Prof/Tech Applied Math(5cr)- WMath 100 DE3539 Work on MyMathLab & MySVC e-mail Summer 2017

Teacher: Zoe Grimshaw. All communication via E-mail- Please include your roster name at: **zoe.grimshaw@skagit.edu**
Office hours by email appointment to meet & on line chat

Web based - Skills Class, for Professional/Technical Students, to review & practice basic Mathematics used in several occupational clusters, like; estimation effective calculator usage and practical problem solving. Includes conversions using metric, and household scales, & percentages. There will be **an On Campus Proctored Final Paper Test in this class** [15% of course grade]**.** If you miss the Final you have one calendar week to make arrangements to make it up & you will receive a grade of "0" on the final, until this is done. The Whidbey College Library is the site for make-up tests. There is a Library proctoring procedure for make-up tests. There will be 10 On-Line Chapter Quizzes [Open Book] during the quarter [5.5% ea.] . Quizzes can't be made-up unless arrangements are made by e-mail message [10% late penalty per week; max of 1 without documentation of need]. The average of On-Line homeworks tracked on MyMathLab will be 30% of the grade. During the Exam please silence your cell phones, beepers, pagers, radio's etc., you can quietly listen to mp3s. **Prerequisite:** MATH 96 with a grade of C or higher, or equivalent math placement score. This class uses 2 computer sites; **MySVC** g-mail & **MyMathLab {MML}**. MyMathLab is used for online testing, online graded homework and practice problems, handouts, & grade reporting. MySVC g-mail is used for communication, & replies to questions.

Required Supplies: MML Access Code + **Calculator:** Optional Paper Book College Mathematics 9th Ed by Cleaves and Hobbs. + **2-line or more** Scientific **Calculator** Required {TI-30XIIS recommended}. A graphing calculator can be used, but the 2-line calculator will work better no phone calculator. The book store has MML access codes, Paper books, & Calculators.

GRADES: % of points	100% - 93% A	92% - 90% A-	The student will review their grades at least 2 times during the
89% - 87% B+	86% - 83% B	82% - 80% B-	quarter. It is the students responsibility to arrange make-up tests
79% - 77% C+	**76% - 73%** C	72% - 70% C-	No retakes of tests. Homework assignments may be retaken.
69% - 66% D+	65% - 60% D	Below 60% F	Maximum of One Make-up per Student w/o Note.

TENTATIVE CLASS SCHEDULE * 8 Week Condensed Course

Final Test Wednesday 8/23 from **1-4pm** Mt.V Rm L-226 **or** Thursday 8/24 from **5 - 9pm** Whid**bey** Rm A- 225

Week	Homework	Quiz or Test last possible due dates
Week 1 - (July 5 - July 8)	**Pre-Test;** Chapter 1, Chapter 2	**Quiz 1 Ch. 1 Due July 9**
Week 2 - (July 9 - July 15)	Chapter 3, Start Chapter 4;	**Quiz 2 Ch. 2 Due July 14**
Week 3 - (July 16 - July 22)	Chapter 4; Chapter 5;	**Quiz 3 Ch. 3 Due July 19 & Quiz 4 Ch. 4 Due July 24**
Week 4 - (July 23 - July 29)	Chapter 6; Chapter 16;	**Quiz 5 Ch. 5 Due July 29**
Week 5 - (July 30 - Aug 5)	Chapter 7; Chapter 8;	**Quiz 6 Ch. 6 -16 Due Aug 3**
Week 6 - (Aug 6 - Aug 12)	Chapter 17; Chapter 18;	**Quiz 7 Ch. 7 Due Aug 8 & Quiz 8 Ch. 8 Due Aug 13**
Week 7 - (Aug 13 - Aug 19)	Chapter 18;	**Quiz 9 Ch. 17** Due **Aug 18 & Quiz 10 Ch. 18 Due Aug 23**
Week 8 - (Aug 20 -Aug 28)	Practice Tests;	**Final Test Paper In-Class Ch.1 - 18**, SEE ABOVE

