary);
 - o provision of a quiet, well-lighted area as free from noise and distraction as possible and within supervisory distance of the proctor;
 - o verification of instructional materials (if any) allowed during the exam process;
 - o return of all papers, including scratch sheets, and examination questions to sjwildfeuer@alaska.edu. (Note: photocopying or taking notes from any examination paper is not permitted);
 - o termination of the examination, confiscation of exam materials, and immediate notification of Sandra Wildfeuer by telephone if there is improper conduct on the part of the student or any evidence that there has been a violation of the examination process.
- Mid-term and Final Grades are posted in UAOnline. Current grades are posted in Blackboard.

Course Policies	Face to Face	Distance synchronous	Distance asynchronous
Participation	Attend ALL class meetings. You are responsible for all material covered in class, even if you are absent.	Attend ALL class meetings. If you miss class, you are expected to watch the Collaborate recording before the next class meeting. This way you will be connected	Login to Blackboard and check @alaska.edu email on a regular basis to check for announcements and progress on assignments.

		with the class. We will have ongoing discussions and when you miss part of it you are missing important material.	
Homework	Complete in a timely manner.	Complete in a timely manner.	Complete in a timely manner.
Quizzes Frequent quizzes for formative assessment of student learning	Given in class and as take home quiz to complete by hand. Some quizzes may be given online. Complete in a timely manner.	Print quizzes and complete them by hand, in a timely manner (ideally within 48 hours after we discuss the content in class). Scan or fax the quizzes to turn them in.	Print quizzes and complete them by hand, in a timely manner. Scan or fax the quizzes to turn them in.
Exams	As a policy, exams cannot be retaken. Exams cannot be missed except in extreme cases. If an excuse for an exam can be scheduled ahead of time, it must be scheduled in advance. The instructor reserves the right to offer retesting opportunities.	Find a proctor to give the exam and to return the exam to the instructor.	Find a proctor to give the exam and to return the exam to the instructor.
Raising Grades on Quizzes and Exams by making Corrections	Make corrections to quizzes and midterm exams to earn back half the points missed. Copy the problem, solve it correctly, and write a sentence stating the initial error.	Make corrections to quizzes and midterm exams to earn back half the points missed. Copy the problem, solve it correctly, and write a sentence stating the initial error.	Make corrections to quizzes and midterm exams to earn back half the points missed. Copy the problem, solve it correctly, and write a sentence stating the initial error.
Final Comprehensive Exam	Attend and take final exam during scheduled day and time.	Find a proctor to give the exam and to return the exam to the instructor.	Find a proctor to give the exam and to return the exam to the instructor.
Withdrawals	If you have not taken Exam 1 and made corrections to it by the Withdrawal date you may be withdrawn.	If you have not taken Exam 1 and made corrections to it by the Withdrawal date you may be withdrawn.	If you have not taken Exam 1 and made corrections to it by the Withdrawal date you may be withdrawn.

Evaluation:

Your grade in this course will depend upon the following:

Evaluation	Face to Face	Distance synchronous	Distance asynchronous
Participation	5% Includes coming to class, participating in hands on learning activities individually, in groups, and with the whole class. Complete Guided Student Notes.	5% Includes coming to class, participating in hands on learning activities individually, in groups, and with the whole class. Complete Guided Student Notes.	0%
Homework ***ALEKS is a web-	15% Online and handwritten	15% Online and handwritten	20% Online homework.

based, artificially intelligent assessment and learning system.	homework	homework	Includes participating in hands on learning activities online, readings, and posting in a discussion group. Complete Guided Student Notes.
Quizzes Frequent quizzes for formative assessment of student learning	20% Given in class and as take home quiz to complete by hand. Some quizzes may be given online.	20% Given online or completed by hand. Scan or fax to turn in.	20% Given online or completed by hand. Scan or fax to turn in.
Midterm Exams (45% = 3 exams @ 15% each) <ul style="list-style-type: none"> It will be important to show work, since the method of solution is just as important as the final answer. 	45% Given in class or proctored. Exam is handwritten, with closed book and no notes.	45% Proctored, handwritten, and closed book with no notes.	45% Proctored, handwritten, and closed book with no notes.
Final Comprehensive Exam <ul style="list-style-type: none"> Students are expected to demonstrate that they have mastered the student learning outcomes. 	15% Given in class or proctored. Exam is handwritten, with closed book and no notes.	15% Proctored, handwritten, and closed book with no notes.	15% Proctored, handwritten, and closed book with no notes.
Total	100%	100%	100%

Grading Scale:

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	0-59%

*****ALEKS online homework:**

ALEKS uses adaptive questioning to quickly and accurately determine exactly what you know and don't know in the course, and then provides instruction on the topics you are most ready to learn. When you use ALEKS, you complete only the learning tasks that you need and not those somebody else needs. Students who show a high level of mastery in ALEKS will gain the foundation needed to be successful in the overall course.

