

# MATHEMATICAL SCIENCES

**Chair and Associate Professor:** Styer

**Professors:** DeVos, Fleischman, Hartmann, Jantzen, Marrero, Sprows, Woldar

**Associate Professors:** Feeman, Gluchoff, Kleiber, Levitan,

Longman, Lynn, Norton, Pigeon, Pollack-Johnson, Rhodes, Volpert

**Assistant Professors:** Ashley, Bartlow, Belkin,

Borchardt, Buckley, Deanin, Seliktar, Short,

**Instructor:** Santomas

**Office:** 305 St. Augustine Center, tel. 519-4850

**FRESHMAN CALCULUS:** Prospective first year Villanova students who have completed a years-study of calculus in high school should take the CEEB advanced placement test for possible credit for the first course at Villanova.

**MAJOR:** MAT 1500, 1505, 2500, 2600, 2705, 3300, 3305, 3400, 3500, and 5900; PHY 2410/2411 and either PHY 2412/2413 or PHY 2414/2415; four additional mathematics courses numbered 3505 and above; and one additional science course (with laboratory if appropriate). Students interested in graduate study in mathematics should satisfy their language requirement with French, German or Russian and should consider taking another of these languages as an elective.

**MINOR:** MAT 1500, 1505, 2500, 2600, plus four courses chosen from MAT 2705, 2710, and courses numbered 3000 or higher. Students may petition to substitute an approved upper division course (e.g., CSC 4170, ECE 3720, PHY 4202, CEE 3702) in his/her major for one of these four courses.

## **MAT 1010 Math Anxiety Workshop**

Techniques to reduce the negative thoughts and feelings some people have when confronted with math situations (numbers, graphs, statistics, etc). **(1 cr)** *Grading: S/U. Six two-hour meetings.*

**MAT 1210 Mathematical Concepts** Topics selected from logic, number theory, finance, set theory, geometry, applied linear algebra, calculus. Not open to students who have completed MAT 1505. **(3 cr)**

**MAT 1220 Discrete Mathematics with Social Sciences Applications** Discrete mathematics for the Liberal Arts student: voting methods, weighted voting, fair division,

apportionment, circuits, network, trees, directed graphs, planning and scheduling, linear programming, growth and symmetry. Not open to students who have completed MAT 1505. **(3 cr)**

## **MAT 1230 Introductory Statistics I**

Displaying and summarizing data, basic probability concepts, normal distributions, sampling distributions, estimation for a single population parameter, hypothesis testing for a single population parameter. No open to students who have completed MAT 1505. **(3 cr)**

## **MAT 1235 Introductory Statistics II**

Probability concepts, inferences about means,

variances, and proportions, contingency tables, analysis of variance, regression and correlation. Not open to students who have completed MAT 1505. **(3 cr)** *Prereq: MAT 1230.*

**MAT 1250 Statistics in Health-Care Research** Descriptive and inferential statistics: graphical displays, estimation, hypothesis testing. Open to Nursing students; others by special permission only. **(3 cr)**

**MAT 1310 Calculus with Life Sciences Applications I** Functions, algebra of real functions, polynomials, allometric functions, exponential and logarithmic functions, trigonometric functions, graphing, log-log and semilog graphs, sequences, difference equations, limits, continuity, the derivative, the chain rule, higher order derivatives, maxima and minima, curve sketching, applications to biology. **(3 cr)**

**MAT 1315 Calculus with Life Sciences Applications II** The mean-value theorem, Taylor's polynomial approximations, the anti-derivative, the definite integral, area, numerical integration, applications of the integral, techniques of integration, indeterminate forms, L'Hôpital's rule, improper integrals, introduction to differential equations with applications to biological systems, numerical solutions using the computer, applications in the life sciences. **(3 cr)** *Prereq: MAT 1310.*

**MAT 1320 Calculus I** Calculus for Liberal Arts students: polynomial, rational and transcendental functions, the derivative, numerical and graphical introduction to integration. **(3 cr)**

**MAT 1325 Calculus II** Techniques of differentiation and integration, applications and

further developments of calculus. **(3 cr)**  
*Prereq: MAT 1320 or equivalent.*

**MAT 1330 Quantitative Analysis for Business I** Analysis of single variable problems: problem formulation, translation between mathematical symbols and verbal descriptions, single variable modeling with real data, rates of change, techniques of differentiation, optimization, post-optimality analysis, continuous probability distributions, integrals, Fundamental Theorem of Calculus. **(3 cr)**

**MAT 1335 Quantitative Analysis for Business II** Analysis of multivariable problems: problem formulation, translation between mathematical symbols and verbal descriptions, multivariable modeling with real data, regression analysis, partial derivatives and unconstrained optimization, Lagrange multipliers and constrained optimization, matrix algebra, linear programming. **(3 cr)**  
*Prereq: MAT 1330.*

**MAT 1500 Mathematical Analysis I** Limits, transcendental functions (logarithms, exponential functions, inverse trigonometric functions), differentiation (definition, tangent lines, rates of change, techniques, implicit differentiation, related rates), applications of differentiation (graphing, optimization), indeterminate forms and L'Hopital's Rule, antiderivatives. Use of a computer algebra system, eg. MAPLE. **(4 cr)**

**MAT 1505 Mathematical Analysis II** Integration (indefinite, definite), applications of integration (area, volume, applications to physics and economics, etc), methods of integration approximate integration (trapezoidal and Simpson's rules), improper integrals,

differential equations, infinite sequences and series. **(4 cr)** *Prereq: MAT 1500.*

**MAT 1903 Internship Elective (3 cr)**

**MAT 1906 Internship Elective (6 cr)**

**MAT 1909 Internship Elective (9 cr)**

**MAT 2100 Theory of Interest** Interest measurements: accumulated and present value factors, annuities certain, amortization schedules, sinking funds, bonds and related securities. **(3 cr)** *Prereq: Two semesters of calculus.*

**MAT 2310 Statistics for Experimenters** The design and analysis of experiments, probability distributions, basic statistical inference, analysis of variance, block designs and factorial designs. For social and natural science majors. **(3 cr)** *Prereq: Two semesters of calculus.*

**MAT 2500 Mathematical Analysis III** Parametric equations, polar, cylindrical, and spherical coordinates; vectors and the geometry of space; vector functions (derivatives, integrals, curvature, etc.); partial derivatives; optimization; multiple integration and its applications; vector calculus (line integrals, vector analysis). Continued use of a computer algebra system. **(4 cr)** *Prereq: MAT 1505.*

**MAT 2600 Foundations of Mathematics** Topics selected from natural numbers, mathematical induction, irrational and transcendental real numbers, complex numbers, Fundamental Theorem of Algebra, infinite cardinals, symbolic logic, functions and relations, iterated functions, mathematical chaos. **(3 cr)**  
*Prereq: MAT 1500.*

**MAT 2705 Differential Equations with Linear Algebra** First order differential equations, matrices, second order linear equations, linear spaces, linear transformations, eigenvalues and eigenvectors, systems and higher order equations. **(4 cr)** *Prereq: MAT 1505.*

**MAT 2710 Advanced Mathematical Analysis II** Complex number system, analytic functions, Cauchy-Riemann equation, Cauchy integral formula, power series, Laurent expansion, residues, applications to Fourier and Laplace Transforms, differential equations. **(4 cr)** *Prereq: MAT 2500, 2705.*

**MAT 2930 History of Mathematics** History of arithmetic, algebra, geometry, trigonometry, calculus, and probability from ancient times to the nineteenth century. **(3 cr)**  
*Prereq: MAT 1505, 2600.*

**MAT 2993 Internship (3 cr)**

**MAT 2996 Internship (6 cr)**

**MAT 3300 Advanced Calculus I** Real numbers, ordering of the reals, lub and glb, density of the rationals, sequences, limits, algebra of convergent sequences, completeness of the reals, continuous functions, Intermediate Value Theorem, Taylor's Formula, L'Hôpital's rule, Riemann integral, Fundamental Theorem of Calculus. **(3 cr)** *Prereq: MAT 2500, 2600.*

**MAT 3305 Advanced Calculus II** Infinite series, absolute and conditional convergence, function sequences, pointwise and uniform convergence, Weierstrass Approximation Theorem, power series, Euclidean and metric spaces, topology of metric spaces, continuous

transformations, differential calculus in Euclidean spaces. **(3 cr)** *Prereq: MAT 3300.*

**MAT 3400 Linear Algebra** Vector spaces, linear transformations, self-adjoint and normal operators, bilinear and Jordan forms. **(3 cr)** *Prereq: MAT 2705.*

**MAT 3500 Modern Algebra I** Topics selected from groups and subgroups, cyclic groups, permutation groups, isomorphisms, direct products, cosets and Lagrange's Theorem, normal subgroups and factor groups, group homomorphisms, the Fundamental Theorem of Finite Abelian Groups, rings, fields. **(3 cr)** *Prereq: MAT 2600 and MAT 2705.*

**MAT 3505 Modern Algebra II** Topics selected from rings, subrings, integral domains, ideals and factor rings, ring homomorphisms, polynomial rings, fields, extension fields, finite fields. **(3 cr)** *Prereq: MAT 3500.*

**MAT 4110 Combinatorics** Induction, permutations and combinations, general counting methods, generating functions, recurrence relations, principle of inclusion-exclusion, graph theory, trees, planarity, networks, Hamiltonian cycles, Eulerian tours. **(3 cr)** *Prereq: MAT 1505.*

**MAT 4270 Numerical Analysis** Numerical and computational aspects of root-finding methods, interpolation and polynomial approximation, numerical differentiation and integration, and solutions of ordinary differential equations. **(3 cr)** *Prereq: MAT 1505 and ability to write programs in a high-level programming language.*

**MAT 4310 Statistical Methods** Data displays and summarization, probability

distributions, point and interval estimation, hypothesis testing, categorical data analysis, regression and correlation. **(3 cr)** *Prereq: MAT 1505.*

**MAT 4410 Mathematical Modeling** Model formulation, the modeling process, graphs as models, examples from the physical, social and life sciences, parameter estimation, experimental modeling, dimensional analysis, modeling discrete and continuous dynamic behavior, implementation. **(3 cr)** *Prereq: MAT 2705.*

**MAT 4600 Deterministic Operations Research** Deterministic methods: mathematical optimization, linear programming, formulation and solution techniques, duality, integer linear programming, transportation problem, assignment problem, network flows, dynamic programming. **(3 cr)** *Prereq: MAT 2705. MAT 4600 and MAT 4610 are independent courses; neither one is a prerequisite for the other.*

**MAT 4610 Stochastic Operations Research** Probabilistic methods: brief review of probability, transient and asymptotic properties of Markov chains, queuing models and their applications, Markov decision processes, optimal inventory policies, forecasting, game theory, simulation. **(3 cr)** *Prereq: MAT 2705. MAT 4600 and MAT 4610 are independent courses; neither one is a prerequisite for the other.*

**MAT 5110 Topics in Geometry** Topics selected from affine, hyperbolic, spherical, elliptic, Euclidean or projective geometry. **(3 cr)**

**MAT 5200 Theory of Numbers** Congruences, quadratic reciprocity,

Diophantine equations; applications. **(3 cr)**  
*Prereq: MAT 2600 or permission of instructor.*

**MAT 5400 Complex Analysis** Algebra of complex numbers, analytic functions, Cauchy-Riemann equations, Laplace equations, conformal mapping, integrals of complex functions, Cauchy's theorem, power series, Taylor's theorem, Laurent's theorem, residues, entire functions. **(3 cr)** *Prereq: MAT 2500.*

**MAT 5500 Topology** Topological equivalence, connectedness, compactness, topology of subsets of  $\mathbb{R}^n$ , manifolds, topological embeddings, topological spaces. **(3 cr)** *Prereq: MAT 2500.*

**MAT 5600 Differential Geometry** Geometry of curves and surfaces, curvature, first and second fundamental forms, minimal surfaces, use of MAPLE. **(3 cr)** *Prereq: MAT 2500.*

**MAT 5700 Mathematical Statistics I** Probability, random variables, joint distributions, expected values, limit theorems, distributions derived from the normal distribution. **(3 cr)** *Prereq: MAT 2500, 2705.*

**MAT 5705 Mathematical Statistics II** Survey sampling, parameter estimation, hypothesis testing, two sample tests, analysis of variance, analysis of categorical data, linear least squares. **(3 cr)** *Prereq: MAT 5700.*

**MAT 5900 Seminar in Mathematics** Supervised study of selected topics or problems in mathematics, student presentations. May be repeated for credit if content is different. **(3 cr)** *Prereq: MAT 3300, 3500.*

**MAT 5920 Topics in Applied Mathematics** Lecture course in an area of applied mathematics. May be repeated for credit if topics are different. *Prereq: As determined by instructor.*

**MAT 5930 Topics in Pure Mathematics** Lecture course in an area of pure mathematics. May be repeated for credit if topics are different. *Prereq: As determined by instructor.*

**MAT 5991 Independent Study in Mathematics** Reading in a selected branch of mathematics under the direction of a member of the staff. May be repeated for credit. **(1 cr)**  
*Prereq: Consent of instructor.*

**MAT 5992 Independent Study in Mathematics** Reading in a selected branch of mathematics under the direction of a member of the staff. May be repeated for credit. **(2 cr)**  
*Prereq: Consent of instructor.*

**MAT 5993 Independent Study in Mathematics** Reading in a selected branch of mathematics under the direction of a member of the staff. May be repeated for credit. **(3 cr)**  
*Prereq: Consent of instructor.*

# MODERN LANGUAGES AND LITERATURES

**Chair and Associate Professor:** Julia

**Professors:** Goldberg, Helmetag, Ogden,

**Associate Professors:** Mongeau, Omran, Pastore, Poeta, Roman

**Assistant Professors:** Chi, Hamada, Hart, Nakagawa,

Peraita, Rigaud, Trujillo, Waggaman

**Office:** 303 St. Augustine Center, 519-4680

**MAJORS:** Majors in French, German or Spanish are required to take ten courses above the intermediate level. Once a sequence of language courses has begun, a student may not revert to a lower level course. French 2144 is required of all majors in French; Spanish 2211, 2212 and 3950 are required of all majors in Spanish. In addition, majors in French and German are required to take French 3950 or German 3950.

**MINORS:** Students may minor in Arabic, Chinese, French, German, Italian, Japanese, Russian or Spanish. Minors in Arabic, Chinese, Japanese and Russian must complete six courses in the language. For Minors in French, German, Italian and Spanish four courses above the intermediate level are required.

The Department also offers courses in foreign literatures in English translation. Such courses may be used to fulfill a Humanities elective; however, they may not be used toward credit requirements for a foreign language major or minor.

Students may obtain up to six credits through Villanova summer programs abroad in France, Chile, Germany, Italy and Spain.

*NOTE:* Courses marked with an asterisk (\*) do not fulfill the Core Curriculum Language requirement.

