

PREREQUISITE(S):

COREQUISITE(S):

MAT 104 Technical Math

Course Master Syllabus

CATALOG DESCRIPTION: This course covers topics selected from arithmetic, algebra, and geometry with applications. This course is intended for students in career/technical fields who need to apply mathematical concepts in their chosen programs. Topics including ratios and proportions, metric measures, geometry, and practical algebra are covered with emphasis upon their application to students' career programs.

None

None

CREDITS:	3	HOURS:	3		
REQUIRED TEXT(S):	WebAssign: Mathematics: Journey from Basic Mathematics through Intermediate Algebra, 1 st Edition – Aufman & Lockwood				
CENGAGE COURSE COI	DE:				
SUPPLEMENTAL MATERIALS:					
INSTRUCTOR INFORM	ATION:				
OFFICE HOURS:					



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CORE COMPETENCIES: The following co	re competencies are embedded in this			
curriculum: Communicate effectively in both speech and writing; Apply appropriate				
mathematical and statistical concepts and operations to interpret data to solve problems;				
Address an information need by locating, evaluating, and effectively using information.				
LEARNING ASSESSMENT				
Student Learning Outcomes:	Suggested Means of Assessment:			
Demonstrate knowledge of the fundamental concepts and theories from arithmetic, algebra, and geometry.	Lab Assignments, Quizzes and Tests			
Utilize various problem-solving and critical thinking techniques to set up and solve technical application problems taken from algebra and geometry, including ratios, percent, and proportion.	Lab Assignments, Quizzes and Tests			
Apply appropriate mathematical and statistical concepts to interpret data and solve problems.	Lab Assignments, Quizzes and Tests			
Apply appropriate use of metric and US customary measurement systems to solve application problems involving conversions.	Lab Assignments, Quizzes and Tests			
GRADING SYSTEM:	C+ = 77 < 80			
A = 90 < 100	C = 70 < 77			
B+ = 87 < 90	D = 60<70			
B = 80 < 87	F = Below 60			

DISABILITY SERVICES STATEMENT: Warren County Community College is committed to providing all students equal access to learning opportunities. Student Services is the campus office that works with students who have disabilities to provide and/or arrange reasonable accommodations. Students who have, or think they may have, a disability (e.g. mental health, learning, vision, hearing, physical or systemic), are invited to contact Student Services to arrange a confidential discussion at (908) 835-2300 or by email at StudentServices@warren.edu as soon as possible. Students registered for Disability Services with Student Services, who have requested accommodations for the current semester will be provided with an electronic letter detailing individual accommodations and are encouraged to contact the instructor early in the semester to discuss accommodations outlined in their letter.

INSTRUCTIONAL SUPPORT CENTER: The Instructional Support Center (ISC), located in Room 105 across from the library, provides academic support at no cost to WCCC students and is available for courses in which they are currently enrolled. The ISC is staffed with trained professional and peer tutors who are ready to help you understand and succeed. For scheduling



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or further information, visit the ISC in person, online at http://www.warren.edu/tutoring/ or by telephone at (908)835-2354.

STATEMENT AND POLICY ON CHEATING, PLAGIARISM AND ACADEMIC

DISHONESTY: Students are required to perform all the work specified by the instructor and are responsible for the content and integrity of all academic work submitted. A violation of academic integrity will occur if a student: (1) knowingly represents work of others as one's own, (2) uses or obtains unauthorized assistance in any academic work, (3) gives fraudulent assistance to another student, or (4) furnishes false information or other misuse of college documents.

In cases of suspected violation of academic integrity, the incident is to be reported to the Office of Academics. A student found guilty of violating the rule of academic integrity by the Vice President of Academics will be considered to have failed in personal obligation to the College; such failure will be subject to disciplinary action by the College. Unless otherwise notified, the instructor will allow students who are pending disciplinary action to attend class.

REQUIRED FORMAT FOR RESEARCH PAPERS: Research papers written for any Warren County Community College class must conform to the required documentation style. Papers written for humanities (and some social science) classes will follow the most recent edition of the Modern Language Association (MLA) in-text citation and bibliographic methods. Social science and science papers will require the use of the most recent edition of the American Psychological Association (APA) in-text citation and bibliographic methods.

Please consult with your instructor regarding the correct documentation style to use in his/her class.

ATTENDANCE POLICY: Students are expected to attend all class sessions of courses in which they are enrolled and are responsible for all material presented in class and all homework assignments.

Grades are based on the quality of work completed in meeting the requirements for a particular course, as stated in the course syllabus and catalog description.