Chapter Quizzes are all open from the start of class with the prerequisite of the homework for that Quiz being done to 50%, you get 2 attempts. They close at 11:55pm on the due date, so they must be started at least 2 hours before they close to get the full time allotted. You can get as far ahead in this class as you want including taking the Final Test Early by arrangement. The usual homework assignment will be to Skim (10 min. per Chapter max) then read the chapter (e-book), & work the examples in the book, then do the On-Line Homework Exercises before the On line Quiz in which the Chapters are covered. After the Quiz review, & note the problem # of the questions you had trouble with and e-mail me these questions [via e-mail or Ask My Instructor] Homework Questions will be replied to & posted as Class Notes. Homework will be graded online, not collected. For full credit note the Homework, Quiz & Test due dates. Homework problems & quizzes worked after the due date will have late penalties. There are 2 locations for the final exam, pick one & show up with photo ID, Calculator, 1[8.5 ×11] note sheet, scrap paper, pencil, and cell phone off. All students are expected to behave in a professional manner. Students are responsible to abide by the student rights and responsibilities listed in the current Student Handbook. Please **no audible cell phones** or pagers during the in class test. There will be **Free Math Labs** & On-Line Office Hours for tutoring help, times will be announced.

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Course Objectives- The Student should be able to:

a. solve computational problems that involve decimals, percents, fractions, signed numbers and exponents.
b. understand how to recognize and solve percentage problems including percent increase/decrease, commission, sales tax, etc.
c. convert within and between the Metric System and the U.S. Customary System.
d. accurately use scientific notation.
e. find the mean, median, and mode of a set of data.
f. apply the principals of proportion and variation to real world problems.
g. Graph linear equations and read and interpret circle, bar and line graphs.
h. Simplify & Solve linear equations
i. evaluate certain exponential formulas such as compound interest. j. solve basic geometry problems involving surface area, volume, Pythagorean Theorem, etc.

Gen Ed Learning Values & Outcomes:

2. Critical Thinking *Definition:* The ability to think critically about the nature of knowledge within a discipline and about the ways in which that knowledge is constructed and validated and to be sensitive to the ways these processes often vary among disciplines.
Outcomes: Students will be able to . . . 2.1 Identify and express concepts, terms, and facts related to a specific discipline.
8. Mathematical Reasoning *Definition:* Understanding and applying concepts of mathematics and logical reasoning in a variety of contexts, both academic and non-academic.
Outcomes: Students will be able to . . . 8.1 Analyze problems to determine what mathematical principles apply.
8.2 Correctly apply logical reasoning and mathematical principles to solve problems.
8.3 Interpret information and reasoning expressed mathematically (for Example in spreadsheets, diagrams, charts, formulas, etc.).
8.4 Communicate mathematical information effectively.

For enrichment in this class we will be using an online system called MyMathLab. Over one million students have improved their mathematics skills with MyMathLab's dependable and easy-to-use online homework, guided solutions, multimedia, tests, and e-Books. ***To use MyMathLab you need an access code.*** Access Code Options Please select one of the following options: { Listed most expensive to least expensive}

- purchase a new textbook that includes the Access Code from the SVC Bookstore = Val Pack
- purchase a used textbook and purchase the Access Code from the SVC Bookstore
- purchase a used textbook and purchase the Access Code on-line from www.pearsonmylabandmastering.com
- purchase no textbook* and purchase the Access Code only from the SVC Bookstore
- purchase no textbook* and purchase the Access Code on-line from www.pearsonmylabandmastering.com (the Access Code is cheaper on-line with a credit card)
- A free 14 day Temporary access code is available at enrollment, it must be paid for on-line within 14 days so as to not loose the work you have done up until the 14th day..

*NOTE: the enhanced electronic version of the textbook is on-line as an e-book and available via your Access Code.