## ARABIC

*Introductory Arabic I and II will fulfill the core requirement for a foreign language.*

**ARB 1111, 1112 Intensive Basic Modern Standard Arabic I and II** Functional use of Modern Standard Arabic for students with no prior knowledge of Arabic. Recitations, readings and oral drills, supplementary

language laboratory work. **(12 cr)** *Six hours a week. Sem 1&2.*

**ARB 1121, 1122 Intensive Intermediate Modern Standard Arabic I and II** Review of grammar and vocabulary. Recitations, readings and oral drills. Supplementary language laboratory work. **(10 cr)** *Five hours a week. Sem 1&2.*

**ARB 1131, 1132 Intensive Advanced Arabic I and II** Advanced communication skills including reading and discussing topics on current events. Supplementary language laboratory work. **(10 cr)** *Five hours a week. Sem 1&2.*

**ARB 1141 Introduction to Colloquial Egyptian Arabic** Training in the use of colloquial Egyptian Arabic, focusing on listening and speaking skills. Supplementary laboratory work and drills. **(3 cr)**

**ARB 2100 Arabic Literature in English Translation** The major works of Arabic literature in translation. **(3 cr)** *Conducted in English.\**

**ARB 2141 The Arab-Andalusian Legacy** The impact of the Arab period on the Iberian Peninsula from the historical, cultural and literary viewpoints. **(3 cr)**

**ARB 2142 Arab Culture and Civilization** Arab culture and civilization with emphasis on the Arab people's contribution to the arts and sciences. **(3 cr)**

#### CHINESE

*Introductory Chinese I and II will fulfill the core requirement for a foreign language.*

**CHI 1111, 1112 Intensive Basic Chinese I & II** Functional use of Chinese for students with no prior knowledge of Chinese. New pronunciation system, PINYIN, readings and oral drills. Supplementary language laboratory work. **(12 cr)** *Six hours a week, Sem 1&2.*

**CHI 1121, 1122 Intermediate Chinese I & II** Review of grammar and vocabulary. New pronunciation system, PINYIN, readings and

oral drills. Supplementary language laboratory work. **(10 cr)** *Five hours a week. Sem 1&2.*

**CHI 1131, 1132 Advanced Chinese I and II** Advanced communication skills including reading and discussing topics on current events. Supplementary language laboratory work. **(6 cr)** *Three hours a week. Sem 1&2.*

**CHI 2143 Chinese Culture: Past and Present** Chinese culture and civilization from the beginning to the present. **(3 cr)** *conducted in English.\**

**CHI 2144 Chinese Literature in Translation** The history and development of Chinese fiction from its beginning to the present. **(3 cr)** *Conducted in English.\**

#### FRENCH

**FRE 1111, 1112 Introductory French I and II** Groundwork in French, including oral proficiency, aural comprehension and reading; for students with no prior knowledge of French or only one year of high school French. Supplementary language laboratory work and oral drills. **(8 cr)** *Four hours a week. Sem 1&2.\**

**FRE 1113 French for Reading Knowledge** Essentials of grammar and exercises in expository French prose to prepare students for independent research in specialized fields. **(0 cr)**

**FRE 1121, 1122 Intermediate French I and II** Review of grammar, composition, reading and conversation. **(6 cr)** *Three hours a week. Sem 1&2. Prereq: FRE 1111 and 1112, 2-3 years of high school French, or the equivalent.*

**FRE 1131, 1132 Conversation and Composition I and II** Intense practice in

conversation and composition with emphasis on developing advanced language skills in French. A writing enriched course. **(3 cr)**  
*Prereq: FRE 1121, 1122, 4-5 years of high school French or the equivalent.*

**FRE 1133, 1134 Practical French I and II** Business and professional writing and readings in applicable publications. **(6 cr)** *Three hours a week. Sem 1&2. Prereqs: FRE 1121 and 1122 or permission of the chair.*

**FRE 1135 Advanced Grammar** Systematic grammar analysis with comprehensive exercises and compositions. A writing enriched course. **(3 cr)** *Prereqs: FRE 1121, 1122 or the equivalent.*

**FRE 1136, 1137 Contemporary French Language I and II** Offered as part of the Villanova Summer Program at the University of Bourgogne/Dijon to provide practice in speaking and writing on an advanced level. The use of French in everyday situations and subject-related discussions. Students will read newspapers, magazines, advertising, and listen to broadcasts. **(6 cr)**

**FRE 1141 Phonetics** Intensive practical presentation of French phonetics and stylistic. **(3 cr)**

**FRE 2100 French Literature in English Translation** The major works of French literature in translation. (3 cr). *Conducted in English.\**

**FRE 2101 French Literature and Film** Study of evolutionary relationship between 19th century realist Novel, pre-war poetic realism in film, post-war Nouveau Roman and Nouvelle vague cinema. **(3 cr)**

**FRE 2142 French Civilization** Study of French culture in its manifold aspects. **(3 cr)**  
*Prereqs: FRE 1121, 1122.*

**FRE 2143 Contemporary France** Offered as part of the Villanova Summer Program at the University of Bourgogne/Dijon. France's current role in the international, political, economical and cultural world, and its impact in the EEC. Oral presentations and independent research required. **(3 cr)**

**FRE 2144 Explication de textes** Close analyses of and textual commentary on representative selections. **(3 cr)** *Prereqs: FRE 1131, 1132.*

**FRE 2215 French Women Writers** French women writers from the Middle Ages to the present. **(3 cr)** *Prereqs: FRE 1131. Satisfies diversity requirement.*

**FRE 2218 Introduction to Francophone Literature** Representative selections of French writers of Black Africa, North Africa, the Caribbean, and Canada. Topic to be announced. **(3 cr)** *Satisfies diversity requirement.*

**FRE 3211, 3212 Survey of French Literature I & II** Close readings of representative texts from the Middle Ages to the 20th Century. **(6 cr)** *Prereq: FRE 1131 or the equivalent; either or both semesters for credit.*

**FRE 3411 Medieval Literature** The earliest texts, the chanson de geste, the romance, lyric, didactic, allegorical and satirical poetry and the prose writers of the Middle Ages. **(3 cr)**

**FRE 3412 Special Topics** Advanced study of topics of special interest in French literature.

Topics to be arranged. Course may be repeated for credit. **(3 cr)**

**FRE 3512 The Renaissance** The *Pléiade* and the prose writers of the 16th Century. **(3 cr)** *Prereq:* FRE 1131.

**FRE 3613 Seventeenth-Century Literature** Analytical readings of major non-dramatic texts, 1620-1690. **(3 cr)** *Prereq:* FRE 1131.

**FRE 3614 Classical Theatre** Classical dramaturgy and modern interpretations of Corneille, Molière and Racine. **(3 cr)** *Prereq:* FRE 1131.

**FRE 3715 Eighteenth-Century Literature I** Study of the Enlightenment through the theater, novels and philosophical texts with special emphasis on Voltaire. **(3 cr)** *Prereq:* FRE 1131.

**FRE 3716 Eighteenth-Century Literature II** Philosophical, revolutionary and sentimental writings with special emphasis on Rousseau. **(3 cr)** *Prereq:* FRE 1131.

**FRE 3717 Eighteenth and Nineteenth-Century Theatre** Development of the French theatre from the Classical tradition of the eighteenth century to the Romantic drama of the nineteenth. **(3 cr)** *Prereq:* FRE 1131.

**FRE 3818 Romanticism** The poetry, novel, short story and drama of the romantic period. **(3 cr)** *Prereq:* FRE 1131.

**FRE 3819 Realism and Naturalism** Realism and naturalism in the French novel and theatre with emphasis on Balzac, Flaubert and Zola. **(3 cr)** *Prereq:* FRE 1131.

**FRE 3820 The Post-Romantic Poets** The development of French poetry and poetic theory from Baudelaire to Mallarmé. **(3 cr)** *Prereq:* FRE 1131.

**FRE 3921 Twentieth-Century Theatre** Major stage works in text and performance from Jarry to Koltès. **(3 cr)** *Prereq:* FRE 1131.

**FRE 3922 Twentieth-Century Novel** Development of the novel in the first half of the 20th Century with emphasis on Proust, Gide, Mauriac, Green, etc. **(3 cr)** *Prereq:* FRE 1131.

**FRE 3923 Post-World War II Writers** French Literature since 1945, with emphasis on the novels and essays of Sartre, Simone de Beauvoir, Camus, Robbe-Grillet, and Le Clézio. **(3 cr)** *Prereq:* FRE 1131.

**FRE 3950 Research Seminar** Bibliographical principles and the techniques of literary research; preparation of a paper. **(1 cr)** *Prereq:* Senior major in Modern Languages.

Courses in English

**FRE 4110 French Classical Theatre; Text and Theory** Readings and discussions on the major dramatists and theorists of the French 17th Century. **(3 cr)** *Prereqs:* FRE 1131, 1132 or permission of the chair. Conducted in English.\*

**FRE 4120 Modern French Theatre** The contemporary drama of France from its origin (King Ubu) to Beckett, Sartre, Genet, Ionesco and recent dramatists. **(3 cr)** *Prereqs:* FRE 1131, 1132 or permission of the chair. Conducted in English.\*

**FRE 4130 The Modern French Novel** The search for identity and meaning in contemporary French fiction from Gide to Camus, Sartre and the new novelists. (3 cr) *Prereqs: FRE 1131, 1132 or permission of the chair. Conducted in English.\**

GERMAN

**GER 1111, 1112 Introductory German I and II** Groundwork in German, including oral, aural and reading skills. Supplementary oral drills. (8 cr) *Four hours a week. Sem 1&2.*

**GER 1113 German for Translation** Essentials of grammar and exercise for reading comprehension and translation. (0 cr)

**GER 1121, 1122 Intermediate German I and II** Review of grammar, composition, reading and conversation. (6 cr) *Three hours a week. Sem 1&2. Prereq: GER 1111 and 1112, 2-3 years high school German, or the equivalent.*

**GER 1131, 1132 Conversation and Composition I and II** Intensive practice in conversation and composition with emphasis on developing advanced language skills in German. Writing enriched. (3 cr) *Prereq: GER 1121 and 1122, 4-5 years of high school German, or the equivalent.*

**GER 1133, 1134 Business German I and II** Business and professional writing and readings in applicable publications. (6 cr) *Three hours a week. Prereq: GER 1121 and 1122 or permission of chair.*

**GER 1135, 1136 Practical German I and II** Intercommunication with supplemental readings in newspapers and magazines. (6 cr) *Three hours a week. Prereq: GER 1121 and 1122.*

**GER 2100 German Literature in English Translation** The major works of German literature in translation. (3 cr) *Course conducted in English.\**

**GER 2142 German Civilization and Culture to 1989** German civilization and culture from their beginnings until the fall of the Berlin Wall. (3 cr) *Prereq: GER 1121, 1122.*

**GER 2143 German Culture and Civilization Since 1989** Contemporary German civilization and culture in their manifold aspects. (3 cr) *Prereq: GER 1121, 1122.*

**GER 3211 Survey of German Literature I** From its beginnings to 1750. (3 cr) *Prereq: GER 1131 or the equivalent.*

**GER 3212 Survey of German Literature II** From 1750 through 1900. (3 cr) *Prereq: GER 1131 or the equivalent.*

**GER 3213 Survey of German Literature III: Modernism** From 1900 through 1995. (3 cr) *Prereq: GER 1131 or the equivalent.*

**GER 3411 Medieval Masterpieces** Selections from medieval German literature read in modern German. (3 cr)

**GER 3412 Special Topics** Topics of interest in German literature. Topics to be arranged. Course may be repeated for credit. (3 cr)

**GER 3714 German Literature: Enlightenment to Romanticism** Emphasis on Sturm and Drang. (3 cr) *Prereq: GER 1131 or the equivalent.*

**GER 3716 Goethe** Study of selected works. (3 cr) *Prereq: GER 1131 or the equivalent.*

**GER 3717 German Drama in the Nineteenth Century** The German drama from Romanticism to Naturalism, with emphasis on the major dramatic works of Kleist, Grillparzer, Büchner and Hebbel. (3 cr)

**GER 3718 The German Novelle** The German *Novelle* as a genre from Goethe to the 20th century. (3 cr) *Prereq: GER 1131 or the equivalent.*

**GER 3818 Romanticism** The philosophy, lyric and prose of the Romantic period. (3 cr) *Prereq: GER 1131 or the equivalent.*

**GER 3819 Realism** The major works of Poetic Realism. (3 cr) *Prereq: GER 1131 or the equivalent.*

**GER 3920 Austrian Literature** Selected works of Austrian literature from 1850 to the present. (3 cr) *Prereq: GER 1131 or the equivalent.*

**GER 3921 Twentieth-Century Drama** German drama from Naturalism to the present. (3 cr) *Prereq: GER 1131 or the equivalent.*

**GER 3922, 3923 Twentieth-Century Prose I and II** Novels and short stories. (6 cr) Three hours a week. *Prereq: GER 1131 or the equivalent.*

**GER 3950 Research Seminar** Bibliographical principles and the techniques of literary research; preparation of a paper. (1 cr) *Prereq: Junior or Senior major in German.*

**GER 4110 German Epic Theatre** Evolution of the genre culminating in the political documentary theatre. (3 cr) *Conducted in English.\**

**GER 4120 German Theatre and Film** Plays by Brecht, Hasenclever, Kaiser, etc. Films such as *Caligari, Nosferatu, Metropolis, M.* (3 cr) *Conducted in English.\**

**GER 4140 150 Years of German Drama** The main currents in German drama evolving into the modern period: Kleist, Grillparzer, Hebbel, Hauptmann, Kaiser, Brecht, Frisch, Duerrenmatt. (3 cr) *Conducted in English.\**

**GER 4150 German Culture and Civilization** The culture and civilization of the German-speaking countries. (3 cr) *Conducted in English.\**

#### ITALIAN

**ITA 1111, 1112 Introductory Italian I and II** Groundwork in Italian, including oral proficiency, aural comprehension and reading for students with no prior knowledge of Italian. Supplementary language laboratory work and oral drills. (8 cr) *Four hours a week. Sem 1&2.\**

**ITA 1121, 1122 Intermediate Italian I and II** Review of grammar, composition, reading and conversation. (6 cr) *Three hours a week. Sem 1&2. Prereqs: ITA 1111 and 1112 2-3 years of high school Italian, or the equivalent.*

**ITA 1131 Grammar and Composition** Intensive practice in conversation and composition with emphasis on developing advanced language skills in Italian. Writing enriched. Course conducted in Italian. (3 cr) *Prereq: ITA 1121, 1122, 4 years of high school Italian, or permission of the chair.*

Courses in English

**ITA 1132 Conversation and Composition**

Further practice in conversation and composition with focus on advanced proficiency in Italian. Course conducted in Italian. Writing enriched. **(3 cr)** *Prereq: ITA 1131 or permission of the chair.*

**ITA 2142 Italian Civilization I** Study of Italian culture in its manifold aspects: geography, history, literature to 1300's. **(3 cr)** *Prereqs: ITA 1131, 1132 or the equivalent.*

**ITA 2143 Italian Civilization II** Italian culture in its manifold aspects: literature from Renaissance to 20<sup>th</sup> century, art, music. **(3 cr)** *Prereqs: ITA 1131, 1132 or the equivalent.*

**ITA 2211 Readings in Italian Literature** Readings in fiction, verse and drama representing various literary currents and personalities from the Renaissance to modern times. **(3 cr)**

**ITA 3411 Petrarca and Boccaccio** The major works of Francesco Petrarca and Giovanni Boccaccio. **(3 cr)** *Prereqs: ITA 1131 and 1132 or the equivalent.*

**ITA 3412 Special Topics** Topics of special interest in Italian literature. Topics to be arranged. Course may be repeated for credit. **(3 cr)**

**ITA 3421 Dante's Divine Comedy** Dante's masterpiece with special emphasis on the "Inferno". **(3 cr)** *Prereqs: ITA 1131, 1132 or the equivalent.*

**ITA 3512 The Renaissance** Selected authors who played a major role in the development of humanistic viewpoint and in

the creative achievements of the Renaissance. **(3 cr)** *Prereqs: ITA 1131, 1132 or the equivalent.*

Courses in English

**ITA 4100 Italian Literature in English Translation** The major works of Italian literature in translation. **(3 cr)** *Conducted in English.\**

**ITA 4110 Dante's Divine Comedy** Dante's masterpiece in the context of the medieval vision of man and his destiny. **(3 cr)** *Conducted in English.\**

**ITA 4115 Italy Through the Sociological Film** A culturally-oriented course using the film medium to explore various aspects of Italian society from the aftermath of World War II to the present. **(3 cr)** *Conducted in English.\**

**ITA 4120 Boccaccio** The *Decameron* as an expression of the individual's struggle to emerge from the collectivity of medieval society and of Boccaccio's fascination with the infinite resources of human intelligence. **(3 cr)** *Conducted in English.\**

**ITA 4130 Italian Culture** The land and people of Italy; their social and cultural evolution; their achievements in the arts and their influence on art, literature and music; their contribution to the history of ideas. **(3 cr)** *Conducted in English.\**

**ITA 4140 The Image of Woman in Italian Literature** Literary works from the Medieval period to modern times. The role of the woman in Italian culture through the eyes of such literary geniuses as Dante, Petrarch and Boccaccio. Fulfills Diversity and Women's

Studies requirements. **(3 cr)** *Conducted in English.\**

**ITA 4150 ITA Italian Art and Literature**

Italian literature as reflected in painting, sculpture and architecture. Course is also offered as part of the Villanova summer program in Urbino, Italy. **(3 cr)** *Conducted in English.*