Excessive absence may be considered sufficient cause for dismissal from class by an instructor or other appropriate college staff member. Any decision to exclude a student from class or the College due to excessive absence shall be subject to review by the President in accordance with established procedures. Students who have not attended class are not entitled to a refund of tuition.

WCCC HAYTAIAN & MAIER LIBRARY

Text: 908-652-4445 Email: lstoll@warren.edu

http://warren.libguides.com

Please see the library's website above for current semester hours.

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The WCCC Library offers a wide range of services to students specific to the information literacy goals of the College which includes suggesting research strategies, facilitating the use of both digital and print resources, as well as assisting students with citations to avoid plagiarism.

The library also serves as the College's computer space, with computers for students to use when the library is open. Students also have free, unlimited printing from the College's computers, as well as space to study.

The library is where students can get their college student ID cards. All students are required to get a student ID card and carry it while on campus for security purposes. To get a student ID card, you must bring another form of ID to the library. You may also be asked to bring a printed copy of your current class schedule. You can get a student ID card any time that the library is open. These cards do not expire and can be used for your duration at WCCC.

Additionally, the library participates in a national inter-library loan program which is available free to all students and faculty. You can submit ILL requests by emailing the librarian or by stopping by the library's circulation desk.

TOPICAL OUTLINE:

A. REVIEW OF BASIC CONCEPTS

- 1. Order of Operations
- 2. Fractions
- 3. Decimals
- 4. Percents
- 5. Powers and roots
- 6. Signed numbers
- 7. Scientific notation
- 8. Applications

B. THE METRIC SYSTEM

- 1. Length
- 2. Mass and weight
- 3. Volume and area
- 4. Metric and U.S. conversion

C. MEASUREMENT

- 1. Approximation, accuracy, error
- 2. Operations of measurements
- 3. Applications

D. SOLVE EQUATIONS AND FORMULAS

- 1. Basics of solving equations
- 2. Translating words to algebraic symbols
- 3. Formulas

A. INTEGERS

- 1. Addition and subtraction of integers
- 2. Exponents and the order of operations agreement

B. FRACTIONS

- 9. The least common multiple and greatest common factor
- 10. Introduction to fractions
- 11. Writing and equivalent fractions
- 12. Multiplication and division of fractions
- 13. Addition and subtraction of fractions

C. DECIMALS AND PERCENTS

- 1. Introduction to decimals
- 2. Adding and subtracting
- 3. Multiplying and dividing
- 4. Comparing and converting fractions and decimals
- 5. Intro to percent
- 6. Radical expressions and real numbers

D. VARIABLE EPRESSIONS

- 1. Evaluating
- 2. Simplifying



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- 4. Applications
- E. RATIO AND PROPORTION
 - 1. Ratio
 - 2. Proportion
 - 3. Variation
 - 4. Applications
- F. GEOMETRY
 - 1. Angles and polygons
 - 2. Circles
 - 3. Three-dimensional figures
- G. DATA REPRESENTATION
 - 1. Bar graphs
 - 2. Circle graphs
 - 3. Line graphs
 - 4. Other graphs

- 3. Translating
- E. INTRO TO EQUATIONS
 - 1. Intro to equations
 - 2. Proportions
 - 3. The basic percent equation
- F. GENERAL FIRST-DEGREE EQUATIONS & INEQUALITIES
 - 1. General equations
 - 2. Translating sentences
 - 3. Mixture and uniform motion
- G. LINEAR FUNCTIONS SND INEQUALITIES INTO TWO VARIABLES
 - 1. The rectangular coordinate system
 - 2. Linear functions
- H. RATIONAL EXPRESSIONS VAARRISTION
- I. POLYNOMIALS: INTEGER EXPONENTS AND SCIENTIFIC NOTATIONS
- J. THE COMIC SECTIONS: THE CIRCLE
- K. MEASUREMENT
 - 1. The U.S. customary systems
 - 2. The Metric System
 - 3. Conversion between U.S. and Metric
- L. GEOMETRY
 - 1. Angles, lines and geometric figures
 - 2. Perimeter of plane geometric
 - 3. Area of a plane geometric figure
 - 4. Volume
 - 5. The Pythagorean Theorem
 - 6. Similar and congruent triangles
- M. STATISTICS AN PROBBILITY
 - 1. Pictograph and circle graphs
 - 2. Bar graphs and circle graphs
 - 3. Organizing data
 - 4. Statistical measures



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GRADING METHODS:	
ITINERARY:	