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| Board Approval Date: |  |
| Technical Review Approval Date: |  |
| CRC Approval Date: |  |
| |  | | --- | |  | | **MISSION COLLEGE** | | **Associate and Non-Associate Degree** | | **Credit Course Outline** | |  | | **SECTION ONE - Course Specific Information** | |  | | 1. **Type of Credit Course:**  \_\_\_\_ Degree Applicable    X    Non Degree Applicable 2. **Course Number and Title:** MATH 904 - Preparation for Intermediate Algebra 3. **General Information:** 1.5 **Total Units** (Based on 16-18 hours per semester for 1 lecture unit, and 48-54 hours per semester for 1 lab unit)   Number of Lecture Units: 1.5  Number of Student Contact Hours Per Semester: 27  Total hours of student work required outside of class per semester: 54  Number of Laboratory Units: 0  Number of Student Contact Hours Per Semester: 0  Number of Arranged Lab Units: 0  Number of Student Contact Hours Per Semester: 0  Total Hours of Student Work Required Per Semester: 81  Other Contact Hours: 0  Distance Learning: No   1. **Size of Class:** Optimal Class Size based on instructional methodology described: 35 2. **Grade Type:** Pass/No Pass Only 3. **Repeatability:** This course may be taken a total of No Repeats time(s). 4. **Recommended for Credit By Examination:** Yes 5. **Catalog Description** The student will prepare for Intermediate Algebra by an accelerated review of all the material from Elementary Algebra. The course will concentrate on those areas of Algebra which require additional work, and is suitable for students who once passed an Elementary Algebra course. 6. **Description for the Schedule of Classes** This is an accelerated review of all the material from Elementary Algebra. The course will concentrate on those areas of Elementary Algebra which require additional work. 7. **Content Review** List any prerequisites, corequisites, and advisories here.  **Prerequisite**  MATH 903 or satisfactory score on an appropriate Mathematics Placement Exam 8. Instructional Methodology:  |  | | --- | |  | | | **SECTION TWO - Course Content** | |  | | 1. **Course Content and Scope**    1. **Student Course Objectives** Upon completion of the course the student should be able to:   The student completing this preparation for an Intermediate Algebra course should have recovered or maintained beginning algebra skills and be able to proceed to further mathematics courses or to courses in other areas with Elementary Algebra prerequisites. The student completing this course will be able to:   * + 1. Identify the commutative, associative, and distributive properties and apply them to the basic operations with signed numbers, polynomials, algebraic fractions, exponents and radicals.     2. Solve and check linear equations and inequalities of one variable and graph the solution sets.     3. Formulate and graph linear equations of two variables.     4. Solve and check linear systems using graphical, substitution, and linear combination techniques.     5. Solve quadratic equations by factoring, completing the square, or by using the quadratic formula.     6. Translate word problems involving one or two variables into linear or quadratic equations, solve and check.   1. **Outline of Topics to be Addressed**   Review topics as appropriate from the following list:  1. Review of signed numbers and fractions  2. Notation and translation of English to algebra  3. Properties of exponents  4. Evaluation and substitution of algebraic expressions  5. Techniques for solution of linear equations  6. Solution of formulas  7. Solution of linear inequalities  8. Multiplication and addition of polynomials  9. Factoring of trinomials  10. Graphing in the plane  11. Graphing of inequalities  12. Solving systems of equations  13. Solution of word problems with linear equations  14. Solution of word problems with system of equations  15. Operations on algebra fractions  16. Evaluation and simplification of expressions involving radicals and exponents  17. Graphing of simple quadratic equations   * 1. **Cultural Pluralism/Diversity**   Students will study and discuss the historical and current development and use of algebra throughout the world and solve culturally diverse applications.   1. **Student Preparation and Evaluation**    1. **Textbooks and Readings**       1. **Textbooks**   Angel, Allen R.. Elementary and Intermediate Algebra for College Students. 2nd ed. New Jersey: Prentiss-Hall Publishers, 2004.   * + 1. **Manuals**     2. **Periodicals**     3. **Other**   1. **Writing/Skill Building** Students will use the concepts and technical skills learned in the class to analyze and solve practical problems in elementary algebra from the course objective areas. For example:  The distance between town A and town B is 630 kilometers. A passenger train leaves town A at 9:00 am and travels toward town B at 100 kilometers per hours. An hour later, a freight train leaves town B and travels toward town A at 40 kilometers per hour. When will the two trains meet?   2. **Outside Assignments** Students will read material from the textbook and other sources and will solve assigned problems   3. **Critical Thinking Assignments** NA   4. **Student Evaluation** Grades will include the following factors: 1. Participation in class activities and quizzes. 2. Assigned homework problems. 3. At least two tests and a final examination. These tests will include problems requiring written solutions involving intermediate steps and analysis. | | **SECTION THREE - Course Support** | |  | | 1. **Rationale for Course/Needs Assessment** This is an existing course that is a fundamental part of basic mathematics education. This course is necessary for students who do not have the math background to continue onto higher mathematics. The skills taught in this class are also used in courses offered by other disciplines. 2. **Discipline Area** (List all acceptable disciplines from state discipline list) Mathematics 3. **Resources Needed or Anticipated** The math lab is an important resource for this course. 4. **Plan for Evaluation of Course** **In addition to Program Review, this course will be evaluated by:**   This course will be evaluated by student questionnaires given at the end of the course, the instructor’s written comments, and scheduled observations by the Department Chair. Student enrollment and completion will also be tracked on an ongoing basis and during Program Review. | | **SECTION FOUR - Transferability and Classification** | |  | | 1. **Request for Transferability** (Note: Applicable to Associate Degree Level courses only.)    * **California State University (Baccalaureate level):** No    * **University of California (To be submitted to U.C.):** No 2. **Classification of Course for Major and/or General Education** (Note: Necessary for Associate Degree courses only.)    * **Are you requesting that this course be added to the requirements for a major?** Yes - Mathematics    * **Are you requesting that this course satisfy a General Education requirement?** No | |  | | CID: 1081 | |  |