JAPANESE

*Introductory Japanese I and II will fulfill the core requirement for a foreign language.*

**JPN 1111, 1112 Intensive Basic Japanese I and II**

Functional use of Japanese for students with no prior knowledge of Japanese. Communication skills (speaking and listening), reading and writing skills. Supplementary practice with computer. **(12 cr)** *Six hours a week. Sem 1&2.*

**JPN 1121, 1122 Intermediate Japanese I and II**

Further practice of communication skills (speaking and listening), reading and writing skills. Supplementary practice with computer. **(10 cr)** *Five hours a week. Sem 1&2.*

**JPN 1131, 1132 Advanced Japanese I and II**

Advanced practice of communication skills - oral speech and discussion skills, reading and writing skills. Supplementary practice with computer. **(6 cr)** *Three hours a week. Sem 1&2.*

**JPN 2100 Japanese Literature in English**

**Translation** The Masterpieces (including Nobel Prize Winning work) of 20<sup>th</sup> century Japanese Literature (novels, short stories, drama, poems, women writers). Writing enriched. Fulfills cultural diversity requirement. **(3 cr)** *Conducted in English.\**

**JPN 2142 Japanese Culture and**

**Civilization** Various aspects of Japanese culture, society and people from the beginning to the present. Writing enriched. Fulfills cultural diversity requirement. **(3 cr)** *Conducted in English.\**

**JPN 3412 Special Topics**

Topics of special interest in Japanese society, culture, language (cross-cultural communication, business Japanese), and literature. Topics to be arranged. Course may be repeated for credit. **(3 cr)**

MODERN LANGUAGES

**ML 3200 Special Studies**

Studies in one of the areas not included in the languages, literatures and civilizations usually offered, e.g., Polish, Romanian and Ukrainian; readings and discussions. **(3 cr)\***

**ML 3201 Introduction to Language**

The definition and structure of language; also presents an analysis of the issues and terminologies related to the study, acquisition and learning of language. **(3 cr)**

RUSSIAN

*Introductory Russian I and II will fulfill the core requirement for a foreign language.*

**RUS 1111, 1112 Introductory Russian I and II**

Functional use of Russian for students with no prior knowledge of Russian. Recitations, readings and oral drills. Supplementary language laboratory work. Satisfies Arts and Sciences Language requirement. **(12 cr)** *Six hours a week. Sem 1&2.*

**RUS 1121, 1122 Intermediate Russian I and II**

Review of grammar and vocabulary. Recitations, readings and oral drills. Supplementary language laboratory work. **(10 cr)** *Five hours a week. Sem 1&2.*

*Prereqs: RUS 1111 and 1112 or the equivalent.*

**RUS 1131 Conversation and Composition I**

Advanced communication skills including reading and discussing topics on current events. Supplementary language laboratory work. **(3 cr)** *Prereqs: RUS 1121 and 1122 or the equivalent. Writing Enriched.*

**RUS 1132 Conversation and Composition II**

A continuation of RUS 1131. **(3 cr)** *Writing Enriched.*

**RUS 3412 Special Topics** Special interest topics in language, literature and culture.

Course may be repeated for credit. **(3 cr)** *Writing Enriched.*

Courses in English

**RUS 4110 Russian Civilization**

Understanding of Russian life and culture today by focusing on basic historical, ideological, economic, religious and cultural developments. Each student chooses one aspect of social development for further research. **(3 cr)** *Conducted in English. \* Writing Enriched.*

**RUS 4120 The Russian Short Story**

Representative Russian short stories from Pushkin to Pasternak. **(3 cr)** *Conducted in English.\* Writing enriched.*

**RUS 4130 The Russian Novel I**

Major Russian novels of the 19th century, including Pushkin, Lermontov, Gogol, Turgenev, Dostoevsky and Tolstoy. **(3 cr)** *Conducted in English.\* Writing Enriched.*

**RUS 4140 The Russian Novel II**

Major Russian novels of the 20th century including Bely, Fedin, Olesha, Bulgakov, Sholokhov,

Pasternak and Solzhenitsyn. **(3 cr)** *Conducted in English.\* Writing Enriched.*

**RUS 4150 The Russian Drama** The evolution of Russian drama from the 19th century to the present. **(3 cr)** *Conducted in English.\* Writing Enriched.*

SPANISH

**SPA 1111, 1112 Introductory Spanish I and II**

Groundwork Spanish, including oral proficiency, aural comprehension, and reading; for students with no prior knowledge of Spanish. Supplementary language laboratory work and oral drills. **(8 cr)** *Four hours a week. Sem 1&2.\**

**SPA 1121, 1122 Intermediate Spanish I and II**

Review of grammar, composition, reading and conversation. **(6 cr)** *Three hours a week. Sem 1&2. Prereqs: SPA 1111 and 1112, 2-3 years of high school Spanish, or the equivalent.*

**SPA 1131 Conversation and Composition I and II**

Intense practice in conversation and composition with emphasis on developing advanced language skills in Spanish. Course conducted in Spanish. Writing enriched. **(3 cr)** *Prereq: SPA 1121, 1122, 4-5 years of high school Spanish or the equivalent.*

**SPA 1133 Business Spanish I**

Credit documents, contracts, business correspondence, and abundant practice in letter writing. **(3 cr)** *Prereqs: SPA 1121 and 1122 or permission of the chair.*

**SPA 1134 Business Spanish II**

Corporations, their organization and function, mortgages, insurance, and taxes. **(3 cr)** *Prereqs: SPA 1121 and 1122 or permission of the chair.*

**SPA 1136 Translation Skills** An introduction to the theory and practice of translation. (3 cr) *Prereqs: SPA 1132 and 1133 or the equivalent.*

**SPA 1137 Spanish for the Health Professions** Medical terminology and idioms with emphasis on communicative competence. (3 cr) *Prereq: SPA 1132 or permission of the chair.*

**SPA 1138 Advanced Grammar** Intensive grammar review with special attention to literary style. (3 cr) *Prereq: SPA 1132 or permission of the chair.*

**SPA 2142 Spanish Civilization** The civilization and culture of Spain. (3 cr) *Prereq: SPA 1132 or permission of the chair.*

**SPA 2143 Spanish-American Civilization** Spanish-American civilization and culture in its manifold aspects. (3 cr) *Prereqs: SPA 1121 and 1122.*

**SPA 2211 Survey of Peninsular Literature** The foremost works of Spanish literature from the beginnings to present day. A required course for majors. (3 cr) *Prereq: SPA 1132 or permission of the chair.*

**SPA 2212 Survey of Spanish-American Literature** Spanish-American literature from colonial times to the present. A required course for majors. (3 cr) *Prereq: SPA 1132 or the equivalent.*

**SPA 2213 Spanish-American Theatre** The modern theatre in Spanish America from the turn of the century to the present. (3 cr) *Prereq: SPA 1132 or the equivalent.*

**SPA 2214 Spanish-American Novel** Reading and interpretation of Spanish-American novels from the modernist period to the present. (3 cr) *Prereq: SPA 1132 or the equivalent.*

**SPA 2215 Spanish-American Short Story** The origins, development and maturity of the short story in Spanish America. (3 cr) *Prereq: SPA 1132 or the equivalent.*

**SPA 2216 History of the Spanish Language** Spanish from its origins to the present. (3 cr) *Prereq: SPA 1132 or permission of the chair.*

**SPA 2217 Hispanic Literature Through Art** Main trends and styles of Spanish and Spanish-American literature analyzed in the light of corresponding trends and styles in the visual arts. From Gonzalo de Berceo to Pablo Neruda. (3 cr) *Prereq: SPA 1132 or the equivalent.*

**SPA 3411 Masterpieces of Medieval Literature** The *Cid* and other major works of the Spanish Middle Ages: early lyric, epic, ballad, prose. (3 cr) *Prereq: SPA 1132 or the equivalent.*

**SPA 3412 Special Topics** Advanced study of topics of special interest in Spanish literature. Topics may be repeated for credit. (3 cr) *Prereq: SPA 1132 or the equivalent.*

**SPA 3612 Cervantes** An interdisciplinary approach to Cervantes's work. (3 cr) *Prereq: SPA 1132 or the equivalent.*

**SPA 3613 Prose of the Renaissance and the Golden Age** 16th and 17th century prose and its cultural and ideological context. (3 cr) *Prereq: SPA 1132 or the equivalent.*

**SPA 3614 Drama of the Golden Age** The representation of the monarch, women, minority groups, etc. in Golden Age society through its drama. (3 cr) *Prereq: SPA 1132 or the equivalent.*

**SPA 3715 Eighteenth-Century Literature** Prose, poetry and theatre from Feijoo to Moratín. (3 cr) *Prereq: SPA 1132 or the equivalent.*

**SPA 3717 Nineteenth-Century Drama** A critical analysis of representative plays. (3 cr) *Prereq: SPA 1132 or permission of the chair.*

**SPA 3718 Nineteenth-Century Novel** Reading of novels representing *costumbrismo*, *realismo* and *naturalismo*. (3 cr) *Prereq: SPA 1132 or permission of the chair.*

**SPA 3820 Spanish Lyric Poetry I** Spanish lyric poetry concentrating on early modern romanticism and modernism. (3 cr) *Prereq: SPA 1132 or the equivalent.*

**SPA 3821 Spanish Lyric Poetry II** Contemporary Spanish lyric poetry. (3 cr) *Prereq: SPA 1132 or the equivalent.*

**SPA 3822 Spanish-American Poetry** The development of Spanish-American poetry from colonial times to the present. (3 cr) *Prereq: SPA 1132 or the equivalent.*

**SPA 3920 Contemporary Spanish Short Fiction** Short fiction in the Spanish literary tradition, with greater emphasis on the fruition of the genre in contemporary Spain. (3 cr) *Prereq: SPA 1132 or permission of the department chair.*

**SPA 3921 Contemporary Spanish Drama** Reading and analysis of representative plays

from Benavente to the present day. (3 cr) *Prereq: SPA 1132 or permission of the chair.*

**SPA 3923 The Modern Novel** Representative trends in 20th century Spanish novels. (3 cr) *Prereq: SPA 1132 or the equivalent.*

**SPA 3924 Spanish Films and Literature** Spanish films based on literary works as a medium will be used to better understand contemporary Spanish culture and civilization. Writing Intensive. (3 cr)

**SPA 3950 Research Methodology** Principles and techniques of literary research. Overview of major Spanish and Spanish-American authors and representative works. Writing intensive. Required for Spanish majors. (3 cr) *Prereq: SPA 1132 or the equivalent.*

#### Courses in English

**SPA 4100 Spanish Literature in English Translation** Major works of Spanish literature in translation. (3 cr) *Conducted in English.\**

**SPA 4110 The Spanish Epic and Ballad** Readings and discussions in the popular literature, including the folktale. (3 cr) *Conducted in English.\**

**SPA 4120 Don Juan** The mythic don, his ancestors and descendants in Spanish literature, from Juan Ruiz to the present. (3 cr) *Conducted in English.\**

**SPA 4130 The Modern Spanish Novel** The Spanish Civil War reflected in selected contemporary novels. (3 cr) *Conducted in English.\**

**SPA 4140 The Latin American "Boom"**

The contemporary novel and short story: Borges, Cartázar, Asturias, Fuentes, Machado de Assis, Rulfo, García Márquez. **(3 cr)**  
*Conducted in English.\**

**SPA 4150 The Arab-Andalusian Legacy**

The historical, cultural and literary impact of the Arab period in Spain. *Conducted in English. (3 cr)*

## NAVAL SCIENCE

**Chair and Professor:** Pugh

**Associate Professor:** Shaffer

**Instructors:** Fondren, Hyde, Monagle, Wall

**Office:** 103 John Barry, tel. 519-7380

Eligibility for a commission in the U.S. Navy or the U.S. Marine Corps through the NROTC Program is contingent upon successful completion of required University and naval professional courses of study. Courses required by the NROTC program are as follows:

1. Navy Option: NS 0100, 1000, 1100, 2100, 2200, 3100, 3200, 4100, 4200 plus six credits each of calculus (completed by end of Sophomore year), physics (completed by the end of Junior year), and English. Also three credits of Computer Science, and three credits of American military affairs. All courses must be approved by the Naval Science Adviser.
2. Marine Option: NS 0100, 1000, 1100, 3500, 3600, 4100, 4200 and three credits of American military affairs, approved by the Marine Option Adviser.
3. Nurse Option: NS 0100, 1000, 1100, 4100, 4200, and six credits of English, approved by Naval Science Adviser.

**MINOR:** (Navy Option) NS 0100, 1000, 1100, 2100, 2200, 3100, 3200, 4100, 4200. (Marine Option) NS 0100, 1000, 1100, 3500, 3600, 4100, 4200.

**NS 0100 Naval Professional Laboratories**  
Military drill, information briefings, and seminars on various subjects of USN/USMC interest including naval orientation (freshman), naval warfare specialties (sophomores), navigation laboratory (juniors), career planning and pre-commissioning information (seniors).  
**(0 cr)** *Two hours a week. Sem 1&2.*

Course is an introduction to the naval profession and to the concepts of seapower. The mission, organization, and warfare components of the Navy and Marine Corps, including an overview of officer and enlisted ranks, rates, and career patterns; naval courtesy and customs, military justice, leadership, and nomenclature are discussed. Normally taken by freshmen. **(2 cr)** *Sem 1.*

**NS 1000 Introduction to Naval Science**

**NS 1100 Seapower and Maritime Affairs**

Naval history from the beginnings of the age of sail through the twentieth century. The works and influence of Alfred Thayer Mahan as they relate to current and past fleet doctrine. The impact of foreign nations= maritime activities on world seapower.

Normally taken by freshmen. This course is writing enriched. **(3 cr)** *Sem 2.*

**NS 2100 Naval Ships System I**

Construction and propulsion of naval ships, including design, stability, control of damage. Propulsion systems including steam, diesel, gas turbine, and nuclear power plants; shipboard electrical power generation and distribution; and shipboard auxiliary systems including refrigeration, fresh water distilling plants and air compressors. Normally taken by sophomores. **(3 cr)** *Sem 2.*

**NS 2200 Naval Ships Systems II** Naval weapons systems including radar, sonar, and gyroscopes; weapons systems analysis stressing the fire control problem, information flow, the servo principle, and use of computers; general operation, safety and maintenance of shipboard weapons systems. Normally taken by seniors. **(3 cr)** *Sem 1.*

**NS 3100 Navigation** The theory and technique of piloting and celestial navigation. Normally taken by juniors. **(3 cr)** *Sem 1.*

**NS 3200 Naval Operations** The maneuvering board, tactical communications,

rules of the road, and seamanship. Normally taken by juniors. **(3 cr)** *Sem 2.*

**NS 3500 Evolution of Warfare** The evolution of weapons, tactics, and military organization applicable to land operations; the classic principles and variables of land operations. **(3 cr)** *Sem 1.*

**NS 3600 Amphibious Operations** The study of significant events in history relating to amphibious operations with particular attention on their impact on the evolution of amphibious warfare doctrine. **(3 cr)** *Sem 1.*

**NS 4100 Leadership and Management**

Fundamentals of leadership and management of an organization; emphasis on the Naval officer as leader and manager, concentrating on areas such as professional ethics, organizational theory, and the characteristics and roles of successful leaders. Normally taken by sophomores. **(3 cr)** *Sem 1.*

**NS 4200 Leadership and Ethics**

Application of the principles of leadership and management to the Navy and Marine Corps; exploration of the problems of race relations, drug and alcohol abuse, and human resource development. The organizational process, professional ethics, moral responsibilities of leadership, and the military justice system. Normally taken by seniors. **(3 cr)** *Sem 2.*

# PEACE AND JUSTICE

**Acting Director:** Werpehowski

**Office:** Ground Floor, Sullivan, tel. 519-4499

**CONCENTRATION:** Twenty-four 24 credit hours, including all requirements for the minor plus two additional courses from Peace and Justice seminar categories or cross-listed by Peace and Justice .

**MINOR:** Eighteen credit hours, including either PJ 1100 or 5300; at least three courses from at least two different Peace and Justice seminar categories (2000, 3000, 4000, 5000); and two courses from the remaining Peace and Justice seminars or from those courses cross-listed as Peace and Justice courses.

