Course Information Sheet

Course: Prairie State College Math 112-01 & LNK1 - General Education Mathematics - 3 Credit/Contact Hours - Spring 2019
IAI Code: M1 904
Delivery Mode: Face-to-face
Meeting Time: MW 8:30am-9:50am
Meeting Place: Room 3290

Instructor: Steve Kifowit, Rm 2305, Ph. (708) 709-3954
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Web: http://stevekifowit.com
Office Hours: MW 10:30am-12:30pm, TTh 12pm-12:30pm, or by appointment

Text: *Math in Our World*, 3rd edition (2015), PSC Custom Edition; Sobecki & Bluman

Course Description: This course is designed for the liberal arts student who is not a mathematics, science, or business major. The course focuses on mathematical reasoning and solving real-life problems. The following topics will be studied in depth: set theory and logic, the mathematics of finance, probability, and statistics. The use of calculators or computers will be a component of the course.

Course Prerequisite: Math 091 (Mathematical Literacy) or Math 095 (Intermediate Algebra), with a C or better, or equivalent.

Course Goals/Objectives:
General Education Objectives---The mathematics component of general education focuses on quantitative reasoning to provide a base for developing a quantitatively literate college graduate. Every college graduate should be able to apply simple mathematical methods to the solution of real-world problems. A quantitatively literate college graduate should be able to:
a.) interpret mathematical models such as formulas, graphs, tables and schematics, and draw inferences from them;
b.) represent mathematical information symbolically, visually, numerically and verbally;
c.) use arithmetic, algebraic, geometric and statistical methods to solve problems;
d.) estimate and check answers to mathematical problems in order to determine reasonableness, identify alternatives and select optimal results; and
e.) recognize the limitations of mathematical and statistical models.

Specific Course Objectives---In addition to meeting the general education objectives, every successful Math 112 student should be able to:
1.) use the notation of set theory, perform operations on sets, and use Venn diagrams in order to solve problems;
2.) construct truth tables and analyze logical arguments;
3.) solve problems involving simple and compound interest, including finding the amounts and payments of loans and annuities;
4.) find probabilities and expected values using counting techniques and the laws of probability; and
5.) organize data, compute descriptive statistics, solve problems involving the normal distribution, and find the regression line for a data set.

PSC College-wide General Education Learning Outcomes: Prairie State College's general education outcomes encapsulate the core knowledge and skills that we believe equip students to develop personally, as critical thinkers, and as global citizens. The specific college-wide learning outcome for this course is:
Problem solving--Students will locate and identify information, determine what problem exists, develop solutions, evaluate results, and extend results to new situations. In class, we will model good problem solving on a daily basis, but also expect to be assessed on this problem solving outcome throughout the semester.

Attendance Policy: Regular class attendance is an essential component of successful learning. Students are responsible for prompt attendance and participation in all class meetings. **If you miss class, you will not be allowed to make up any tests, quizzes, or assignments that you may have missed (but you may reschedule a test or quiz, or submit an assignment, in advance of a missed class period).** All material covered in class is the student's responsibility.

Grading: Your grade will be based on your performance on three 100-point tests, a 150-point final exam, approximately ten 10-point quizzes, and miscellaneous problems and projects (0-25 points). Very roughly, tests count for about 54% of your grade, the final exam counts for about 27%, and quizzes count for about 18%. The grading scale is as follows:

A --- 88% and above
B --- 77% - 87%
C --- 66% - 76%
D --- 55% - 65%
F --- below 55%

You may estimate your current grade at any time during the semester by computing the following percentage: 100% * (Total points accumulated) / (Total points possible). Please feel free to discuss your grade with me at any time during the semester. Throughout the semester, grades will be posted online in D2L.

Homework: Homework problems will be assigned on a daily basis. Your work will not normally be collected, but we will often discuss homework problems in class. If any suggested homework problems are to be submitted for grading, you will be given advance notice of at least one class period. Keep up to date on your homework! Homework problems will show up on quizzes and tests.