Each of you will have a password-protected student account in ALEKS. Since all records of your work are kept on the ALEKS servers, you can access your account from any computer connected to the Internet.

In this course, you will be required to use ALEKS to help you master course content. Your work in ALEKS will constitute a significant part of your final grade in the course, so be sure to start ALEKS early in the term. ALEKS is very unfriendly to procrastinators; don't wait until the last minute to finish an ALEKS assignment as an automated progress assessment may interrupt your timing.

ALEKS Registration

Before starting ALEKS, you must first register in our ALEKS course.

- A. Go to www.aleks.com

- B. Click on the link marked "New User? Sign Up Now!" in the upper left corner of the page. Under "Using ALEKS with a Class," enter the 10-character course code given below into the boxes provided, and click on "Continue." Course Code: **E93T6-EPHMY**
- C. Verify the course information and click on "Continue."
- D. Enter the ALEKS access code you purchased in the bookstore, or purchase online by clicking on the "purchase an access code online" link and follow the instructions.
- E. Answer the questions on the "Personal Information" page to complete your registration.
- F. During the registration process, you will be given a login name and password. You will have the opportunity to change your password if you wish. Write down your login name and password, and keep them in a safe place. You will need them to access your ALEKS account in the future.
- G. If you do not have a current ALEKS plug-in, one will be installed automatically at this time. The plug-in is a small software component needed by ALEKS and provided free of charge to all ALEKS users. Normally, installation is fully automatic and requires only a minute or so. If you experience any difficulty with installation, please contact ALEKS Customer Support at <http://support.aleks.com>. When the installation is complete, please be sure to close all of your browser windows to restart your browser.
- H. Go to www.aleks.com and enter your ALEKS login name and password in the Registered Users area and click on "LOGIN." You will now be in your ALEKS student account.

ALEKS Tutorial After Registration you will take a brief Tutorial, or introduction to the ALEKS interface. It shows you how to enter the various kinds of answers that you may be asked to provide in ALEKS.

Assessment Following the Tutorial, you will be assessed to determine the correct starting point for your work in the course. Do the initial assessment carefully and honestly. If you do this assessment carelessly or answer randomly, you'll waste time later because ALEKS will force you to work through material you already know and don't really need to review. Also, there is no advantage to consulting outside resources to improve your assessment score. Doing so, will not only make the assessment longer, but when you enter the Learning Mode, ALEKS will try to teach you things that you are not really ready to learn. The periodic progress assessments will discover this, and you'll spend even more time in Learning Mode to reach your correct learning state.

Assessments in ALEKS There is no partial credit on assessments; take the time to be sure that you have entered your answer correctly. Enter only the final answer and have a pencil and scratch paper ready to use. NEVER click the "I don't know" button during any ALEKS assessment unless you really don't have any idea of how to solve the problem. Otherwise, ALEKS will think that you not only don't know how to solve that specific problem, but also other related problems. As you make progress in ALEKS, you will be automatically reassessed at regular intervals to check retention and provide review as needed. If the reassessment comes at a time when you cannot concentrate, log off and return later. You can also interrupt your assessment mid-way if you become tired, and return to complete it later. You may lose material from your pie on automatic reassessments; this is completely normal. The loss of material is based on the answers you gave on the assessment. ALEKS uses the assessments to update your pie and provide needed review.

Pie Chart The results of your assessment are shown in a color-keyed pie chart. The pie chart represents the course curriculum; each slice of the pie chart represents a part of the curriculum and is filled in with solid color to reflect your current course mastery. Your goal is to fill in the slices of the pie chart by demonstrating your mastery of the course curriculum. If you move your mouse pointer around the slices, they will pop out and display lists of topics that you are currently ready to learn. Click on any one of these topics to begin working in the Learning Mode.

Learning Mode Most of your time in ALEKS will be spent in Learning Mode, working practice problems. ALEKS can provide a nearly unlimited variety of practice problems since they are algorithmically generated and do not rely on a question/answer bank that you can cycle through. In most cases, you will solve only a few problems per topic in order to establish your grasp of the concept. Every time you do a problem, ALEKS will give you immediate feedback on your answer. Note that if you make mistakes, ALEKS requires a little extra practice, but it doesn't start you over; you always get credit for the problems that you have answered correctly.