**PJ 1100 Introduction to Peace and Justice**

Definitions and understandings of concepts such as peace, justice, racism, sexism, and classism. Critical reflection on the systematic nature of justice and injustice; strategies and techniques for effective social change. (3 cr) *Sem 1.*

**PJ 2000 Selected Topics** Application of Catholic Social Teaching and the Pastorals of the American Catholic Bishops to issues of systemic justice, social analysis, and political economy. (3 cr)

**PJ 2100 Ecofeminism** Women's Studies' perspectives on environmental thought. The role of ecofeminist thought in the development of a post-modern societal paradigm and in a radical reconsideration of destructive and unquestioned beliefs concerning justice, peace, and community. (3 cr) *Sem 1&2.*

**PJ 2200 Caring for the Earth** The richness and diversity of Planet Earth, especially in its species forms; current forms of degradation to land, water, soil, and air and human inhabitants; economic, political, religious, cultural and social causes of global environmental problems; personal and

ethical/social justice decisions necessary to care for the Earth. (3 cr) *Sem 2.*

**PJ 2300 Literacy and Social Justice**

Theories of literacy and literacy training. Literacy tutoring in poor and marginalized communities. (3 cr) *Sem 2.*

**PJ 2400 Service & Education for Justice**

Economic, political, cultural, and spiritual root causes of the problems students observe in service projects. Development of a deeper appreciation and respect for the poor and a more long-lasting commitment to their struggle for justice. (3 cr) *By permission of instructor only. Sem 1.*

**PJ 2500 Education and Social Justice**

American education's contribution to class, gender, and race inequality: political bias in school curricula; unequal treatment of students by teachers and administrators based on race, ethnicity, class, and gender; unequal allocation of resources among public schools; the public-private school debate; possible political influences in universities; the mass media as an important component of education. (3 cr) *Sem 1.*

**PJ 2600 Catholic Social Teaching** One hundred years of Catholic Social Thought. Papal encyclicals, especially *Rerum Novarum* (1891) and *Sollicitudo Rei Socialis* (1987). The pastoral letters of the American Bishops, special emphasis on *The Challenge of Peace* (1983) and *Economic Justice for All* (1986). Guest lecturers will help to show the interdisciplinary nature of Catholic teaching. **(3 cr) Sem 1.**

**PJ 3000 Selected Topics** Violence in families and society, the traditions of Just War theory, and the critiques of war from the perspective of pacifism and non-violence. The importance and role of the peacemakers of the world, the values of conflict resolution, and strategies that aid the creation of a peaceful world order. **(3 cr)**

**PJ 3100 American Indian Thought & Culture** Historical, philosophical, religious, literary and artistic contributions of the Navajo, Sioux, Iroquois, and Hopi cultures. American Indian Art and Poetry, American Indian colonial history, American Indian tribal claims, and American Indian spirituality of the earth. Guest speakers and films. **(3 cr) Sem 1.**

**PJ 3200 Justice and Sports** The benefits and problems of competition. The role and value of competition in contemporary sports, with attendant social justice issues. The importance of play to a wholistic human life. **(3 cr) Sem 2.**

**PJ 3300 Modern Peacemakers** The life, times, writings, and influence of Mohandas Gandhi, Dorothy Day, Thomas Merton, and Martin Luther King, Jr., emphasizing their nonviolent protests against modern forces of racism, militarism and economic exploitation. Guest lecturers. **(3 cr) Sem 1.**

**PJ 3400 War and Morality** Three traditions of moral reflection on war: Just War Theory; Pacifism; and, the historical experience of women. Discussions focus on concrete cases (e.g., the modern world wars, Vietnam, the Persian Gulf War, Bosnia). **(3 cr) Sem 2.**

**PJ 3500 Making Peace Work** Various theories of peace; describing, explaining, and predicting the occurrence of peace; conflict, peace-making, -keeping, -building. Computer simulations of the peace process. **(3 cr) Sem 1.**

**PJ 4000 Selected Topics** The history of the struggle for justice and human rights in geographical locations, such as the Middle East, Ireland, Africa, and Central America, focusing on such issues as world hunger and apartheid, and culminating in an attempt to articulate systemic questions of justice. **(3 cr)**

**PJ 5000 Selected Topics** Justice and discrimination in U.S. society from social, economic, political and ethical perspectives. Strategies for the just elimination of discrimination. Topics include civil rights, gender issues of justice, etc. **(3 cr)**

**PJ 5100 Discrimination, Justice & Law** Development of discrimination and civil rights law in the United States through case materials in areas of racial discrimination, gender-based discrimination, reverse discrimination, sexual preference-based discrimination, and age discrimination, if time permits. **(3 cr) Sem 1.**

**PJ 5200 Poverty and the American Economy** An interdisciplinary perspective on poverty in the United States, emphasizing the past thirty years. Trends in the extent and incidence of poverty; underlying causes of

poverty; policies that might be used to combat poverty. **(3 cr)** *Sem 1.*

**PJ 5300 Race, Class and Gender** An integrated and interdisciplinary approach to race, class, and gender issues. Special attention to how considerations of race, class, and gender reinforce one another and together impede the realization of justice and the common good. **(3 cr)** *Sem 2.*

**PJ 5400 Ethics, Justice and the Family** Interdisciplinary perspectives on: the moral meaning of marriage; justice, gender, and the domestic division of labor; the legal protection of marriage and the parties to it; marriage, reproductive technology, and the commodification of children; the moral meaning of having children; the responsibilities of parents to their children; the responsibilities of children to their parents, with special reference to care for the aged; distributive justice and the family; a society's responsibilities to serving the needs of its children. **(3 cr)** *Sem 1.*

**PJ 5500 Race and Racism in American Film** The depiction of African Americans, Latinos, Native Americans, Asian Americans, and Jews in American films from sociological and textual approaches. Attention to

producers, directors, and audiences. Film as a cultural document. **(3 cr)** *Sem 1.*

**PJ 5600 Independent Study** **(3 cr)**  
*Sem 1&2*

**PJ 5700 The Meanings of Justice** Libertarian, socialist, welfare liberal, communitarian, feminist, and multicultural approaches to justice in contemporary literature. Consideration of recent studies of social justice in Christian ethics. **(3 cr)**  
*Sem 1*

**PJ 5800 International Perspectives on Poverty** Characteristics of the poor; international differences and compositions of poverty; economic explanations of poverty in alternative systems; poverty and sustainable development; institutional responses to poverty; Catholic Social Teaching and poverty. **(3 cr)** *Sem 1.*

**Elective courses which receive Peace and Justice credit:** ARB 2142; ECO 3127, 3141, 4207; GEO 2000, 2100, 2200, 2300; HIS 2990, 4490, 4620; PHI 2115, 2140, 2150, 2400, 3500, 3820; PSC 2100, 2700, 3500, 4401, 5600, 6130, 6325; SOC 3500, 3600, 5200; THL 3100, 3500, 4200, 4300, 4600; and selected Honors Program courses.

# PHILOSOPHY

**Chair and Associate Professor:** McCartney

**Professors:** Betz, Brogan, Busch, Caputo,

Doody, Fielder, Immerwahr, Schmidt,

**Associate Professors:** Carvalho, Goff, Losoncy, Wall

**Assistant Professors:** Brakman, Klein, Miles, Regan, Scholz, Tomarchio

**Office:** 108 St. Augustine Hall, tel. 519-4690

**MAJOR:** In order to graduate as a Philosophy major, the student must take PHI 1050 and must satisfy the college-wide ethics requirement (Eth. 2050). The student must take an additional 30 credits in Philosophy including PHI 3010 (*taken in Junior Year*), three courses in the history of Philosophy and PHI 6000 (*taken in Senior Year*). A student with majors in Philosophy and another discipline may, with the approval of the Chair of the Philosophy Department, count up to six cognate related credits from the second major toward fulfilling the Philosophy major requirements.

**MINOR:** In order to graduate as a Philosophy minor, the student must take fifteen credit hours in Philosophy, this number to include credits taken to satisfy the collegiate core requirements. At least nine credits must be taken from courses other than 1050, 2015, 2115, 2130 and 2150.

**PHI 1050 Introduction to Philosophy** The issues of God, persons and nature, and knowledge. Readings include sources which give special consideration to the classical and Christian perspectives. (3 cr)

**PHI 1600 Business and Society** The role of government in business, consumer demands, corporate social responsibility. Particular emphasis placed on social justice and individual ethics. (3 cr)

**PHI 2015 Logic and Critical** The study of Logic and critical thinking. Topics include: argument identification and analysis; formal and informal logic; fallacies; inductive argument; the role of argumentative structures in various philosophical traditions. (3 cr)

**PHI 2115 Ethics for Health Care Professionals** Rights and duties of the patient/client and the members of the health

care team, death and dying, genetic engineering and manipulation. (3 cr)

**PHI 2125 Philosophy of Death and Dying** Theories and conceptions of human suffering, death and life; issues of suicide, bereavement, grief and euthanasia. (3 cr)

**PHI 2130 Business Ethics** Social justice and charity as principles of order in economic life and relationships: topics include consumer rights, corporate social responsibility, and ecology. (3 cr)

**PHI 2140 Philosophy of Criminal Justice** Philosophical dimensions of criminal justice; law and morality, criminal versus civil disobedience, philosophical presuppositions of the insanity defense, philosophical problems in controlling and correcting criminal and delinquent behavior. (3 cr)

**PHI 2150 Engineering Ethics** Whistle-blowing, conflicts of interest, political contributions, and the social responsibility of engineers. (3 cr)

**PHI 2160 Philosophy of Biology** Key assumptions of the contemporary biological sciences: the meaning of life, the relevance of science, the structure of the life sciences, the doctrine of DNA and molecular genetics, evolutionary theory, ecology and the Gaia hypotheses, and the ethical and social issues spawned by new advances in biology and molecular genetics.

**PHI 2170 Ethical and Social Issues in Mass Media** The impact of the changing communications technologies on the human person and society; freedom of the press, violence; pornography and censorship, confidentiality of sources, advertising ethics and codes of ethics and standards of practice. (3 cr)

**PHI 2180 Ethical Issues in Computer Science** Codes of professional ethics, unauthorized access, ownership of software, and the social responsibility of computer professionals. (3 cr)

**PHI 2200 Philosophy and Film** Analysis of selected classics and current films from the perspective of basic philosophical concepts and questions. (3 cr)

**PHI 2400 Social and Political Philosophy** Social and political philosophers and the influence of their theories on the philosophical foundation of modern culture and society; emphasis on such conceptions as society, the state, justice and equality, and the social and political nature of persons. (3 cr)

**PHI 2410 The Ethics of War** Just war theory, total war, nuclear deterrence and nuclear war, disarmament, genocide, war crimes and atrocities, terrorism, non-violent resistance, and pacifism. (3 cr)

**PHI 2425 Philosophy of Women** Nature and status of woman from ancient times to the present, with consideration of the more general context of self-identity; contemporary feminist theories; feminism as a political movement. (3 cr)

**PHI 2430 Eco-feminism** Basic positions in eco-feminism as they relate to the philosophical and religious traditions of the West. (3 cr)

**PHI 2500 History of Ancient Philosophy** Plato, Aristotle and selected pre-Socratic and Hellenistic philosophers in the context of ancient and classical Greek civilization. (3 cr)

**PHI 2510 History of Medieval Philosophy** Philosophical movements from the early Middle Ages to the rise of modern philosophy; the influence of later Medieval speculation upon thinkers of the modern period; readings from Augustine, Aquinas, Bonaventure, and others. (3 cr)

**PHI 2520 History of Modern Philosophy** The systems of Descartes, Spinoza, Leibniz, and the empiricists - Locke, Berkeley, and Hume; Kant; selections read and evaluated. (3 cr)

**PHI 2800 American Philosophy** The growth of philosophy in America, concentrating on the thinkers of the classical period, especially Peirce, James, Royce, Dewey, and Santayana. (3 cr)

**PHI 2950 Topics in Philosophy** Special topics in philosophy of current interest to faculty and students. (3 cr)

**PHI 2993 Internship** Departmentally related and academically creditable field work experience. See department chair for more information. (3 cr)

**PHI 2996 Internship** Departmentally related and academically creditable field work experience. See department chair for more information. (6 cr)

**PHI 3000 Plato and Aristotle** Selected texts and themes from Plato and Aristotle. (3 cr)

**PHI 3010 Majors Seminar: Approaches and Methods** Preparation for advanced work in philosophy by exploring a representative variety of approaches and methods characteristic of the discipline. (3 cr)

**PHI 3100 An Introduction to Saint Augustine** Life and thought of Saint Augustine; the problem of certitude, the problem of evil, the nature of history, human knowledge and God, the soul-body relations, and political philosophy. (3 cr)

**PHI 3120 Augustine in Western Thought** Influences of Augustine's major teachings in shaping medieval and modern thought. Augustine's position on human nature, human freedom, sin and grace, history, and the nature and end of society. (3 cr)

**PHI 3130 Augustine and Existentialist Tradition** Existential themes in Augustine and their influence on such thinkers as Luther, Kierkegaard, Heidegger, Marcel, Camus. (3 cr)

**PHI 3160 History of Islamic Philosophy** Islamic thought, concentrating particularly on Islamic medieval theology and philosophy. (3 cr)

**PHI 3200 Metaphysics** Questions regarding the nature and possibility of metaphysics; selected texts from Greek philosophy to the present. (3 cr)

**PHI 3400 Theories of Knowledge** Nature and limits of human knowledge, kinds of knowledge, the nature of perception, subjectivity, belief, doubt, truth, and certitude. (3 cr)

**PHI 3500 Freedom** Human freedom analyzed from a metaphysical and political perspective; readings from classical and contemporary sources on such topics as determinism, slavery, rights, authority and dissent. (3 cr)

**PHI 3525 Philosophy of Human Sexuality** Embodiment, the nature of sexuality, the types of love, sexual ethics, marriage, sexual differences, and sexual discrimination. (3 cr)

**PHI 3600 Philosophy of Art** The principles and causes of beauty and art with special reference to the formation of art objects and the cultural context of philosophy and art. (3 cr)

**PHI 3620 Philosophy and Literature** Philosophical ideas in selected literary works; examination of the relation of literature to philosophy; fiction and truth, modes of communication. (3 cr)

**PHI 3650 Philosophy of Law** The nature and function of law, relation of law to ethics, the judicial process, the role of constitutions, the

rights of citizens, law and international relations. (3 cr)

**PHI 3700 Philosophy of History** Theories concerning the nature of history, the idea of progress, historical inevitability, the role of the Great man. (3 cr)

**PHI 3720 Marxism** Marx on the theories of human nature, freedom and history; related developments in Marxist thought. (3 cr)

**PHI 3750 Mysticism and Philosophy** The metaphysical interpretation of God, humans and the world implicit in the writings of selected mystics; epistemological issues such as mysticism and logic, the value of mystical experience, mysticism and psychedelic experience, mysticism and ethics. (3 cr)

**PHI 3820 Environmental Ethics** The relation of the physical and biological environment to ethical values. Priorities among environmental, economic and political values as a basis for ethical decisions. (3 cr)

**PHI 3825 Technology and Society** Case studies of specific technologies (such as television, automobiles, health technology) and critical examination of ethical, philosophical and policy issues that these technologies raise. (3 cr)

**PHI 3850 Philosophy of Sport** Nature of play, sport and game with special emphasis on the role of sport in modern society. (3 cr)

**PHI 4000 Philosophy of Social Science** The relation of social and natural science, behaviorism, models of explanation, moral and valuational implications of social science. (3 cr)

**PHI 4050 Philosophy of Natural Science** Philosophical implications of specific laws and theories; Newton's laws, energy, evolution, relativity, atomic theory. Methodological problems of observation, discovery, testing; scientific realism, revolutions in scientific thought. (3 cr)

**PHI 4200 Philosophy of Language** Major classical and contemporary philosophical theories concerning language, including the relationship of language to thought, experience and reality; theories of meaning, communication, linguistics, translation, poetic and religious language. (3 cr)