Quizzes: Be prepared for an in-class, 10-point quiz near the end of each Wednesday's class period, unless a test is scheduled. No make-up quizzes will be given. Quizzes may have in-class and take-home portions. Your lowest quiz scores will be dropped at the end of the semester.

Tests/Exams: Test problems will be similar to class examples, quiz problems, and homework problems. In addition to computational problems, tests may include multiple choice, true/false, short answer, and/or writing problems. You must show all work on all tests to receive full credit. **You must work individually on all tests.** No make-up tests will be given (unless scheduled prior to the test). At the end of the semester, your lowest test score will be replaced by two-thirds of your final exam score (if this helps you).

Final Exam: The final exam is comprehensive and will be worth 150 points toward your final grade. The final exam counts for more than 25% of your grade. Please take it seriously! See the lecture pace for the date of the final exam.

Academic Honesty: In a Math class, it is extremely important that the work you present to your instructor is genuinely something that you have produced. Relying heavily on other people and/or inappropriate technology can create a false sense of achievement that ultimately leads to failure when those resources are no longer available. Part of my role as your instructor is to communicate to you what resources are acceptable and appropriate. The use of inappropriate resources is a form of academic dishonesty. In general, the use of any technology or human help that allows students to simply present a problem and have the problem solved for them is prohibited. Please feel free to speak to me if you are not sure whether you are allowed to use a particular resource in doing the work for this class. There are serious consequences for submitting work that is not your own. Possible consequences include a zero score for the assignment, failure of the class, or expulsion from the college. All cases of academic dishonesty will be reported to the dean.

Calculators: The TI-83/84 Graphing Calculator is **required** for this course. If you cannot obtain your own calculator, the math department has some available for loan.We may also make use of computer software such as Microsoft Excel, GeoGebra, or Wolfram Alpha.

Phones/Tablets/Laptops: Electronic devices may be used for notetaking and computing during lectures, but they may not be used on in-class tests and quizzes. These devices must be silenced and put away during tests

and quizzes. Students in special circumstances who require their phones to be readily available must discuss their situations with the instructor.

Misc. information:
1.) **The last day to withdraw from the course is April 12.** For refund information, refer to the spring schedule book. If you wish to withdraw from the course, it is your responsibility to do so. Any student who does not come to class, yet fails to withdraw, will be given the FW grade.
2.) You are expected to spend roughly 9 hours per week on coursework - 3 hours in class and 6 hours out of class. If you cannot make this commitment, you may want to reconsider taking this course.
3.) **The grading scale will be strictly adhered to!** Final percentages will be rounded to the nearest whole number.
4.) This is a fast-paced course! We will cover much material in little time. You are responsible for thoroughly reading the textbook and keeping up with the assigned material.

Disability Disclosure: Prairie State College recognizes its responsibility and has an institutional commitment to provide equal educational opportunities for students with disabilities in accordance with Section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act of 1990. Any student needing to arrange reasonable accommodations for a documented disability (learning, physical, psychological, health, or other) should contact the Office of Disability Services located in the Counseling & Academic Advising Center, Room 1200. All discussions are confidential.

Student Veterans Statement: Veterans and those currently serving in the Armed Services may be eligible for various benefits. Information and support are available in the Student Veterans Center (Room1240). Online information is available at http://prairiestate.edu/student-services/veterans-services/index.aspx.

Religious Observance Accommodation: Prairie State College is required to excuse students who need to be absent from class, examinations, study, or work requirements because of their religious beliefs, and provide students with a make-up opportunity, unless to do so would unreasonably burden the institution. Students must notify their instructor well in advance of any absense for religious reasons. If you require special accommodations for observance of a religious holiday, please notify me during the first week of the term.

