Possible Placement Courses*

The following are possible courses you may place into after completing the placement test. If you will be attending an orientation as part of the admission process, your academic advisor will explain test results and select appropriate classes at that time. You may also contact the department listed on your IPFW acceptance letter for the information. This information is from the IPFW Bulletin at http://bulletin.ipfw.edu

**ENGLISH**

**ENG R190**
Rhetorical Reading Cr. 3
A college-level course that challenges students to expand their repertoire of reading performances and become better readers of public and academic texts.

**ENG W129**
Introductory Elementary Composition Cr. 3
For students who need to complete the two semester sequence of writing instruction, culminating in English W131. Practice in writing coherent, developed, and researched papers for a variety of purposes and audiences. Study of sentence and paragraph structure is integrated into study of the writing process.

**ENG W131**
Elementary Composition I Cr. 3
P: placement in W131 or completion of W130 with a grade of C or better, or completion of the ESL composition sequence and recommendation of the ESL instructor. Practice in writing organized, well-developed, researched papers for a variety of purposes and audiences. Some analysis of prose style and structure. *(Fall, Spring, & Summer)*

**MATH**

**MA 12401**
Introduction to Mathematical Ideas Cr. 3
Introduction to problem solving and critical thinking set theory, logic, numbers and numerical reasoning and elementary algebra. Serves as a prerequisite for STAT 12500 and MA 14000. Not intended for programs requiring calculus.

**MA 11100**
Algebra Cr. 3
P: MA 12401 with a grade of C- or higher or placement by departmental exam. This is an algebra review course for students not prepared for 15300. Topics covered: linear functions, solving linear equations and inequalities, systems of linear equations, radical and rational expressions and equations, quadratic functions, and solving quadratic equations.

**MA 11101**
Algebra Applications and Activities Cr. 1
C: MA 11100. This course will include activities and projects to accompany and enhance the material covered in MA 11100.

**MA 10100**
Mathematics for Elementary Teachers I Cr. 3
P: MA 12401 with a grade of C or higher or placement at or above the MA 11100 level and one year of high school geometry. A teacher’s perspective of the mathematics of the elementary school curriculum, in particular, mathematical problem solving, sets, numeration, and operations on the whole numbers.

**MA 15900**
Algebra and Trigonometry Cr. 5
P: MA 11100 with a grade of B- or higher or placement by departmental exam (previous exposure to trigonometry recommended).
A one-semester version of MA 15300 or 15400.

**MA 15300**
Algebra and Trigonometry I Cr. 3
P: MA 11100 with a grade of B- or higher or placement by departmental exam. Review of algebraic operations; factoring, exponents, radicals and rational exponents, and fractional expressions. Linear and quadratic equations and modeling, problem solving, and inequalities. Graphs of functions and transformations, including polynomial, rational, exponential, and logarithmic functions with applications.
MA 14000  
Practical Quantitative Reasoning Cr. 3  
P: MA 12401 or MA11100 with a grade of C or higher or placement by departmental exam. A course for liberal arts students that shows mathematics as the language of modern problem solving. The course is designed around problems concerning management science, statistics, social choice, size and shape, and computer science. Applications in quality control, consumer affairs, wildlife management, human decision-making, architectural design, political practices, urban planning, space exploration, and more may be included in the course.

MA 15400  
Algebra and Trigonometry II Cr. 3  
P: MA 15300 with a grade of C or higher or placement by departmental exam. Trigonometric functions and graphs, vectors, complex numbers, conic sections, matrices, and sequences.

MA 21300  
Finite Mathematics I Cr. 3  
P: MA 12401 or MA 11100 with a grade of C or higher or placement by departmental exam. Basic logic, set theory, Elementary probability, Markov chains. Vectors, matrices, linear systems, elementary graph theory. Applications to finite models in the managerial, social, and life sciences; and computer science.

MA 22700  
Calculus for Technology I Cr. 4  
P: MA 15900 or MA15400 with a grade of C or higher or placement by departmental exam. Functions, derivatives, integrals. Applications to problems in the engineering technologies.

MA 22900  
Calculus for the Managerial, Social, and Biological Sciences I Cr. 3  
P: MA 15300 with a grade of C or higher or placement by departmental exam. Differential and integral calculus of one variable. Applications to problems in business and the social and biological sciences.

MA 16500  
Integrated Calculus and Analytic Geometry I Cr. 5  
P: MA 15900 or MA15400 with a grade of C or higher or placement by departmental exam. Plane analytic geometry, calculus of one variable, derivatives, integrals, applications. The sequence MA 16500, 16600, and 26100 is suitable for majors in engineering, life, and physical sciences.

STAT 12500  
Communicating with Statistics Cr. 3  
P: MA 12401 with a grade of C or higher. An introduction to the basic concepts and methods in statistical reasoning that are commonly referenced in the print media. Topics include data collection methods, descriptive statistics, basic techniques of estimation, and theory testing. Students will analyze and interpret statistics relating to contemporary problems in politics, business, science and social issues.

STAT 24000  
Statistical Methods for Biology Cr. 3  
P: MA 15300 with a grade of C or higher. An introduction to the basic concepts and methods in a statistical analysis, with emphasis on applications in the life sciences. Descriptive statistics, discrete and continuous distributions, confidence interval estimation, hypothesis testing, and contingency tables.

STAT 30100  
Elementary Statistical Methods I Cr. 3  
P: MA 15300 with a grade of C or higher. Not open to majors in mathematics or engineering. Credit should be allowed in no more than one of STAT 30100, 35000, 43300, 50100, 50300, or 51100. Introduction to statistical methods with applications to diverse fields. Emphasis on understanding and interpreting standard techniques. Data analysis for one and several variables, design of samples and experiments, basic probability, sampling distributions, confidence intervals and significance tests for means and proportions, correlation and regression. Software is used throughout.

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