**PHI 4300 Contemporary Anglo-American Philosophy** Major themes and trends in analytic philosophy: Russell, logical positivism, Wittgenstein and present day linguistic philosophy. (3 cr)

**PHI 4500 Asian Philosophies** Sources of Eastern philosophies. Aspects of philosophies such as: Hinduism; Buddhism; Confucianism; Jainism; Sufism. (3 cr)

**PHI 4600 Introduction to St. Thomas Aquinas** Historical influences in the formation of St. Thomas' thought; specific contributions of Aristotelianism and Neoplatonism; theory of knowledge, being, persons and morality. (3 cr)

**PHI 4610 Freud and Philosophy** Philosophical implications of Freudian theory as it relates to the individual and culture; the role of the unconscious; interpretation, structure of the ego, human sexuality and the foundations of civilization. (3 cr)

**PHI 4800 French Existentialism and Phenomenology** The development of

phenomenology and existentialism in post-war France; the challenge to this thought by structuralism. Sartre, Marcel, Camus, Merleau-Ponty, Ricoeur, Levinas. (3 cr)

**PHI 4850 German Existentialism and Phenomenology** Individual and mass society, freedom, our consciousness of the world, and death in the writings of Kierkegaard, Nietzsche, Husserl and Heidegger. (3 cr)

**PHI 4875 Hermeneutics** Problem of interpretation; the possibility of a presuppositionless interpretation,

interpretation, pre-understanding and the hermeneutic circle, historical, literary, scriptural and artistic interpretation. (3 cr)

**PHI 4975 Independent Study and Research** Topic chosen by the student and approved by the professor and the chair. (3 cr)

**PHI 6000 Research Seminar** Inquiry in depth into one major philosophical problem or into the thought of one major philosopher; practice in the use of research and bibliographical techniques. (3 cr)

# PHYSICS

**Chair and Professor:** Maurone

**Professors:** Hones, Phares

**Associate Professors:** Shaw, Vassiliou, Wunderlich

**Assistant Professors:** Arrison, Besson, Guim, Schick, Siah, Strieb, Zamani

**Office:** 352A Mendel, tel. 519-4860

**MAJOR:** PHY 2410/2411, 2412/2413, 2414/2415, 2416/2417, 2601/2603, 3310/3311, 4000/4001, 4002/4003, 4100/4102, 4200/4202, 5100, 5200, 5300; CHM 1103, 1151/1152; MAT 1500, 1505, 2500, 2705. In addition, Physics majors must select a minimum of one elective from the Physics departmental offerings and three science courses chosen from courses for Science, Mathematics or Computer Science Majors.

**MINOR:** Successful completion of an introductory sequence in Physics, plus a minimum of 15 credits from the upper level Physics courses numbered above 2417. Physics minors are open to all science and engineering students.

**PHY 1010 Conservation Laws and Their Modern Applications** Kinematics; Newton's laws of motion and universal law of gravitation; rotational dynamics; hydrostatics and hydrodynamics. Linear momentum, energy and angular momentum conservation: collisions, space travel, satellite and planetary motion, static equilibrium and the mechanics of the human body. **(3 cr)** *Sem 1. Prereq: High school Algebra, Trigonometry and Geometry, or two semesters Mathematics. Coreq: PHY 1011.*

**PHY 1011 Physics Laboratory I** Elements of q-basic programming with applications to data analysis; mechanics experiments exhibiting conservation laws and testing Newton's laws of motion and universal law of gravitation. **(1 cr)** *Sem 1. Two hours laboratory a week. Coreq: PHY 1010.*

**PHY 1012 Energy and Modern Technologies** Thermodynamics: heat pumps,

refrigerators and car engines. Electricity and magnetism: energy conversion and electric power generators, electromagnetic waves (radio, TV, telecommunication). Applications of Einstein's special theory of relativity, Planck's quantization, deBroglie's wave-particle duality, Heisenberg's uncertainties and Pauli's exclusion principle include: twin paradox, photoelectric effect and solar cells, atomic energy levels, periodic table of elements, chemical bonding, fission and fusion energy, radioactivity. **(3 cr)** *Sem 2. Prereq: PHY 1010 and 1011. Coreq: PHY 1013.*

**PHY 1013 Physics Laboratory II** Heat, electromagnetism, and modern physics experiments. **(1 cr)** *Sem 2. Prereq: PHY 1010 and 1011. Coreq: PHY 1012.*

**PHY 1020 Great Ideas In Physics, Aristotle To Einstein I** General physics at a primarily conceptual level (algebra only). History and

Philosophy of science, especially physics and astronomy. Topics include mechanics, optics, and relativity. Personalities include Aristotle, Galileo, Newton, and Einstein. **(3 cr)** *Sem 1.*

**PHY 1021 Great Ideas In Physics Lab I**

Experiments designed to complement the topics in PHY 1020. **(1 cr)** *Sem 1. Coreq: PHY 1020, or consent of chair. Two hours laboratory a week.*

**PHY 1022 Great Ideas In Physics, Aristotle To Einstein II**

A continuation of Great Ideas In Physics I. Thermodynamics, earth science, electricity and magnetism, and modern theories of physics. Personalities include Joule, Maxwell, Faraday, Bohr, and Feynman. **(3 cr)** *Sem 2. Prereq: PHY 1020, 1021, or consent of chair.*

**PHY 1023 Great Ideas In Physics Lab II**

Experiments designed to complement the topics in PHY 1022. **(1 cr)** *Sem 2. Prereq: PHY 1020, 1021, or consent of chair. Coreq: PHY 1022.*

**PHY 1100 General Physics I** Mechanics, heat and sound. **(3 cr)** *Sem 1. Prereq/coreq: MAT 1310, 1320, or 1330. Coreq: PHY 1101.*

**PHY 1101 General Physics I Laboratory**

Selected experiments in mechanics, heat and sound. **(1 cr)** *Sem 1. Coreq: PHY 1100.*

**PHY 1102 General Physics II A**

continuation of PHY 1100; light, electricity and modern physics. **(3 cr)** *Sem 2. Prereq: PHY 1100. Pre/coreq: MAT 1315, 1325, or 1335. Coreq: PHY 1103.*

**PHY 1103 General Physics II Laboratory**

Selected experiments in light and electricity.

**(1 cr)** *Sem 2. Prereq: PHY 1101; Coreq: PHY 1102.*

**PHY 1500 The Concept of Light**

Historical and analytical survey of the concept of light from classical to modern view points. Designed for the students in the College of Commerce and Finance. **(3 cr)** *Sem 1&2; Prereq: MAT 1320 & 1325, or MAT 1330 & 1335.*

**PHY 1501 The Nature of Light**

A set of experiments in optics designed to complement the principles and ideas covered in PHY 1500, the Concept of Light lectures. **(3 cr)** *Sem 1&2; Corequisite: PHY 1500.*

**PHY 2400 Physics I, Mechanics**

Introduction to Mechanics. **(3 cr)** *Sem 2. Prereq/coreq: MAT 1500.*

**PHY 2402 Physics II, Electricity & Magnetism**

Electrostatics, DC Circuits, magnetism, and AC circuits. **(3 cr)** *Sem 1. Prereq: MAT 1505 and PHY 2400.*

**PHY 2403 Physics Lab for Engineering**

Selected experiments illustrating the principles of Mechanics and Electricity and Magnetism. **(1 cr)** *Sem 1. Coreq: PHY 2402.*

**PHY 2410 University Physics: Mechanics**

Vectors, kinematics, and dynamics of particles, rigid bodies, and fluids. **(3 cr)** *Sem 1. Coreq: MAT 1500.*

**PHY 2411 Lab: Mechanics**

Selected experiments demonstrating the fundamental principles of Mechanics and Waves with emphasis on techniques of measurements and data analysis. **(1 cr)** *Sem 1. Coreq: MAT 1500 and PHY 2410*

**PHY 2412 University Physics: Electricity & Magnetism** Electrostatics, DC circuits, magnetism, and AC circuits. **(3 cr)** *Sem 2. Coreq: MAT 1505. Prereq: PHY 2410*

**PHY 2413 Lab: Electricity & Magnetism** **(1 cr)** *Sem 2. Coreq: PHY 2412*

**PHY 2414 University Physics: Thermodynamics** Heat, kinetic theory of gases, first and second laws of thermodynamics, wave motion acoustics, geometrical and physical optics. **(3 cr)** *Sem 1. Prereq: PHY 2410. Coreq: MAT 2500.*

**PHY 2415 Lab: Thermodynamics** Selected experiments in heat, waves and optics. **(1 cr)** *Sem 1. Coreq: PHY 2414*

**PHY 2416 Modern Physics** Special theory of relativity, atomic theory, quantum physics, the Schrodinger equation, solid-state physics, nuclear physics, elementary particles and cosmology. **(3 cr)** *Sem 2. Prereq: PHY 2410, 2412 and 2414, or equivalent. Coreq: MAT 2500 or 2705 or equivalent.*

**PHY 2417 Lab: Modern Physics** Interference; Franck Hertz experiment; Photoelectric effect; Michelson interferometry; Millikan oil drop experiment; Electron Spin Resonance (ESR); Ferroelectricity; Superconductivity; Low Temperature physics experiments. **(1 cr)** *Sem 2. Prereq/coreq: PHY 2416.*

**PHY 2601 Computational Physics Lab I** Computer applications, data analysis and presentation, algorithms and programming, numerical methods, and basic graphics for physics and astronomy majors. **(1 cr)** *Sem 1. Coreq: Any introductory physics course.*

**PHY 2603 Computational Physics Lab II** Continuation of Computational Physics I. **(1 cr)** *Sem 2. Prereq: PHY 2601.*

**PHY 3310 Electronics** DC and AC analysis including network theorems, power, resonance, filters, bridge circuits, amplifiers, integrated circuits, active devices, digital logic circuits and applications. **(3 cr)** *Sem 1. Coreq: PHY 3311.*

**PHY 3311 Electronics Laboratory** Laboratory experiments are chosen to supplement the Physics 3310 lectures and to give experience with sophisticated electronic equipment. **(1 cr)** *Sem 1. Coreq: PHY 3310.*

**PHY 4000 Electricity and Magnetism I** Electrostatics, Coulomb's and Gauss' Laws, Maxwell's first two equations, Laplace's equation and boundary value problems, dielectrics, currents in conductors. **(3 cr)** *Sem 1. Prereq: PHY 2414 and 4200, or consent of chair. Coreq: PHY 4001.*

**PHY 4001 Electricity and Magnetism I Laboratory** Selected experiments in the field. **(1 cr)** *Sem 1. Prereq: PHY 2414 and 4200, or consent of chair. Coreq: PHY 4000.*

**PHY 4002 Electricity and Magnetism II** Magnetism, Biot-Savart's law, Faraday's law, Maxwell's third and fourth equations, electromagnetic wave equation, radiation. **(3 cr)** *Sem 2. Prereq: PHY 4000..*

**PHY 4003 Electricity and Magnetism II Laboratory** Selected experiments in the field. **(1 cr)** *Sem 2. Prereq: PHY 4000 and 4001. Coreq: PHY 4002.*

**PHY 4100 Mechanics I** Newtonian Mechanics, oscillations (simple, non-linear and driven), Lagrangian and Hamiltonian dynamics,

central force motion and scattering, special theory of relativity. **(4 cr)** *Sem 1. Prereq: PHY 2414, or consent of chair.*

**PHY 4102 Mechanics II** Dynamics of rigid bodies, coupled oscillations, wave phenomena, fluid mechanics (steady and turbulent flow, the equations of Euler and Navier-Stokes). **(4 cr)** *Sem 2. Prereq: PHY 4100.*

**PHY 4200 Mathematical Physics I** Vector and tensor analysis, matrices and determinants, infinite series, functions of a complex variable. **(3 cr)** *Sem 2. Prereq: PHY 2414 and MAT 2505, or consent of chair.*

**PHY 4202 Mathematical Physics II** A continuation of PHY 4200; second order differential equations, orthogonal functions, integral transforms, integral equations. **(3 cr)** *Sem 1. Prereq: PHY 4200.*

**PHY 5000 Electronics** Semiconductor diodes, transistors and integrated circuits; linear and nonlinear circuits, oscillation, logic circuits. **(3 cr)** *Coreq: PHY 5001.*

**PHY 5001 Electronics Laboratory** Selected experiments in the field. **(1 cr)** *Coreq: PHY 5000.*

**PHY 5100 Quantum Mechanics** Operators, Schrodinger Equation, one dimensional problems, harmonic oscillator, angular momentum, hydrogen atom, scattering theory. **(3 cr)** *Prereq: PHY 4000, 4100, 4200, and 4202, or consent of chair.*

**PHY 5102 Quantum Mechanics II** A continuation of Quantum Mechanics I. **(3 cr)** *Prereq: PHY 5100.*

**PHY 5200 Thermodynamics/Statistical Mechanics** Statistical methods, statistical thermodynamics, Ensembles, Partition functions. Quantum statistics. Kinetic theory of transport processes. **(4 cr)** *Sem 1. Prereq: Consent of chair required.*

**PHY 5300 Nuclear Physics** A Writing Intensive course. Lecture on structure of subatomic particles and nuclei, symmetries and Conservation laws, interactions and nuclear models, radioactivity and passage of radiation through matter. Lab covers accelerators, detectors and selected experiments in nuclear physics. **(4 cr)** *Sem 2. Prereq: Consent of Chair (course replaces PHY 5301)*

**PHY 5500 Solid State Physics I** Description of crystal structure, diffraction of X-rays, classification of solids, thermal properties of solids, dielectric properties, diamagnetism and paramagnetism, free electron theory of metals, band theory of solids. **(3 cr)** *Prereq: PHY 5100.*

**PHY 5502 Solid State Physics II** A continuation of PHY 5500. Brillouin zones. Band structure of solids. Semiconductor crystals, rectifiers and transistors. Ferromagnetism. Superconductivity. Applications. **(3 cr)** *Prereq: PHY 5500.*

**PHY 5600 Advanced Electronics** Three hours lecture a week. **(3 cr)**

**PHY 5601 Advanced Electronics Laboratory** **(1 cr)** *Coreq: PHY 5600.*

**PHY 5701 Advanced Laboratory I** Techniques and instrumentation of advanced experiments. **(3 cr)**

**PHY 5703 Advanced Laboratory II** A continuation of PHY 5701. (3 cr) *Prereq: PHY 5701.*

**PHY 5800 Advanced Mechanics** Lagrange, Hamilton and Hamilton-Jacobi forms of mechanics. (3 cr)

**PHY 5900 Advanced Quantum Mechanics** Abstract formulation of quantum mechanics, perturbation and variational methods; applications to atomic and molecular structures. (3 cr)

**PHY 6000 Advanced Optics** Topics in geometrical and physical optics. (3 cr)

**PHY 6001 Advanced Optics Laboratory** (1 cr) *Coreq: PHY 6000.*

**PHY 6100 Acoustics** Transmission, reflection, refraction, absorption and generation of sound waves, acoustical measurements. (3 cr)

**PHY 6101 Acoustics Laboratory** (1 cr) *Coreq: PHY 6100*

**PHY 6400 Relativity Theory I** Introduction to Einstein's Theory of Special Relativity,

Relativistic kinematics and dynamics. Lorentz invariance. Relativity and electromagnetism. Tensor analysis. (3 cr) *Prereq: PHY 4100 and 4200, or consent of chair.*

**PHY 6402 Relativity Theory II** Introduction to Einstein's Theory of General Relativity, Newtonian Gravitational and Tidal Forces. Linear Field Approximation. Gravitational Waves. Space-Time Measurements. Riemannian Geometry. Schwarzschild Solution. Black Holes and Gravitational Collapse. Cosmology. (3 cr) *Prereq: PHY 6400.*

**PHY 6500 Supervised Study in Physics** Reading and/or laboratory work in a selected branch of physics under the direction of a member of the staff. (2 cr) *Sem 1&2. Prereq: Consent of chair.*

**PHY 6600 Supervised Study in Physics** Same as PHY 6500 with increased number of hours. (3 cr) *Sem 1&2.*

**PHY 6700 Supervised Study in Physics** Same as PHY 6500 with increased number of hours. (4 cr) *Sem 1&2.*

# POLITICAL SCIENCE

**Chair and Associate Professor:** Gustafson

**Professors:** Hahn, Johannes, Langran, Lesch, Malik, Schrems

**Associate Professors:** Barrett, Ellis, Kerbel, Sheehan, Strack, Thompson, Wheeland

**Office:** 202 St. Augustine Center, tel. 519-4710

**MAJOR:** Thirty credit hours in political science courses are required for a major including the two introductory courses and a senior seminar. Elective courses are divided into three areas: American Government and Public Law (2000 and 3000 level), Comparative Government and International Relations (4000 and 5000 level), and Political Theory and Behavior (6000-6800). The political science major must complete three courses from at least one area, two from another area, and one from the remaining area. One additional course must be taken for a total of ten courses. Political Science majors are encouraged to take two economics courses and more than the minimum number of courses in languages and mathematics.