To register in MyMathLab you will need to create an Account for yourself in MML and then enroll yourself in this course BY:

1. A computer capable or running MyMathLab and a good Internet connection. [Your own or one in the school lab]
2. Go to pearsonmylabandmastering.com. for computer system requirements.
3. A valid E-mail Address - use the email address that you look at the most often, doesn't have to be your FREE SVC acct. Please use the same password you used for Your SVC Login.
4. The Course Name is **WMATH 100 DE Summer 2017** The Course ID is **grimshaw69307**
5. School zip code 98273 -Mount Vernon 98277 - Whidbey Island Campus, South Whidbey Center, San Juan Center
6. Institution Name: Skagit Valley College
7. Student Access Code - This individual, course-specific 6-word code is needed for registration as a MyMathLab student.

The Access Code bookstore kit includes a card with a pullback strip that reveals the code. This code can be redeemed only once---at the moment of registration. The kit also includes instructions on how to register online for MyMathLab and enroll in the course.

8. MyMathLab is located at http://mymathlab.com/
9. Once you have enrolled yourself in our class in MyMathLab, send yourself an e-mail to make sure we can communicate through this site. In MyMathLab you will find: assigned homework is under the Homework button; assigned Quizzes are under the Quizzes / Test button; your progress is tracked in Gradebook, ane practice Tests are under Study Plan. I look forward to working with you.

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How to logon to your account in the SVC computer classrooms & labs and FREE e-mail account:
Your user name: 1st initial, last name, last 4 of SID [**S**tudent not social **ID**entification Number]
For Example: Name: John Smith SID: 835-22-1234 The username would be: **jsmith1234**@mysvc.skagit.edu

Your password is created by you on your first system log-in. See https://secure.skagit.edu/netpass.asp (PIN = B-day = mmddyy)
You may access your free mysvc E-mail account [same user name and password] from off campus by going to mail.mysvc.skagit.edu
Browser Please use Chrome or *FireFox* with a check that Quick Time, Adobe Reader, Adobe Flash, and Java are all current, and you have allowed cookies and pop-ups for the MyMathLab site. Free Software for use on you computer or tablet: Skagit Valley College provides licensing of the full Microsoft Office Software, including Skype [used for on-line office hours] to all students. Information for this program is found at http://www.skagit.edu/images/MySVC_Office_Guide.pdf. Your accounts will be created when you have finished registration. Realize that anytime you are installing or upgrading software, there is a chance that it may corrupt the current operating system, and may require the operating system and/or other programs to be reinstalled. This could result in a loss of data. Students must assume all responsibility for possible losses. Contact IT for help.

Academic Honor Code: All students of Skagit Valley College are responsible for knowing and adhering to the Academic Honor Code of this institution found at http://www.skagit.edu/honorcode. Violations of this code include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct are reported to the student conduct officer. The Code of Student Conduct may be found at http://www.skagit.edu/conduct and the Policy on Student Grievances can be found at http://www.skagit.edu/grievance . WAC 132D-120-080. Disciplinary decisions may be appealed via the disciplinary appeals process described in the Code of Student Conduct, WAC 132D-120-230. The Skagit Valley College policy on plagiarism can be seen online at http://www.skagit.edu/plagiarism.

CLASSROOM ENVIRONMENT: No one has the right to interfere with the learning process in the classroom. If you carry **personal electronic devices** (pager, cell phone, for Quizple), please silence them while you are in class. Emergency/ personnel may be exempted from this rule (See your instructor.) **EXTRA CREDIT:** Extra credit is given at the instructor's discretion and involves opportunities available to all students in the class. Usually limited to Bonus Questions on graded Quizs. **FINAL COURSE GRADES**: Grades are unofficial until processed by Registration. Students are strongly recommended to keep all graded work/tests until they have verified the accuracy of the final grade for this course on their transcripts. **INCOMPLETE GRADES:** Incomplete grades will generally not be given; however, life can intervene, so if you feel you have adequate documented justification for an incomplete grade please contact me before the last week of the quarter and we can discuss the options. Your instructor will set up an Incomplete Contract only when there is a documented emergency such as a serious illness, accident, or birth or death in the nuclear family Also please understand that incomplete grades are given at the discretion of the instructor. **WITHDRAWAL: Students can drop without a "W" online through the 5th day of the quarter 8/14,** The last day to partially withdraw from classes is 8/19. Complete withdraws from all Summer Quarter classes may be processed up until 3pm on the last day of the quarter, 8/26. **GUESTS:** Guests and children are not allowed in the classroom without prior approval from your instructor.