Timing Out ALEKS will automatically terminate your session after 30 minutes. There is no warning message before the session is terminated. Simply log back on and ALEKS will bring you back to exactly where you left off.

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 (audio-conferenced, web-based, etc.). The HOTLINE is staffed by knowledgeable, helpful, personable tutors who are standing by to assist students with their math courses.
- Please contact ALEKS Customer Support at <http://support.aleks.com> if you have questions or registration/system issues with ALEKS at any point during the term.

Disability 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. Students with documented disabilities who may need reasonable academic accommodations should discuss these with me during the first two weeks of class.
- Contact UAF Disability Services (<http://www.uaf.edu/disability/>) by email at uaf-disabilityservices@alaska.edu, by phone at (907)474-5655, or by TTY at (907)474-1827.

Important Dates

First Day of Instruction/Late Registration Begins.....	Thursday, January XX, 2016
Alaska Civil Rights Day (No Classes).....	Monday, January XX, 2016
Deadline for Late Registr/Adding a Class/Fee Payment.....	Friday, January XX, 2016
Drop for Non-Payment of Fees	After Friday, January XX, 2016
Deadline for 100% Refund of Tuition and UA Fees	Friday, January XX, 2016
Deadline for Student-Initiated/Faculty Initiated Drops	Friday, January XX, 2016
<i>*Course Does Not Appear on Academic Record*</i>	
Last Day for Student/Faculty Withdrawal,	Friday, March XX, 2016
<i>*W appears on Academic Record*</i>	
Last Day to Change to Audit	Friday, March XX, 2016
Spring Break (No Classes).....	Monday – Friday, March X-X, 2016
University Holiday (Most Offices Closed)	Friday, March XX, 2016
Last Day of Instruction.....	Monday, May X, 2016
Final Exams.....	Tuesday – Friday, May X – X, 2016
Faculty Deadline to Post Grades	Noon, Wednesday, May XX, 2016

Course calendar:

Mathematical Literacy	Day 1 Jan 15
	Operations on Whole Numbers
Day 2 Jan 20	Day 3 Jan 22
Reading Pie Charts	Operations on Fractions
Operations on Fractions	Operations on Decimals
Day 4 Jan 27	Day 5 Jan 29
Reading Bar Graphs	Operations on Integers
Estimation	Percents
Day 6 Feb 3	Day 7 Feb 5
Percent Equation	Order of Operations
Perimeter and Area	Compare Linear and Exponential Growth
Day 8 Feb 10	Day 9 Feb 12
Exponents	Unit Conversions
Square Roots, Cube Roots	Mean, Median and Mode
Day 10 Feb 17	Day 11 Feb 19

Introduction to Solving Equations	Solving Equations
Day 12 Feb 24	Day 13 Feb 26
Solving Equations	Unit Rates, Dimensional Analysis
	Relative Difference
Day 14 Mar 3	Day 15 Mar 5
Percent Change	Inputs and Outputs of Functions
Perimeter and Area	Order of Operations
Day 16 Mar 10	Day 17 Mar 12
Distribution Property	Solving Linear Equations
Problem Solving	Solving Linear Inequalities
Inductive and Deductive Reasoning	
16-Mar	18-Mar
Spring Break	Spring Break
Day 18 Mar 24	Day 19 Mar 26
Solving Linear Inequalities	Intro to Rectangular Coordinate System
Problem Solving	Plotting Points
	Graphing Lines
Day 20 Mar 31	Day 21 Apr 2
Graphing Lines	Graphing Lines
x-intercept, y-intercept, slope	x-intercept, y-intercept, slope
Day 22 Apr 7	Day 23 Apr 9
Introduction to Factoring	Factoring
Graphing Lines by finding Intercepts	Polynomial Expressions -Distribute, Multiply, and Add Like terms
Slope-Intercept Equation	Find the Equation of a Line
Day 24 Apr 14	Day 25 Apr 16
Factoring and Multiplying Polynomials	Exponent Rules
Finding the Equation of a Line	Applications of Linear Thinking
Applications of Linear Thinking	Introduction to Systems of Equations
Day 26 Apr 21	Day 27 Apr 23
Exponent Rules	Exponent Rules
Solving Quadratic Equations by Factoring	Solving Quadratic Equations by Factoring
Systems of Equations	
Day 28 Apr 28	Day 29 Apr 30
Exponent Rules	Review for Final Exam
Solving Quadratic Equations by Factoring	
May 5-8	
Final Exam	