**CONCENTRATION WITHIN THE MAJOR:** Nine additional credits beyond the 30 credits for a major may earn a student a certificate in a concentration area. Concentrations may be earned in: International Relations, Pre-Law, Public Administration, Pre-Graduate School, and Employment Oriented. A list of courses which satisfy each concentration is available in the departmental office.

**MINOR:** Fifteen credits consisting of the two introductory courses plus any three advanced courses will earn a student a minor in Political Sciences. Courses taken on a satisfactory/unsatisfactory basis cannot be used to satisfy requirements for the minor.

## INTRODUCTORY COURSES

**PSC 1100 Introduction to American Government** Constitutional development; national institutions, federalism, civil rights and liberties; instruments of popular control. **(3 cr)**  
*Prereq: to some 2000-3000 and 6000 area courses.*

**PSC 1200 Introduction to International Relations** Factors in relations between states; the nature, elements, and role of power; problems faced by the modern state system. **(3 cr)** *Prereq: to some 4000-5000 area courses.*

## AREA 1:

### AMERICAN GOVERNMENT AND PUBLIC LAW

**PSC 2000 State and Local Government** Constitutions, institutions, instruments of popular control, and intergovernmental relations. **(3 cr)** *Prereq: PSC 1100.*

**PSC 2100 City and Suburb** Politics and problems in metropolitan areas of the United States. **(3 cr)** *Prereq: PSC 1100.*

**PSC 2200 American Party Politics** The place of parties in national politics; the nature, organization, and functions of political parties; suffrage requirements and election methods; the

activities of organized interests. **(3 cr)** *Prereq: PSC 1100.*

**PSC 2250 Congress** How national politics unfolds in the U.S. Congress, focusing on decision making and voting, leadership roles, committee politics, relations with the other branches, elections, and congressional reform. **(3 cr)**

**PSC 2275 U. S. Presidency** The nature, functions, and development of the American presidency, including relations between the president and other Washington actors, the public and the press. **(3 cr)** *Prereq: PSC 1100.*

**PSC 2300 American Foreign Policy Formation** The institutions, processes, and ideas which shape contemporary American foreign policy; the major problem areas. **(3 cr)** *Prereq: PSC 1100.*

**PSC 2400 National Security Policy** Development of strategic thought in the United States, arms control and disarmament, intelligence, technology, alliance policy, role of civilian and military branches of government, and related topics. **(3 cr)**

**PSC 2500 Washington Minimester** A three week series of seminars in Washington, D.C. with public officials, staff members, party leaders, and interest group representatives. See and study the workings of our government at first hand. **(3 cr)** *Offered during the month of May.*

**PSC 2600 Public Policy** Theories of public policy making, national public policies, and contemporary issues. **(3 cr)** *Prereq: PSC 1100.*

**PSC 2700 Women and Politics** Why women traditionally have been marginal to political life; the efforts of women in the past and today to change that fact; the problems that must be solved before women can translate their numerical strength into political power. **(3 cr)**

**PSC 2800 Public Administration** Administrative politics, law, and ethics, organizational theory, and technical fields, such as budgeting, planning, and personnel. **(3 cr)** *Prereq: PSC 1100.*

**PSC 2900 Political Communication** The role, behavior and influence of communications in American politics. **(3 cr)** *Prereq: PSC 1100.*

**PSC 2993 Internship (3 cr)**

**PSC 2996 Internship** Work experience in politics. **(6 cr)** *Prereq: PSC 1100.*

**PSC 3100 Government and Business** The relations between government and business, including antitrust enforcement, regulation versus deregulation, environmentalism and consumerism, and economic policies. **(3 cr)**

**PSC 3200 Early American Constitutional Development** Factors affecting U. S. Constitutional growth from the Constitutional Convention through the early 1970s. **(3 cr)**

**PSC 3300 Constitutional Law and Development** Major Supreme Court cases concerning the powers of Congress and the president, federalism, commerce, taxing and voting. **(3 cr)**

**PSC 3400 The Supreme Court and the First Amendment** Major Supreme Court

decisions involving freedoms of speech, press, religion, church-state, and assembly. (3 cr)

**PSC 3500 The Supreme Court, Equal Protection, and Criminal Justice** Major Supreme Court decisions involving equal rights for minorities and women, and the rights of defendants. (3 cr)

**PSC 3600 Criminal Justice System** The political phenomena of crime, nature of law, police, courts, correction, community crime prevention, and the procedures of local, state, and national agencies as political issues. (3 cr) *Prereq: PSC 1100.*

**PSC 3800 Environmental Law and Regulation** The manner in which our society protects or fails to protect the environment through law and environmental regulation. The relative efficacy, costs, and benefits of various types of this regulation. (3 cr)

AREA II:

COMPARATIVE GOVERNMENT  
AND INTERNATIONAL RELATIONS

**PSC 4000 European Politics** European political institutions, changes in party systems, and impact of European integration/globalization on domestic economies. (3 cr) *Prereq: PSC 1200.*

**PSC 4100 Political Movements in Industrialized Countries** Comparison of civil rights, labor, fascist, environmental and women's movements in their political and historical context. (3 cr)

**PSC 4200 South Asia** The historical development of India and Pakistan; their contemporary problems and conduct of foreign relations with the great powers. (3 cr)

**PSC 4401 Russia** An introduction to the contemporary Russian political system emphasizing its transformation from the Communist system which preceded it. (3 cr)

**PSC 4500 Japan and China** Historical and cultural factors explaining Chinese and Japanese political behavior and modern institutions. (3 cr)

**PSC 4700 Africa** Cultural pluralism, African socialism, terrorism, politico-legal and socioeconomic development, and other problems of contemporary African states. The impact of colonial rule and socioeconomic changes on political life. (3 cr) *Prereq: PSC 1200.*

**PSC 4750 Latin America** Comparison of the political systems of Latin American countries. The role of the military, the church, elites, political parties, constitutions and social and economic factors which have shaped the development of the region. (3 cr) *Prereq: PSC 1200.*

**PSC 4900 The Arab States** Political change in the principal Arab States with emphasis on the diverse forms of rule and political movements. The impact of colonial rule and socioeconomic changes on political life, leadership, social structure, political culture, and modernization. (3 cr)

**PSC 4950 Ireland** Irish government and politics and their socioeconomic context. The impact of Ireland's increasing association with other European countries and the special problems associated with Northern Ireland. (3 cr) *Prereq: PSC 1200.*

**PSC 5000 International Law** The rules and principles of international law based on a study

of treaties, diplomatic practice, and cases dealt with by international and national courts. (3 cr) *Prereq: PSC 1200.*

**PSC 5100 International Organization** The development of international organization, the U.N., its principles, structure, and accomplishments; regional organizations; prospects for the future. (3 cr)

**PSC 5225 U.S. Foreign Policy Issues** Contemporary foreign policy issues facing the United States; elements of continuity and change; implementation and consequences. (3 cr) *Prereq: PSC 1200.*

**PSC 5300 Democratization in Europe** Development of liberal democracy in turn of century Western Europe and end of century Eastern Europe. (3 cr) *Prereq: PSC 1200.*

**PSC 5351 Russian Foreign Policy** The development of Russian foreign policy in the post-Soviet period, historical roots; relations with the United States, Europe, the Far East and the developing countries; diplomatic; economic and military instruments of Russian policy. (3 cr) *Prereq: PSC 1200.*

**PSC 5500 Africa in World Politics** Political and economic problems in Africa south of the Sahara; problems of South Africa - past, present, and future; the interaction of states in regional organizations; Pan-Africanism; response of the outside world to African nationalism. (3 cr)

**PSC 5600 Human Rights** Transnational case studies of human rights; the nature and significance of human values in relation to the political process, law, and ideology. (3 cr) *Prereq: PSC 1200.*

**PSC 5700 The Struggle for Power and Oil in the Inner Crescent** International oil policy; economic and political systems of the oil producing states in the Arabian Peninsula, Persian Gulf, and the adjoining states, i.e. the Russia, Iran, Afghanistan, and Pakistan. The foreign policies of the super powers and the regional states. (3 cr)

**PSC 5800 Politics of International Economics** The politics international trade, economic interdependence, foreign aid, monetary relations, North-South relations, and national development. (3 cr) *Prereq: PSC 1200.*

**PSC 5900 Middle Eastern International Relations** Intra-regional and international problems facing the Middle East: the struggle for independence; the impact of the Cold War; the protracted conflict between Israelis and Arabs; and the tensions in the oil-rich Persian Gulf. (3 cr)

**PSC 5950 Russia's Relations with the Islamic States** Four sets of Islamic states: (1) 21 autonomous states within the Russian Federation, about half of which are Turkic and Muslim; (2) Central Asia; (3) Islamic states on the periphery of the former Soviet Union; and (4) in the Middle East. (3 cr)

#### AREA III:

##### POLITICAL THEORY AND BEHAVIOR

**PSC 6000 Early Political Theories** The relevance of the classics of political thought for understanding modern politics from the Greeks to the modern era. (3 cr) *Prereq: PSC 1100.*

**PSC 6100 Modern Political Theories** The structure of modern political thought and developments of twentieth century political

thought as an aid to understanding our age. (3 cr) *Prereq: PSC 1100.*

**PSC 6120 Principles of Politics** An analytical, rather than historical, approach to the principles of politics. Justice, liberty, equality, purpose of the state, constitutionalism, political prudence, separation of powers, etc. (3 cr) *Prereq: PSC 1100.*

**PSC 6130 Theories of War and Peace** The major political theories about war and peace, and the importance of ideas of justice for them in ancient, non-Western, modern and contemporary theories. (3 cr) *Prereq: PSC 1200.*

**PSC 6140 Theories of Religion and Politics** The relation of religion and politics found in either classical, modern, or contemporary literature from the Western or non-Western, American or Latin American experience. (3 cr) *Prereq: PSC 1100.*

**PSC 6150 Politics and Literature** Politics in classical and modern literature. Sophocles, Thucydides, Plutarch, Shakespeare, Twain, Melville, Austen, Huxley, Orwell. (3 cr) *Prereq: PSC 1100.*

**PSC 6200 American Political Theory** Significant political ideas in the American experience from their European origins to the present with attention to the influence of these ideas in the development of American political institutions. (3 cr) *Prereq: PSC 1100.*

**PSC 6250 Introduction to Jurisprudence** The nature and origin of law from historical and/or analytical perspectives. *Prereq: PSC 1100.*

**PSC 6325 American Liberalism and Conservatism** The main strands of American liberal and conservative thought and political practice. Rawls, Galbraith, Schlesinger to Goldwater, Kirk, and Buckley. *Prereq: PSC 1100.*

**PSC 6650 Using Political Science: A Hands-on Approach** Research methods, no prior knowledge expected. Design and conduct study of political and social attitudes in the Villanova community, probability and random sampling, research design, hypothesis testing and intelligent use of statistics, tests of significance, and basic data analysis. *Prereq: PSC 1100.*

**PSC 6800 Political Violence and Conflict** The nature of political violence and conflict emphasizing the human perspective. Origins and causes of political violence; socio-psychological explanations. Manifestations include terrorism, rebellion, revolution, and war. *Prereq: PSC 1200.*

Topics, Seminars, Independent Studies.  
(Not Area III Courses)

**PSC 6875 Topics in Political Science** Selected area of special interest. (3 cr) *Permission of chair required.*

**PSC 6900 Political Science Seminar** Individual research and report on contemporary problems in political science. (3 cr) *For seniors. Required of political science majors; permission of chair required.*

**PSC 6950 Independent Study and Research** Individual students with specific interests work on a tutorial basis with an appropriate professor. (3 cr) *Permission of chair required.*

# PSYCHOLOGY

**Chair and Professor:** Klieger

**Professors:** Blewitt, Brown, Bush, Long, Toppino, B. Ward, I. Ward, Ziegler

**Associate Professors:** Folk, Kendzierski, Tuck

**Assistant Professors:** Krauss, Kurtz, Sheldon

**Office:** 334 Tolentine, tel. 519-4720

**MAJOR:** PSY 1000 plus 28 additional credits including PSY 4000, 4050, 4100, 4150, 4200, 4500, and 12 elective credits (four electives). PSY 4000 and 4050 are prerequisites for many upper level Psychology courses (PSY 4200 and above). Specific prerequisites for each course are enumerated below. Students who contemplate majoring in psychology may begin the major early by taking PSY 1000, plus any elective courses for which PSY 1000 is the only prerequisite.

To choose psychology as a major, a student must have earned a "C+" or higher in General Psychology (PSY 1000) or have a cumulative QPA of 3.00 or better. Because of course prerequisites, students should expect that completion of the major will require at least four semesters after their formal declaration of the major.

**MINOR:** PSY 1000 plus any combination of 12 undergraduate credits in psychology. Courses taken on a satisfactory/unsatisfactory basis cannot be used to satisfy requirements for the major or minor.

PSY 1000 is a prerequisite for all other courses in psychology.

## **PSY 1000 General Psychology**

Introductory examination of the fundamental concepts of psychology, with particular emphasis on the description of normal human behavior and those factors that underlie it. **(3 cr)** Sem 1&2. *Prereq: to all other courses in psychology.*

## **PSY 2100 Physiological Psychology**

Theoretical and laboratory examination of basic neural and hormonal processes underlying behavior. **(3 cr)** Sem 2. *Prereq: PSY 1000.*

## **PSY 2200 Developmental Psychology**

Theory and research on social/personality, physical, and cognitive/ intellectual changes

from infancy through old age. **(3 cr)** Sem 1&2. *Prereq: PSY 1000.*

**PSY 2300 Perception** Theory and application of sensory and perceptual processes such as distance perception, color vision, illusion and deafness. **(3 cr)** Sem 1&2. *Prereq: PSY 1000.*

## **PSY 2400 Cross-Cultural Psychology**

Theory and research on cultural influences on human diversity in behavior and psychological processes. **(3 cr)** Sem 1. *Prereq: PSY 1000.*

## **PSY 2500 Psychology of Personality**

Theories, dynamics, and structure of

personality. Intended for non-psychology majors. **(3 cr)** *Sem 1&2. Prereq: PSY 1000.*

**PSY 2600 Social Psychology** Survey of theory and research on altruism, attraction, social cognition, the self, attitudes and attitude change, social influence, affiliation, personal control, and aggression. **(3 cr)** *Sem 1&2. Prereq: PSY 1000.*

**PSY 2700 Industrial/Organizational Psychology** Applications of psychological data, theories, research methods, and testing procedures to individuals in organizational settings. **(3 cr)** *Sem 1&2. Prereq: PSY 1000.*

**PSY 2800 Human Factors** Application of theories of human performance (perception, cognition, and motor control) to the design of products and systems. **(3 cr)** *Sem 2. Prereq: PSY 1000.*

**PSY 2993 Psychology Internship** Supervised work experience in agency, hospital, school, or company. **(3 cr)** *Sem 1&2. Prereq: PSY 1000, Psychology major, minimum 3.2 QPA in psychology courses, and permission of Internship Coordinator. Apply in Psychology Department Office. Graded S/U.*

**PSY 2996 Psychology Internship** Supervised work experience in agency, hospital, school, or company. **(6 cr)** *Sem 1&2. Prereqs: Same as PSY 2993. Graded S/U.*

**PSY 3000 Special Topics** Selected topics in psychology: motivation, comparative psychology, health psychology, the self, psychology and law, psychology of women, etc. **(3 cr)** *Sem 1&2. Prereq: PSY 1000.*

**PSY 4000 Introductory Statistics** Basic concepts, assumptions, and applications of

descriptive statistics and inferential statistics. **(3 cr)** *Sem 1. Prereq: PSY 1000.*

**PSY 4050 Research Methods in Psychology** Introduction to the reading, design, and reporting of psychological research. **(3 cr)** *Sem 1. Prereq: PSY 1000.*

**PSY 4100 Foundations of Modern Psychology** Overview of the major concepts and theories of psychology presented in a historical context. **(3 cr)** *Sem 1&2. Prereq: PSY 1000, senior status, PSY 4000, 4050, and either PSY 4200 or PSY 4500; or consent of instructor.*

**PSY 4150 Seminar in Professional Development** Overview of ethical and professional issues in psychology. **(1 cr)** *Sem 2. Prereq: PSY 1000. Psychology Major.*

**PSY 4500 Cognitive Psychology** Theory and research on human learning, memory, and cognitive processes. **(3 cr)** *Sem 1&2. Prereq: PSY 1000, PSY 4000 and PSY 4050 or consent of instructor.*

**PSY 5100 Animal Learning and Cognition** **(3 cr)** Cognitive mechanisms responsible for simple behavior and behavioral change as they have been studied using animal subjects. *Sem 2. Prereq: PSY 1000 and PSY 4050 or consent of instructor.*

**PSY 5200 Personality Theory and Research** Contemporary theories of personality and the scientific investigation of personality variables. Intended for psychology majors. **(3 cr)** *Sem 2. Prereq: PSY 4050 or consent of instructor.*

**PSY 5300 Psychological Measurement** Basic principles and problems of psychological

measurement in the assessment of behavior.