STUDENT WITH SPECIAL NEEDS: SVC and your instructor are committed to making every effort to meet students' needs. If you are a student with a documented disability, please contact Disabled Student Services in the Counseling Center to arrange accommodations. Or call the Counseling office at 360-416-7654 [Mt. V] or Julie Kunz at 679-5351 [Whidbey]- and make an appointment to request access services. -thanks

EMERGENCIES AND WEATHER: Listen to radio and TV stations for SVC emergency and weather announcements: In Anacortes, KLKI 1340 AM; in Bellingham KPUG1170 AM, KGMI 790 AM, KISM 92.9 FM, KAFE 104.3 FM, KVOS-TV Ch. 12; in Mt. Vernon KBRC 1430 AM, KAPS 660 AM, KSVR 91.7 FM (SVC radio station); and in Seattle KIRO710 AM, KOMO 1000 AM. KIRO-TV CH. 7, KOMO-TV Ch. 4. Or visit the SVC website at www.skagit.edu.

If class is canceled, students are expected to check their MySVC e-mail for assignments, & other course work. Please don't fall behind schedule. A sample note sheet for the final exam is on the next page, You can cut paste it with your own notes as you like.(Use with homework & Bring to final exam).

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Area= A, Perimeter= P, Circumference = C Volume = V

Circle $A = \pi r^2$ r = radius, d = diameter

$C = 2\pi r = \pi d$ $d = 2r$

Triangle $A = \frac{1}{2}bh$ b= base, h= height, s= side

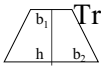
$P = s_1 + s_2 + s_3$

Square $A = s^2$ s= side

$P = 4s$

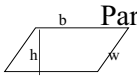
Rectangle A= l·w l = length, w = width

$P = 2l + 2w$



Trapezoid $A = \frac{1}{2}(b_1 + b_2)h$ b_2, b_2= bases, h= height

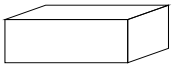
$P = b_1 + b_2 + s_3 + s_4$ s= side



Parallelogram A = bh b= base, h= height

P = 2b +2w w = width

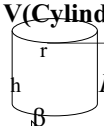
Volume = base x height V(Sphere) $= \frac{4}{3}\pi r^3$



V(Box) = l•w•h SA = 2(lw+wh+lh)

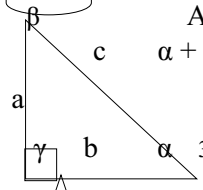
V(cube) = s^3 SA = Surface Area = $6s^2$

V(Cylinder) = Area of circle • height = $\pi r^2 h$ SA = $2\pi rh + 2\pi r^2$



↓ **Right triangle** ◁angles A=α, B=β, C=γ

Pythagorean Thm. $a^2 + b^2 = c^2$ a, b, c = side lengths

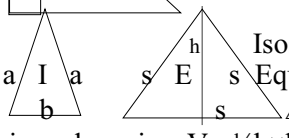


$A = \frac{1}{2}bh = \frac{1}{2}ba = \frac{1}{2}ab \sin\gamma$ {SAS}

$\alpha + \beta + \gamma = 180°$ α, β, γ= size of angles

45° - 45° - 90° sides = x, x, $\sqrt{2}$ x

30° - 60° - 90° sides = x, $\sqrt{3}$ x, 2x

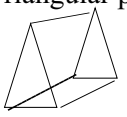


Isosceles; base △= & 2 sides=

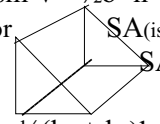
Equilateral sides = ; △ = 60° & ↓

△180° = $\pi_{(radians)}$ h = $(\sqrt{3}/2)$ s

Triangular prism V =½b×h×l



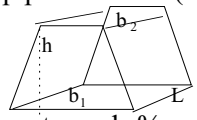
or

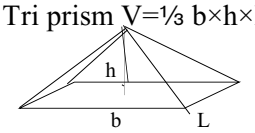


SA(isoc.) = 2 ends + 1base +2sides

SA(rt.) = 2 ends + back + slant side

Trap prism V = ½(b_1 + b_2)h × L Tri prism V=⅓ b×h×L





Percent: p = br% r = % rate part is r% of base amount

Increase is r% of original base or Decrease is r% of original base

Price changed from 15 to 12 what % decrease is this?

