

**Approved Purdue Fort Wayne Dual Credit Courses**

**AD 10101 – Art Appreciation** Objectives: to acquaint students with outstanding works of art and to provide an approach to appreciation through knowledge of purposes, techniques, form, and content. No credit toward a fine arts degree. CTL Course\*. 3 credits.

**AD 10502 – Digital Imaging** Knowledge in digital imaging software is useful in graphic and web design, image manipulation, photo restoration, digital illustration, and even in creating textures, and lighting maps for 3D modeling and animation. This is a course that introduces basic skills and functions of digital imaging. 3 credits. *Priority Dual Credit Course*.

**AD 10801 – Introduction to Drawing for Non-majors** Introduces the student to the basic elements of drawing. Line, shape, value, and perspectives will be studied before moving on to the more complex use of color. Landscape and still life will be the source of subject matter. CTL Course\*. 3 credits.

**AD 13300 – Metalsmithing Fundamentals for Non-Arts Majors** Metalsmithing Fundamentals for Non-majors. Students will learn various basic fabricating techniques using non-ferrous metals (copper, brass, silver) on a small object/jewelry scale. Processes studied will include silver brazing with acetylene gas torches, metal stretching and forming by hand using polished hammers, wax working, and silver lost-wax casting. 3 credits.

**AD 16500 – Ceramics for Non-majors** Introduction to ceramics is a creative art course in which students use hand building techniques to create tile, pottery form, and ceramic sculpture. Various lowfire surfaces and firing atmospheres will be explored. Slide lectures will accompany projects, exposing students to the work of various cultures and ceramic artists. Classroom projects and discussions will promote a greater understanding of form and creative processes. 3 credits.

**AD 20201 – Introduction to Photography** This course introduces the student to the basic elements and principles of design as they apply to the field of photography and imaging. Through lectures, demonstrations, projects, and exercises, students will develop a body of work that will demonstrate their understanding of the fundamentals of photography.  Minimum grade of C- for credit towards all Art and Design degree program major requirements. 3 credits. *Priority Dual Credit Course*.

**AD 23900 – Painting for Non-Majors** Introduction to painting in oil. Study of the spatial and expressive qualities of color, with an emphasis on composition and pictorial design. Development of technical skills in image making through exploration of traditional and modern methods of paint application.  Introduction to surface preparation, framing, and display of paintings.  Credit cannot be used to satisfy Art and Design major degree requirements except towards liberal arts electives. 3 credits.

**BIOL 10000 – Introduction to the Biological World** Principles of biological organization from molecules through ecosystems. Emphasis on processes common to all organisms and on concepts related to problems of current importance. No credit towards a degree in IU Allied Health. Credit given for only one of the following: BIOL 1000 or BIOL 25000. CTL Course\*. 3 credits. *Priority Dual Credit Course*.

**BIOL 10001 – Introduction to the Biological World Laboratory** Laboratory exercises and experiments that illustrate selected principles of biology. CTL Course\*. 1 credit. *Priority Dual Credit Course.*

**BUS 10001 – Principles of Business Administration** An introduction to functional areas of business, tracing the evolution of business, business forms, the role of government and society, relationships between administrators and employees, ethical issues, and the globalization of world markets. Ideal for pre-business students or students of any major desiring a basic understanding of business. CTL\* course. 3 credits. *Priority Dual Credit Course.*

**BUS 26000 – Personal Finance** Financial problems encountered in managing individual affairs: family budgeting, installment buying, insurance, and home ownership. No credit toward B.S. in business if taken during junior or senior year. CTL\* course. 3 credits.

**CHM 11100 – General Chemistry** A basic introduction to the principles of chemistry including: matter and energy, nomenclature, measurement, atomic structure, nuclear chemistry, chemical bonding, stoichiometry, classification of chemical reactions, kinetics, equilibria, gas laws, liquids, and solids. CTL\* course. 3 credits. *Priority Dual Credit Course.*

**COM 11400 – Fundamentals of Speech Communication** A study of communication theories as applied to speech; practical communicative experiences ranging from interpersonal communication and small-group process through problem identification and solution in discussion to informative and persuasive speaking in standard speaker-audience situations. CTL Course\*. 3 credits. *Class size limit of 26 students. Priority Dual Credit Course.*

**CS 11200 – Computer Science for Everyone** This course is designed to provide a broad and realistic idea of what computer professionals do and how they do it. It will prepare students for later computing courses, including software development courses, by providing both individual and team hands-on lab experiences with web design, markup languages (HTML) and JavaScript. Students will be introduced to various professional opportunities and work environments. Current topics in computer science as they relate to society will be covered. Students will gain sufficient programming experience to enable a smooth transition to CS 16000 Java programming. 3 credits. *Priority Dual Credit Course.*

**CS 11400 – Introduction to Visual Basic** This course provides an introduction to programming using the Visual Basic language and its integrated development environment. Topics to be covered include the syntax and structure of the VB language; controls, dialog boxes, and other interface tools; menu design; multiple forms; error-trapping; and arrays. Other topics that may be covered include object linking and embedding (OLE); VB for applications; database development using record sets and data bound controls; data handling; grids; validation and election; drag and drop; and graphics, and new revisions for interoperability with other languages. 3 credits. *Priority Dual Credit Course.*