(3 cr) *Sem 2. Prereq: PSY 1000 and PSY 4050 or consent of instructor.*

### **PSY 5400 Clinical and Counseling**

**Psychology** Fundamental concepts, basic areas of professional functioning and contemporary issues in the mental health field. (3 cr) *Sem 2. Prereq: PSY 1000 and PSY 4050 or consent of instructor.*

### **PSY 5500 Abnormal Psychology**

Classification, etiology, and treatment of mental and behavioral disorders with emphasis on contemporary theory and research. (3 cr) *Sem 1&2. Prereq: PSY 1000 and PSY 4050 or consent of instructor.*

### **PSY 5600 Computer Use for Social**

**Scientists** Statistical packages (statistical software) in the analysis of social science data. Prior computer experience not necessary. (3 cr) *Sem 2. Prereq: PSY 1000 and PSY 4000 or consent of instructor.*

### **PSY 5900 Undergraduate Research**

Supervised research project and report. Student may register for PSY 5900 more than once; however, only 3 hours of research can be applied toward the degree requirements in psychology. (3 cr). *Sem 1&2. Prereq: PSY 1000 and consent of Chair and instructor.*

## **RUSSIAN AREA STUDIES**

**Director:** Hahn

**Office:** 264 St. Augustine Center, tel. 610/519-4640

The Russian Area Studies Concentration is open to all students enrolled in the University. The purpose of the concentration is to provide students with a multi-disciplinary comprehension of a complex part of the world.

**Concentration:** Two semesters of Russian at the intermediate level, or demonstrated proficiency at an equivalent level, plus fifteen credit hours selected from among the following: AAH 2009; HIS 3241, 3242; PSC 4401, 5351, 5950; RUS 1131, 1132, 3412, 3717, 3718, 3810, 3818, 3819; THL 5510; and appropriate special topics courses in Economics and approved by the director. In addition students are required to take RAS 6000, a multi-disciplinary intensive investigation of a topic in Russian studies, generally taken in the senior year.

Students are encouraged to study in Russia for a summer or semester, either at Nizhny Novgorod State University in Central Russia (which has an exchange agreement with Villanova), or at another approved Russian university. Contact the Russian Area Studies Office or the International Studies Office for further details on available programs and transfer of credits.

**RAS 6000 Senior Research Project** A multi-disciplinary senior seminar or independent study which helps students integrate and expand previous study of Russia. Required of all Russian Studies Concentrators and usually

taken in the second semester of senior year, stressing independent research and intensive investigation at the advanced level of a topic in Russian Studies. *Prereq: Permission of the Director. (3 cr) Sem 2*

## SOCIOLOGY

**Chair and Associate Professor:** Waegel

**Professors:** Gallagher, Jones, Juliani, Knapp, McFalls

**Associate Professors:** Arvanites, Eckstein, McGarry, Malik, Pattnayak, Shai

**Assistant Professor:** McKenzie

**Office:** 204 St. Augustine Center, tel. 519-4740

**MAJOR:** The Sociology major requires completion of 10 courses. Four courses are required of all majors, while the remaining 6 are selected by students on the basis of their interests or career aspirations. Introduction to Sociology (Soc 1000) is required of all majors and is the first course that students should take. In addition, 3 courses are required in the theory-methods area (5000 level courses). There are 3 sociological theory course offerings (Soc. 5000, 5050, and 5100) and 3 research methods course offerings (Soc. 5200, 5300, and 5400). Students are required to take 2 courses from one group and 1 course from the other group.

Majors who wish to structure their Program toward a specific career objective can choose courses from one of the following areas, each of which provides training for a different occupational career.

1. Business and Management Skills:

SOC 2700 Sociology of Organizations  
SOC 2800 Sociology of Occupations  
SOC 2900 Political Sociology  
SOC 3600 Race and Ethnic Relations  
SOC 3900 Social Stratification  
SOC 3950 Social Change and Modern Society

3. Social Services and Social Administration:

SOC 2000 Social Problems  
SOC 2300 Sociology of the Family  
SOC 2400 Sociology of Social Work  
SOC 2500 The Sociology of the Community  
SOC 2700 Sociology of Organizations

2. Criminology and Penology:

SOC 2000 Social Problems  
SOC 2200 Sociology of Deviance  
SOC 3020 Criminal Law and the Community  
SOC 3100 Juvenile Delinquency  
SOC 3200 Penology and Corrections  
SOC 3300 Sociology of Law  
SOC 3450 Social Psychiatry

4. Pre-Law:

SOC 2200 Sociology of Deviance  
SOC 3000 Criminology  
SOC 3020 Criminal Law and the Community  
SOC 3100 Juvenile Delinquency  
SOC 3300 Sociology of Law

## College of Liberal Arts and Sciences

SOC 3400 Medical Sociology  
SOC 3450 Social Psychiatry  
SOC 3600 Race and Ethnic Relations  
SOC 3700 Urban Sociology

5. Graduate School: Two theory courses and two research methods courses plus 12 additional credit hours in upper division courses.

Majors who do not wish to select one of these specialized areas may take the 4 required courses identified above plus 6 additional courses selected in consultation with their advisor.

**MINOR:** SOC 1000 and four other courses chosen from the offerings of the department. The student must inform the chair of his or her intention to minor and request certification of the minor when it has been completed. A concentration in Criminal Justice is available for interested students.

A student may take an internship in a field setting in the second semester of the junior year or during the senior year. Students should consult with the Chair and Director of the Internship Program.

### **SOC 1000 Introduction to Sociology**

Introduction to the analysis of sociocultural behavior; emphasis upon the development of the social individual, collective and group behavior, social institutions and culture. (3 cr)  
*Sem 1&2.*

**SOC 2000 Social Problems** Significant problems of American society; the sociocultural basis of social problems, the conditions facilitating their incidence, and approaches to therapeutic intervention. (3 cr)  
*Sem 1&2.*

**SOC 2100 Cultural Anthropology** Principles of cultural anthropology; ethnological variations in language, techniques, customs and values; problems of cultural development and change. (3 cr) *Sem 1&2*

**SOC 2200 Sociology of Deviance** A sociological examination of rule-breaking behavior; causal theories of deviance; types of deviance and their distribution in contemporary society. (3 cr)

### **SOC 2300 Sociology of the Family**

Institutional organization of mate selection, courtship, and marriage relationships in American society; family relationships and functions; family disorganization and change. (3 cr)

### **SOC 2400 Sociology of Social Work**

History and development of social welfare; basic issues in social welfare planning and administration. The major methods of social work, practice; social casework, group work and community organization, in such areas as child welfare, family service and counseling, probation and corrections. (3 cr)

### **SOC 2500 Sociology of the Community**

Concentration on the changes in the structure of the community from container to network types. Emphasis on the necessity of community as rooted in social nature. (3 cr)  
*Sem 1&2.*

**SOC 2600 Sociology of Religion** The interaction between society and religion; religion and scientific claims; investigation of human nature as social and the concept of oneness in religion. **(3 cr)**

**SOC 2700 Sociology of Organizations** The structure of complex organizations and their relationship to other social institutions. Emphasis on the modern corporation, how corporations interact with labor and government, and how corporations and organizations affect our everyday lives. **(3 cr)** *Sem 2.*

**SOC 2800 Sociology of Occupations** Influence of the social milieu upon internal organizations of occupations and professional modes of selection, entrance, and training; occupational mobility and career patterns; occupational influences upon individual behavior. **(3 cr)** *Sem 2.*

**SOC 2900 Political Sociology** Relationships between state and society from a comparative perspective. Focuses primarily on the United States, with frequent references to the experiences of other developed nations as well as those of third world countries. **(3 cr)** *Sem 1&2.*

**SOC 2993 Internship** *To be arranged.*  
**(3 cr)**

**SOC 2996 Internship** *To be arranged.*  
**(3 cr)**

**SOC 3000 Criminology** The nature and extent of crime; the factors related to criminal behavior; theories of the treatment and control of offenders; crime prevention programs. **(3 cr)** *Sem 1&2.*

**SOC 3010 Crime and Criminal Justice** Crime and criminal justice in America with emphasis on law enforcement and administration of justice; a lecture- discussion course with a socio-legal focus. **(3 cr)** *Sem 1.*

**SOC 3020 Criminal Law and the Community** Survey of the aims of the criminal law in the community; the common-law and statutory law definitions of crimes; the problem of criminal responsibility; sentencing; and the comparison of criminal and civil laws in the social order. **(3 cr)** *Sem 2.*

**SOC 3100 Juvenile Delinquency** Meaning and scope of delinquency; delinquency theories; role of social institutions and social agencies; prevention, control, and treatment programs. **(3 cr)** *Sem 1&2.*

**SOC 3200 Penology and Corrections** Survey of the historical and contemporary treatment of convicted offenders; analysis of the prison social system; analysis of the theory, practice and function of correctional programs. **(3 cr)** *Sem 2.*

**SOC 3300 Sociology of Law** The nature, scope and place of law in society. Law viewed as a collectivistic-individualistic process as a reflector of social values and culture. **(3 cr)** *Sem 1&2.*

**SOC 3400 Medical Sociology** Sociocultural patterns in illness and accidents; social structure of training in medical professions; relations of practitioner with patients, community and society; sociocultural variation in treatment and in use of medical facilities. **(3 cr)** *Sem 2.*

**SOC 3450 Social Psychiatry** Cultural and social patterns in the causation, incidence and

treatment of mental health problems; emphasis upon current approaches to mental illness and the relation of mental illness to criminal, antisocial and deviant behavior. (3 cr)  
*Sem 1&2.*

**SOC 3500 Sociology of Gender Roles** Sex roles examined from a social learning and developmental perspective; recent changes in related attitudes and behaviors, consequences for interpersonal relationships and societal organization. (3 cr) *Sem 1&2.*

**SOC 3600 Race and Ethnic Relations** Development of race and ethnic relationships in America; the impact of power-conflict relations on race and ethnic patterns; particular attention given to development from early 1950's to present. (3 cr) *Sem 1&2.*

**SOC 3700 Urban Sociology** The nature of the city; history of urban settlement; urban form; institutions, organizational structures and processes; major problems of living in urban America. (3 cr) *Sem 1.*

**SOC 3750 Human Populations** The composition of and change in human populations; analysis of fertility; mortality and migration; emphasis on current population, principles, problems and policies as well as practical applications. (3 cr) *Sem 2.*

**SOC 3800 Collective Behavior and Social Movements** Significant features of crowd, mob, and audience behavior; an analysis of their social basis and influence; examination of fads, fashions, and organized social movements as sociocultural behavior. (3 cr) *Sem 2.*

**SOC 3900 Social Stratification** Development and influence of class structures; emphasis upon modern stratification systems

and their relation to community and societal power structures.  
(3 cr) *Sem 1.*

**SOC 3950 Social Change and Modern Society** The process of social change by which modern society and its dominant characteristics have developed. (3 cr)

**SOC 4000 Special Topics in Sociology** Topics addressing special or emerging interests, chosen for their current importance and the specific expertise of an instructor. (3 cr)  
*Sem 1&2.*

**SOC 4100 Special Topics in Sociology** Topics addressing special or emerging interests, chosen for their current importance and the specific expertise of an instructor.  
(3 cr) *Sem 1&2.*

**SOC 5000 Nature and History of Sociological Theory** The nature of sociological theory and the major theoretical developments which have shaped the field of sociology. (3 cr) *Sem 2. Prereq: SOC 1000.*

**SOC 5050 Sociological Theory and Public Policy** Explores how important sociological ideas can, and perhaps should, influence social policies. Students will be expected to design a theoretically driven empirical study which impacts on some public policy. (3 cr)  
*Prereq: SOC 1000 and consent of chair.*

**SOC 5100 Contemporary Sociological Theory and Research** Significant contemporary contributions to sociology theory and research. (3 cr) *Sem 1. Prereq: SOC 1000 and consent of chair.*

**SOC 5200 Design of Sociological Research** Basic methods of sociological research

including the collection and organization of data, statistical analysis, testing hypotheses and the interpretation of data. **(3 cr)** *Sem 1. Prereq: SOC 1000 and consent of chair.*

**SOC 5300 Data Analysis for Social Scientists** This course is designed to provide students with a basic overview of research methods and statistics. Using real data, and statistical techniques commonly used in governmental agencies the link between theory and research will be emphasized. Students will develop the skills necessary to formulate a research question, collect, analyze, interpret and present data. **(3 cr)** *Prereq: SOC 1000 and consent of chair.*

**SOC 5400 Applied Research Methods in Sociology** The development of real-world

research skills through the application of sociological methods and statistics. Special emphasis is given to sampling, measurement, applied statistics, data management and evaluative research. **(3 cr)** *Sem 2. Prereq: SOC 1000 and consent of chair.*

**SOC 6000 Independent Study and Research** Supervised project or research culminating in research report or major paper. **(3 cr)** *Sem 1&2. Prereq: junior or senior status, consent of supervisor and chair.*

**SOC 6500 Seminar in Sociology** Advanced course for seniors focusing on particular substantive area; topics rotate. **(3 cr)** *Sem 1&2. Prereq: this course requires consent of chair.*

# STUDIO ART AND MUSIC

**Office:** 205 St. Augustine Center, tel. 519-4760

Courses in Studio Art and Music are administered by the chair of the Theatre Department.

**SAR 2020 Basic Watercolor Techniques**

Techniques of transparent watercolor painting with concentration on still life. **(3 cr)** *Sem 1&2*

**SAR 2021 Basic Drawing Techniques A**

foundation course in drawing, emphasizing visual concepts through work in a variety of media including charcoal, pencil and ink. Direct observation of the model, composition, perspective, and theory. **(3 cr)** *Sem 1&2*.

**SAR 2022 Basic Oil Painting**

Basic techniques in the oil medium, with emphasis on understanding the nature of canvas as a vehicle, and color theory **(3 cr)** *Sem 1&2*.

**SAR 2113 The Charm of Music**

A listening study approach to the many-faceted world of music from the great classics and their masters to the cultural explosion of the twentieth century. **(3 cr)** *Sem 1&2*.