Ex. Decr = 15-12 = 3 %decrease ➜ 3 = x% of 15 →x% ➜ 3/15 = .2 = 20%

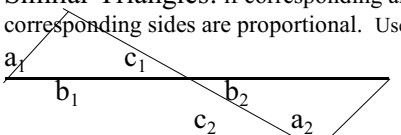
Discount: r% off Base - r%Base = Price Tax or Tip: (1+ r%)of Bill = Total Price

Total Price= 225 = 1price+8.3%tax = 1.083*price ➜ price= 225/1.083 = 23.08

NewSalary = OrigSalary+ raise ➜ 180 = 1S+5%S= 1.05S ➜ 180/1.05=S=171.43

Ratio & proportion: If $\frac{a}{b} = \frac{x}{y}$ then solve **ay = bx**

Similar Triangles: if corresponding angles are equal then corresponding sides are proportional. Used to scale drawings, maps



$\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$

Simple Interest: i = Prt (P = Principal, r = APR, t = time in years, A = accrued(total) amount, n = # of compounds [payments/year])

Compound Interest: $A = P(1 + {}^{r}/_{n})^{nt}$

Continuous Interest: $A = Pe^{rt}$ e= nat # [see shift ln]

Uninhibited growth or decay: $A = A_o\, e^{rt}$

Mo. Pmt $M = P(r/12)/(1-(1+r/12)^{(-12\,t)})$

Car pmt = 12,000(.08/12) / (1-(1+.08/12) ^(-12×4)) = $292.96 per mo for 48 mo or 4 years @ 8% on a $12,000 car

Calc buttons: ↩**Enter** **(-)** **Negative** **( )** above 8 & 9 **%** above (**EE** ×10^x

Fractions: 3 buttons **A^b/c** enter fractions or Mixed numbers **A^b/c↔ d/e** convert Mixed Numbers to Improper fractions **F↔ D** convert factions to decimals or decimals to fractions

(3+½) × (2+$^3/_4$) =9.625 **F↔ D** =$9^5/_8$ **or** 3⌋1⌋2 × 2⌋3⌋4 ←= 9∪5/8 = $9^5/_8$

Linear Equations: x for ↔ y for↕ 1st Point = (x_1, y_1) 2nd Point = (x_2, y_2)

Standard Form: Ax + By = C A, B, C = constants ε ℝ

Slope = m = $^{rise}/_{run} = {}^{\Delta y}/_{\Delta x} = {}^{(y2 - y1)}/_{(x2 - x1)} = {}^{(y1 - y2)}/_{(x1 - x2)}$

y Intercept : y-int = (0, b) **b** = constant

x Intercept: x-int = (d, 0) **d** = constant

Slope- Intercept Form: y = mx + b m = slope, y-int = (0, b)

Point- Slope Form: $y - y_1 = m(x - x_1)$ m = slope, point = (x_1, y_1)

Horizontal Line: (zero slope) y = b b = constant

Vertical Line: (undefined slope) x = d d = constant

Parallel Lines: $m_1 = m_2$ for 2 Lines, L_1 & L_2

Perpendicular Lines: $m_1(m_2) = -1$ or $m_1 = -1/m_2$ $m_1, m_2 \neq 0$

Distance between 2 Points: $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} = \sqrt{(\Delta x)^2 + (\Delta y)^2}$

Midpoint between two points: $({}^{(x2 + x1)}/_2\ ,\ {}^{(y2 + y1)}/_2) = (\bar{x},\ \bar{y})$