**CS 16000 – Introduction to Computer Science I** An introduction to computer concepts and the fundamentals of structured programming in a high-level language. Problem-solving techniques, specifications, stepwise refinement, programming style, structure charts, and program documentation. Programming topics include data types, assignments, input/output, subprograms, selection, iteration, arrays, records, text files, and simple searching and sorting. 4 credits. *Priority Dual Credit Course.*

**CS 16100 - Introduction to Computer Science II** This course continues CS 16000. Students will design larger programs to solve more complicated problems. The emphasis is on deepening students’ abilities to deal with abstraction, problem decomposition, and the interaction between program components. Students will develop their professional practice through analysis of more general problems, debugging and testing of their programs, and written presentation of their solutions. Topics include multidimensional arrays, event-driven programs, GUI’s, class inheritance and interfaces, and libraries.

4 credits.

**ECON 20000 – Fundamentals of Economics** Study of the basic institutions of market economy and the role they play in defining and pursuing economic goals in the U.S. economy. Emphasis is placed upon the effects of existing economic institutions, current economic policy alternatives as they affect both the individual and the society. CTL\* Course. 3 credits. *Priority Dual Credit Course.*

**EDU 20000 – Examining Self as Teacher** Designed to help a student make a career decision, better conceptualize the kind of teacher the student wishes to become, and reconcile any preliminary concerns that may be hampering a personal examination of self as teacher. 3 credits. *Priority Dual Credit Course.*

**EDUC 20001 – Introduction to Scientific Inquiry** Course provides the elementary education major with background in the process skills of science, with emphasis on the integration of these skills and science concepts. 3 credits. *Priority Dual Credit Course.*

**EDUC 20002 – Using Computers for Education** Introduction to instructional computing, educational computing literature, and BASIC programming. Review and hands-on experience with educational software packages and commonly used microcomputer hardware. 3 credits. *Priority Dual Credit Course.*

**ENGL 10201 – Modern World Literature** Plays, poems, and fiction from the 16th century to the present, including works by Shakespeare, Ibsen, Shaw, Wordsworth, Whitman, Yeats, Dostoevsky, Faulkner, Hemingway. Preparation for course P: placement at or above ENGL 13100 (or equivalent) and exemption from or completion of ENGL 15000. CTL Course\*. 3 credits.

**ENGL 13100 – Reading, Writing, and Inquiry I** This course teaches skills of critical reading, thinking, and writing to help students meaningfully engage artifacts, events, and issues in our world. The course builds students’ abilities to read written and cultural texts critically; to analyze those texts in ways that engage both students’ own experiences and the perspectives of others; and to write about those texts for a range of audiences and purposes as a means of participating in broader conversations. Assignments emphasize the analysis and synthesis of sources in making and developing claims. Preparation for course: P: self-placement in ENGL 13100, or completion of ENGL 12900 with a grade of C or better, or completion of the ESL composition sequence and recommendation of the ESL instructor. CTL Course\*. 3 credits. *Class size limit of 22 students. Priority Dual Credit Course.*

**ENGL 20201 – Literary Interpretation** Close analysis of representative texts (poetry, drama, fiction) designed to develop art of lively, responsible reading through class discussion and writing of papers, including a documented research paper. Attention to literary design of critical method. CTL Course\*. 3 credits. *Class size limit of 22 students. Priority Dual Credit Course.*

**GER 11100 – Elementary German I** Introduction to German language as well as to cultures of German-speaking countries. Emphasis on development of communicative competence in speaking, listening, reading, and writing. CTL\* Course. 3 credits. *Priority Dual Credit Course.*

**HIST 10501 – American History I** Colonial period, revolution, Confederation and Constitution, National period to 1877. CTL Course\*. 3 credits. *Priority Dual Credit Course.*

**HIST 10601 – American History II** 1877 to present. Political history forms framework with economic, social, cultural, and intellectual history interwoven. Introductions to historical literature, source material, and criticism. History 10501 is not a prerequisite for 10601. CTL Course\*. 3 credits. *Priority Dual Credit Course.*

**MA 14000 – Practical Quantitative Reasoning** 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 14000 satisfies the General Education Quantitative Reasoning requirement. Students who are not required to take MA 15300 would likely be better off taking MA 14000 or STAT 12500. CTL Course\*. 3 credits. *Priority Dual Credit Course.*

**MA 15300 – College Algebra** 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. CTL Course\*. 3 credits. *Priority Dual Credit Course.*

**MA 15400 – Algebra and Trigonometry II** Trigonometric functions and graphs, vectors, complex numbers, conic sections, matrices, and sequences. P: MA 14900 or 15300 with a grade of C- or better or placement by departmental exam. CTL Course\*. 3 credits. *Priority Dual Credit Course.*

**MA 16500 – Analytic Geometry and Calculus I** Introduction to differential and integral calculus of one variable, with applications. Conic sections. P: MA 15400 or 15900 with a grade of C- or better or placement by departmental exam. CTL Course\*. 4 credits. *Priority Dual Credit Course.*

**MA 16600 - Analytic Geometry and Calculus II** Continuation of MA 16500. Vectors in two and three dimensions. Techniques of integration, infinite series, polar coordinates, surfaces in three dimensions. P: MA 16500 with a grade of C- or better. CTL Course\*. 4 credits. *Priority Dual Credit Course.*

**MA 21300 – Finite Mathematics I** 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. CTL Course\*. 3 credits. *Priority Dual Credit Course.*

**MA 26100 – Multivariate Calculus** Solid analytic geometry, vector calculus, partial derivatives, and multiple integrals. P: MA 16600 with a grade of C- or better. 4 credits.