Extra help/Tutoring: Please seek out help as soon as you need it. I am availble to help during my office hours, but also consider using free tutoring available in the Student Success Center (Room 2629). For more information on tutoring in the Student Success Center, call (708) 709-3663 or (708) 709-3507.

Course information, including tests, quizzes, and answer keys, can be found at http://stevekifowit.com/classes/m112.htm

Lecture Pace

Math 112-01 - General Education Mathematics

Week 1	Jan 14 & Jan 16	Course information; Sections 2.1, 2.2	Intro to set theory
Week 2	Jan 23	Sections 2.2, 2.3	Set operations, Venn diagrams
Week 3	Jan 28 & Jan 30	Sections 2.4, 2.5, 3.1	Venn diagrams, Statements
Week 4	Feb 4 & Feb 6	Review/Catch up, **Test 1**	
Week 5	Feb 11 & Feb 13	Sections 3.2, 3.3	Statements, Truth tables
Week 6	Feb 20	Sections 3.4, 3.5	Logical arguments
Week 7	Feb 25 & Feb 27	Sections 8.2, 8.3, 8.4	Simple and compound interest, Annuities
Week 8	Mar 4 & Mar 6	Review/Catch up, **Test 2**	
Week 9	Mar 11 & Mar 13	**Spring Break --- No class**	
Week 10	Mar 18 & Mar 20	Sections 8.4, 8.5	Mortgages and other loans
Week 11	Mar 25 & Mar 27	Sections 11.1, 11.2	Counting techniques
Week 12	Apr 1 & Apr 3	Sections 11.3, 11.4, 11.5, 11.6	Basic probability, Tree diagrams
Week 13	Apr 8 & Apr 10	Sections 11.7, 11.8	Addition & multiplication rule
Week 14	Apr 15 & Apr 17	Sections 12.1, 12.2; **Test 3**	Organizing data
Week 15	Apr 22 & Apr 24	Sections 12.3, 12.4, 12.5	Center, Variation, Position
Week 16	Apr 29 & May 1	Sections 12.6, 12.7	Normal distribution
Week 17	May 6 & May 8	Section 12.8, Review	Correlation and regression
*******	Monday, May 13	**Final Exam---8am-9:50am**	

*** April 12 is the last day to withdraw ***

Suggested Homework Problems
PSC Math 112-01, 02, & LNK1
Spring 2019
(Subject to changes)

Section 2.1 #'s 9,11,13,17,23,25,27,29,33,37,39,41,43,47,49,51,53,55-68,69,71,73,75,77,79,81,85,101,103a,105
Section 2.2 #'s 11-59(odd),61,65,67,69,75,77,79,81,83,85,87,89
Section 2.3 #'s 11,13,15,21,25,27,31,35,37,41,45,47,49,51,55,57,59,61,63,65,83
Section 2.4 #'s 1,5,7,9,11,13

Section 3.1 #'s 7-39(odd),53-63(odd),65,69,73,77,79,83,87,91,93,97,99,103
Section 3.2 #'s 5,9,13,17,21,25,27,31,35,37,3941,43,45
Section 3.3 #'s 7,11,13,17,25,17,29,33,35,49,53,57,59,69,71,73
Section 3.4 #'s 9,11,13,15,25,27,29,31,33,35,39,41,43,55
Section 3.5 #'s 15,17,25,27,31,33,45

Section 8.2 #'s 7-25(odd),35,39,43,47
Section 8.3 #"s 7-27(odd),29,35,37,43,47,51
Section 8.5 #'s 29,31,41,43,49,53,54

Section 11.1 #'s 7,9,13,15,18,21,25,31-53(odd)
Section 11.2 #'s 9,11,19,21,23,25,29,31-39(odd),41,43,47,49,53
Section 11.3 #'s 23,25,27,29,33,39,41,45,47
Section 11.4 #'s 3,7,9,11,13
Section 11.6 #'s 23,25,29,51,52
Section 11.7 #'s 11,13,17,21,23,25

More problems to be posted later.