P E M-D A-S - Order or operations **P**=( ) [ ] { } work from inside out

E=work exponents x^2 $\sqrt{x}$ y^3 $z^{1/3}$ $\sqrt[3]{x}$ **M or D** = × or ÷ L⇒R 2# at a time

A or S = + or − L⇒R 2# at a time

Exponents & Powers - $2^4 = 16$; 2 is the **base,** 4 is the **exponent**, 16 or 2^4 is the **power.** $a^0 \equiv 1$ $b^{-n} \equiv 1/b^n$

Calc buttons: 2^4 = 16 or 2 y^x 4 = 2^4 = 16

Laws of Exponents: **must** be multiplying ● or dividing ÷

Product Rule: $b^m b^n = b^{m+n}$ $(4^2)(4^4) = 4^6$ •if bases match → exponents add

Distribution: $(ab)^n = a^n b^n$ $(2x)^3 = 2^3 x^3 = 8x^3$ exponents distribute over mult.

Power Rule: $(b^m)^n = b^{mn}$ $(3^2)^4 = 3^8$ Power to a power the exponents multiply

Distribution: $({}^a/_b)^m = a^m/b^m$ $({}^3/_5)^2 = (3^2/5^2) = ({}^9/_{25})$ exponents distribute over division ratio to an exponent is the ratio of the powers

Quotient Rule: $b^m/b^n = b^{m-n}$ $2^5/2^3 = 2^{5-3} = 2^2$ or

$3^2/3^5 = 3^{2-5} = 3^{-3} = {}^1/_{27}$ ÷bases match → exponents subtract

Calc buttons: 3^{2-5} = 3^(2-5) = 0.037037037... F↔D = 1/27

Roots & Radicals: $b^{1/n} = \sqrt[n]{b}$ $b^{m/n} = (b^{1/n})^m = \sqrt[n]{b^m}$

$\sqrt{0} = 0$ $\sqrt{a^2} = |a|$ so it equals a if a ≥0 or -a if a < 0

$\sqrt{a\,b} = \sqrt{a}\,\sqrt{b}$ $\sqrt{a\ /\ b} = \sqrt{a}\ /\ \sqrt{b}$

Calc buttons: $\sqrt[4]{1296} = 6$ → 4 $\sqrt[x]{\ }$ 1296 or 1296^(1/4) = 6

$\sqrt[3]{(-2)^4 + 3^2} = 3$ $\sqrt[x]{\ }$ ((**(-)** 2)^4+3^2) = 2.924 **must use( )**

Logarithms: used to solve equations when the variable is in the exponent position

base^{exponent} = power ⇨ $\text{Log}_{base}(power) = exponent$ {$2^3 = 8 \rightarrow \log_2(8) = 3$}

$\log_b(MN) = \log_b(M) + \log_b(N)$ $\log_b(M/N) = \log_b(M) - \log_b(N)$

$\log_b(M^p) = p \log_b(M)$ {the exp comes down and multiplies to the log}

$\text{Log}_{base}(power) = \text{Log}(power)\ /\text{Log}(base)$ **$\log_b(M) = \ln(M)/\ln(b)$** {Calc}

Factors & Expansions: opposite factors -(a -b) = b -a

-(a +b) = -a -b 4a + 6b = 2(2a +3b) $(a+b)^2 = a^2 + 2ab + b^2$

Absolute Values: $\sqrt{a^2} = |a|$ so it = a if a ≥ 0 or -a if a < 0

If |x| = c then x = c or x = -c **(c > 0)**

If |x| > c then x > c or x < -c ; If |x| < c then -c < x < c

Quadratic Equations: $ax^2 + bx + c = 0$ or y a, b, c = constants 2ans.

Use Quadratic Formula to find 2 x's: $x_{1,2} = (-b \pm \sqrt{b^2 - 4ac}) \div (2a)$

Calc buttons: (−b+√(b^2 -4×a×c))÷(2×a)↩ 2nd ↩ ▶ ◂ ◂ replace + with−↩