**MUSC 10101 – Music for the Listener** Introduction to the elements of music through the mode of listening and a historical survey of the way those elements have been used in various types of musical compositions. For non-music majors. CTL Course\*. 3 credits.

**MUSC 10900 – Rudiments of Music I** Rudiments of Music I. Fundamentals of notation, ear training, music reading. 3 credits.

**MUSC 11100 – Class Piano I** Preparation of non-keyboard concentrations/majors for the keyboard proficiency examination (X299). Six Sequential components provide sequential presentation of fundamental skills. Three performance examinations evaluate poise, facility, and general musicianship at the keyboard. Preparation for Course C: MUSC 11300; music majors only. 1 credit.

**PHIL 11000 – Introduction to Philosophy** An introduction to basic problems and types of philosophy, with special emphasis on the problem of knowledge and nature of reality. CTL Course\*. 3 credits.

**PHIL 11100 – Ethics** A study of the nature of moral value and obligation. Topics such as the following will be considered: different conceptions of the good life and standards of right conduct; the relation of non-moral and moral goodness; determinism, free will, and the problem of moral responsibility; the political and social dimensions of ethics; the principles and methods of moral judgment. Readings will be drawn from bothcontemporary and classical sources. CTL Course\*. 3 credits.

**PHIL 12000 – Critical Thinking** This course is designed to introduce students to the structure of successful reasoning. Topics covered will include language, definitions, vagueness and ambiguity, recognizing arguments, distinguishing between arguments and explanations, patterns for diagramming arguments, informal fallacies, non-deductive reasoning (the structure of explanations), and disciplinary reasoning (the structure of arguments as encountered in such disciplines as ethics or business). Students who have earned credit in PHIL 15000 are encouraged not to register for PHIL 12000. 3 credits.

**PHYS 22000 – General Physics** Mechanics, heat, and sound, for students not specializing in physics. Preparation for course P: MA 15300. CTL Course\* when taken with PHYS 22100. 4 credit hours.

**POL 10300 – Introduction to American Politics** Introduction to the nature of government and the dynamics of American politics. Origin and nature of the American federal system and its present political party base. CTL Course\*. 3 credits. *Priority Dual Credit Course.*

**SPAN 20301 – Second-Year Spanish I** Meets three hours a week. Continuation of 11101-11201/11300 with grammar review and increased emphasis on communication skills. Reading and discussion in Spanish of contemporary literature, essays, and/or cultural readings. Practice in composition. CTL Course\*. 3 credits. *Priority Dual Credit Course.*

**SPAN 20401 – Second-Year Spanish II** Meets three hours a week. Continuation of SPAN 20301 with grammar review and increased emphasis on communication skills. Reading and discussion in Spanish of contemporary literature, essays, and/or cultural readings. Practice in composition. CTL Course\*. 3 credits. *Priority Dual Credit Course.*

**STAT 12500 – Communicating with Statistics** 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. 3 credits.

**STAT 24200 – Introduction to Data Science** This course provides a broad introduction to the field of data science. The course focuses on using computational methods and statistical techniques to analyze massive amounts of data and to extract knowledge. It provides an overview of foundational computational and statistical tools for data acquisition and cleaning, data management and big data systems. The course surveys the complete data science process from data to knowledge and gives students hands-on experience with tools and methods. Basic knowledge of Python is required. Computer Science majors cannot count this course as a degree requirement but can take it for credit as a free elective if taken before CS 37300, 34800, 47100, 47300, 44800. 3 credits.

**STAT 30100 – Elementary Statistical Methods I** Not open to majors in mathematics or engineering. Credit should be allowed in no more than one of STAT 30100 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. P: MA 14900 or MA 15300 or MA 16800 with a grade of C or higher. 3 credits.

**THTR 11400 – Interpretation for Performance and** Presentation Students will enhance their communication skills by analyzing selections from prose, poetry, and drama and exploring them through oral presentation. In addition to learning methods of creating a variety of specific texts, a mixture of vocal and physical techniques will be examined, adapted and practiced in order to better present material to a diverse population. 3 credits.

**THTR 13400 – Fundamentals of Performance** An introduction to the art of acting as practiced in the world today. CTL Course\*. 3 credits.

**THTR 20100 – Theatre Appreciation** Understanding and appreciation of the theatre’s role in the modern world. Includes a seminar approach in discussion of the nature of theatre, critical analysis of drama, the actor, the director, design, and careers in the theatre. Also deals with professional, regional, community, and educational theatre. CTL Course\*. 3 credits.