**SAR 2114 We Write the Songs**

Fundamentals of rhythm, harmony, melody, and formal design will be covered, followed by a student composition. **(3 cr)** *Sem 1. No previous musical study needed.*

**SAR 2115 Orchestral Music**

The major literature of the symphony, symphonic poem and concerto from Haydn through mid-twentieth century. **(3 cr)** *Sem 1.*

**SAR 2118 The Broadway Musical**

The art form of American musical theatre, beginning with roots in late 19th century operetta, the emergence of jazz, folklore, big band era, up to the present. **(3 cr)** *Sem 2.*

**SAR 2119 Jazz: Born in the USA**

A listening study of the greats of American Jazz, beginning with Ragtime, New Orleans, Big Band, Swing, Fusion and current trends. **(3 cr)** *Sem 2.*

# THEATRE

**Chair and Assistant Professor:** Donohue

**Professor:** Christy

**Associate Professor:** Rotte, Cannuli

**Assistant Professors:** Power, Stagliano, Lloyd

**Instructor:** Maloney-Truitt

**Office:** 205 St. Augustine Center, tel. 519-4760

**MINOR:** Students may fulfill a Theatre Minor by completing five theatre courses (three required/two elective) and a theatre practicum. Interested students should request further information through the Theatre Department Office in St. Augustine Center for the Liberal Arts, Rm. 484.

Students majoring in Communication may declare Theatre as their Area of Emphasis. Students majoring in Education may declare an English/Communication concentration with Theatre as the Area of Emphasis.

Any student may educate himself/herself in the art and craft of theatre through Electives and through participation in the department's Theatrical Productions. Auditions and backstage positions are open to all undergraduates for the entire academic theatre season.

**THE 2019 The Theatrical Experience** The variety of arts and crafts that combine to create theatre. Through hands-on experience, discussion, and performance, the interrelations among dramatic idea, stage direction, acting, design and technical elements that harmonize in a theatrical production are discovered. **(3 cr)**

**THE 2025 Improvisational Theatre** Improvisation to explore non-verbal communication strategies and the study of theatre as a communication medium. Readings in non-verbal communication and modern theatre theory. **(3 cr)**

**THE 2029 Fundamental Principles of Acting** Traditional acting theories and basic techniques: games, improvisation, sensory

awareness exercises and beginning work on scenes. **(3 cr)**

**THE 2030 Advanced Principles of Acting** Expands the use of acting theory and techniques through advanced exercises and scene work. Emphasis on the development of imagination, artistic conceptualization and characterization. **(3 cr)**

**THE 2032 Elements of Dance** The broad range of dance styles, dance theory, vocabulary, and body placement. **(3 cr)**

**THE 2033 Advanced Elements of Dance** Expanded study of dance styles, dance theory, vocabulary, and body placement. **(3 cr)**

**THE 2034 Musical Theatre** Explores the conventions of musical theatre. Practical work in the application of musical performance theory to specific song, movement and stylized acting techniques. (3 cr)

**THE 2040 Theatre Practicum** Significant and responsible participation in the department's production program. (0 cr)

**THE 2051 Creativity in the Theatre** Employing writing, acting, directing, movement, film, music and mixed-media elements, the course creates an experimental definition of theatre including content, structure and form. (3 cr)

**THE 3006 Shakespeare on Stage** Shakespeare texts as theatrical experiences, including both traditional and modern approaches to directing Shakespeare. Practical scene work to make complex language accessible to beginning students. (3 cr)

**THE 3008 Black Theatre** Focuses on the development of Black theatre as an outgrowth of African-American historical evolution with an emphasis on those plays which are enduring. (3 cr)

**THE 3020 The Teaching of Acting** A laboratory course for teachers of dramatic arts at the junior and senior high school levels. Emphasis is on the development of teaching skills, including exercises in movement, improvisation and scene study. (3 cr)

**THE 3030 Special Topics in Theatre** A specialized area of theatre studies (e.g., avant-garde, feminist, Asian, Melodrama), combining elements of theatre history, dramatic literature and criticism, as well as performance and production aspects of live theatre. (3 cr)

**THE 4014 Women and Theatre** The contribution of women artists to the American theatre, discussing the particular social issues, and the pertinent historical perceptions and problems encountered by women in the arts. (3 cr)

**THE 4020 Directed Studies in Theatre** Reading and practical work in a specialized area of theatrical production or scholarship under the direction of a faculty artist or scholar. (3 cr)

**THE 7002 Directing** The process of stage directing, including script interpretation. Emphasis is on the use of action, movement, design and rhythm in staging techniques. (3 cr) *Open to seniors only. Prereq: THE 2019 and THE 2029 and consent of chair.*

**THE 7003 Acting/Directing Styles** Acting and directing employing the techniques used to approach classical texts. For actors, emphasis will be on the relationship between performance style and the language of classic texts; for directors, the requisite stage imagery. (3 cr) *Open to seniors only. Prereq: THE 2019, 2029 and consent of chair.*

**THE 7010 Scenography** Investigation of the stage metaphor and image for the director/actor and beginning designer. Emphasis on translating intellectual production concepts into visual ones. (3 cr) *Open to juniors and seniors. Prereq: THE 2019, 2029 and consent of chair.*

**THE 7051 Playwriting** The principles of playwriting as seen through structural analysis of selected plays in a variety of genres. Assignments include scene writing and playwriting. (3 cr) *Open to undergraduate*

*juniors and seniors. Prereq: THE 2019, 2029 and consent of chair.*

**THE 7052 Sound and Movement for the**

**Actor** Eastern and Western theories of voice production and body work. Application of techniques to integrate the components of the performing artist's physical instrument. (3 cr)  
*Open to undergraduate juniors and seniors. Prereq: THE 2019, 2029 and consent of chair.*

**THE 7053 Voice and Speech** The

investigation of the psycho-physiological process of speaking, and specifically with the challenges faced by the actor when when

speaking on stage. Includes a study of standard British and an examination of an accent or dialect of the actor's choice. (3 cr)

**THE 7500 Stage/Arts Management** Tools

for stage management within a variety of theatrical settings including auditions, rehearsals and theatre productions, and the relationship of the stage manager to the artistic, and technical personnel, box office manager, and audience. (3 cr) *Open to undergraduate juniors and seniors. Prereq: THE 2019 and consent of chair.*

## THEOLOGY AND RELIGIOUS STUDIES

**Chair and Assistant Professor:** Chappell

**Professors:** Binns, Conn, Dobbin, Prusak, Scanlon, Van Allen

**Associate Professors:** Benavides, Eigo, Hadley, Inati, Lazor, Loya, Ommen, Toton, Werpehowski

**Assistant Professors:** Danove, Doyle, Enright, Godzieba, Makowski, Martin, Pohlhaus, Veverka

**Instructors:** Laferty, Ruscil, Laird

**Office:** 107 St. Augustine Center, tel. 519-4730

**MAJOR:** Thirty credit hours *exclusive* of the required introductory course, THL 1050, which students in the College of Liberal Arts and Sciences and the College of Commerce and Finance must take in the sophomore year. Twenty-four credit hours are to be taken from among the following: THL 2725 and 2726 (to be taken as soon as possible after the major is declared); one course in Biblical Studies; THL 3100 or 3500; THL 3200; a choice of one among THL 3300, 3325, 3400, 3600; a choice of one among THL 5100 through 5300 plus 5500 and 5510. A student may choose the remaining six credit hours from any of the other Theology and Religion Studies courses. THL 3500 is especially recommended.

**MINOR:** Eighteen credit hours *inclusive* of the required introductory course (see above). Normally, a minor should be declared in the sophomore year or no later than the second semester of junior year. All courses required for the major are highly recommended for minors, especially THL 2725 and 2726; at least one Scripture course; THL 3500; and a selection from among THL 5100, 5150, 5260, 5270, 5280, 5700.

**THL 1050 is a prerequisite for all other courses in Theology and Religious Studies.**

#### INTRODUCTION

**THL 1050 Christianity: Traditions and Transitions** Required introductory course; a critical, academic introduction to the major themes of the Christian traditions from historical, scriptural and theological perspectives, including themes such as: God, Jesus, the human response to God. **(3 cr)**  
*Required for all students at the University; prerequisite for all other courses.*

#### BIBLE STUDIES

**THL 2000 Introduction to the Bible** Critical analysis of biblical books; general scriptural themes; use of textual, source, form, redaction, and literary criticism. **(3 cr)**

**THL 2050 Introduction to the Old Testament** Critical analysis of Old Testament books; Creation, Covenant, Ten Commandments, Exodus, Conquest, Prophets, Apocalyptic Literature; historical and archaeological focus; use of textual, form, redaction, source and literary criticism. **(3 cr)**

**THL 2100 Pentateuch and Early History** Moses, Abraham, Jacob, Adam and Eve, David, Solomon, Samson, Samuel and others; social, political and religious life situations of these; relevant ancient Near Eastern beliefs and customs. **(3 cr)**

**THL 2200 Hebrew Prophets and Wisdom Literature** Isaiah, Jeremiah, Ezekiel and "the 12"; the meaningfulness of the Prophets in today's world; Hebrew Wisdom Literature; influence of Egyptian and Greek culture. **(3 cr)** *Prereq: introductory Bible course or permission of instructor.*

**THL 2300 Introduction to the New Testament** Critical analysis of New Testament texts: structure, meaning, historical development, continuing vitality and application; introduction to transmission of traditions, formation of New Testament canon, use of textual, source, form, redaction, and literary methods. **(3 cr)**

**THL 2310 Synoptic Gospels** Critical analysis of Matthew, Mark and Luke: structure, meaning, historical development, continuing vitality and application; use of textual, source, form, redaction, and literary methods. **(3 cr)** *Prereq: introductory Bible course or permission of instructor.*

**THL 2320 New Testament Letters** Critical analysis of Pauline and Catholic epistles: structure, meaning, continuing vitality and application; use of textual, source, form, redaction, and literary methods. **(3 cr)** *Prereq: introductory Bible course or permission of instructor.*

**THL 2330 Johannine Literature** Critical analysis of the Gospel and Letters of John: structure, meaning, historical development, continuing vitality and application; use of textual, source, form, redaction and literary methods. **(3 cr)** *Prereq: introductory Bible course or permission of instructor.*

**THL 2400 Archaeology of the Bible** Contributions of archaeology to biblical study; the cultural context of people and places depicted in the Bible; explanation of archaeological methodology and history of excavations in the ancient Near East and the

Holy Land; discoveries relating to the Bible. (3 cr) *Cross-listed with Honors.*

**THL 2420 Women in the Bible** Analysis of stories about women in the Bible: traditional and feminist readings examined; use of textual, source, form, redaction and literary methods. (3 cr) *Diversity; cross-listed with Women's Studies.*

**THL 2480 Themes in Bible Studies** Interdisciplinary approach to biblical texts. (3 cr)

**THL 2490 Advanced Topics in Bible Studies** Critical exegesis of biblical texts: use of scholarly methods of analysis. (3 cr) *Prereq: Introductory Bible course or permission of instructor.*

#### HISTORICAL STUDIES

**THL 2500 The Formation of Tradition: Ancient Christianity** Early Christian writings, controversies, councils and events; growth of Christianity from persecution to official acceptance in the Roman Empire; God, creation, evil, Jesus Christ, Church, Christian living, Holy Spirit, culture. (3 cr)

**THL 2525 Miracles, Mystics and Monks: Medieval Christianity** Christianization of Europe during the Middle Ages (500-1500): conversion of the Barbarians, the cult of the saints, Monasticism, the sacraments, popular religion, the Crusades, Heresy and Church Reform. (3 cr)

**THL 2550 Protestantism and Catholicism: Reformation Christianity** The break-down of the Medieval Church (1500-1700) inaugurated by Martin Luther; the creation of Protestant Churches; the

formation of Tridentine Catholicism; the beginnings of the Enlightenment. (3 cr)

**THL 2575 Christianity and the Modern World** Christianity from 1648 to the present; emphasis on the impact from science, philosophy, psychology, socio-political theories, and criticism. (3 cr)

**THL 2590 Themes in Historical Studies** Courses of varying content in historical studies offered on occasional basis. Topics include: Religion in the Age of Romanticism; Roman Catholic Modernism; Vatican II: Evolution or Revolution. (3 cr)

**THL 2725 Christian Classics I** Major theological themes in classic texts of Christian history from the early Church to Reformation; status and interpretation of biblical literature, grace and freedom, faith and reason, Christ and culture; texts from Augustine, Aquinas, Luther and others. (3 cr) *Required for majors.*

**THL 2726 Christian Classics II** Christian history from seventeenth century to present: hermeneutics and relation between Christian commitment and Culture; texts from diverse theological works of Kierkegaard, Rahner, Teilhard, Barth, etc. (3 cr) *Required for majors.*

**THL 2750 St. Augustine: Life and Message** Historical context for the life and message of Augustine; significant theological issues, controversies and events, elements of influence. (3 cr)

**THL 2790 Themes in Patristic Studies** Courses of varying content in patristics offered on occasional basis. (3 cr)

**THL 2900 Catholicism in the United States** The history and development of Catholicism in the United States; emphasis on understanding the present and investigating the future from the perspective of the past. (3 cr)

DOCTRINAL STUDIES

**THL 3100 Christian Anthropology** The relationship between God and the human person from a variety of viewpoints: human origins; the purpose of life; the problem of evil and the human condition; salvation as divinization C insights and approaches of recent writers. (3 cr)

**THL 3200 Understanding Jesus the Christ** The historical Jesus and questions of method; christologies of the early Christian sources and councils; the later tradition of Christological reflection; contemporary trajectories. (3 cr)

**THL 3300 Church: Unity and Diversity** The origins of church as community and its relation to Jesus; development of the church within history; the ministry of the baptized and the ordained; teaching, leadership, service functions; the role of women; the church's relation to public discourse and practice. (3 cr)

**THL 3325 Authentic Life in the Church** Ecclesiological and pastoral issues in contemporary Christian community; authority and shared ministry; obstacles and future possibilities from perspectives of scripture, tradition and phenomanology. (3 cr)

**THL 3350 Catholic Cult and Catholic Creed** Consideration of the relationship between Catholic belief and practice as

updated and applied in the light of past and present church doctrine. (3 cr)

**THL 3400 Sacraments: Worship and its Symbols** History of Christian sacraments; sacraments as celebrations of life in God; theology of worship as fulfillment of being human; present and future shapes of Christian liturgy; applications to particular sacraments, e.g., baptism, reconciliation, eucharist. (3 cr).

**THL 3500 God and the Future of History** The process of history as a cooperative venture of divine and human activity; creation and incarnation C God's initiatives within a future-oriented process; human suffering, the cross, resurrection; human freedom and redeemed optimism; Christians as critical participants in society. (3 cr)

**THL 3550 Presence and Absence of God** Theism and the atheistic critiques of the nineteenth and twentieth centuries; the problem of God in western culture; contemporary retrieval of the doctrine of God as Trinity. (3 cr)

**THL 3600 Christians at Prayer** What Christians do or say at prayer; prayer as the dynamic of the Christian community; Jewish roots; liturgy as prayer; prayer as the ground of theology. (3 cr)

**THL 3700 Catechism of the Catholic Church** Theological analysis of the most recent official statement (*Catechism of the Catholic Church*, 1992, ET 1994) of the practices and beliefs of Roman Catholicism. (3 cr)

**THL 3710 Roman Catholic Identity** A critical exploration of the Roman Catholic

tradition in the light of the student's personal experience; identity issues and church membership of young adults. (3 cr)

**THL 3720 Apocalypse Then and Now**

The end of the world in present-day imagination; Christian hope/anxiety through the centuries; biblical apocalyptic; endtime views in the early church; significant figures and movements; beyond the millennium. (3 cr)

**THL 3730 Feminist Theology** Feminist theological methods and goals; theological reconstructions of Christian understandings of nature, humanity, God, sin and salvation, the church and its mission from the perspective of women's experiences. (3 cr)

**THL 3740 Liberation Theologies**

Theologies emerging from specific struggles for liberation in Latin America, Africa, Asia, and North America; their context, content, and critique. (3 cr)

**THL 3750 Art and Religious Imagination**

Art as orchestration of transcendence; critiques of traditional images of God; role of religious imagination in society, spirituality, and sacramentality. (3 cr)

**THL 3790 Themes in Doctrinal Studies**

Courses of varying content in doctrinal studies offered on occasional basis. (3 cr)

**THL 3795 Themes in Roman Catholic Studies**

Courses of varying content in Roman Catholic studies offered on occasional basis. (3 cr)

STUDIES IN CHRISTIAN  
MORAL LIVING

**THL 4100 Christian Ethical Traditions and Contemporary Life**

Christian moral commitment; current moral problems facing the Catholic; the nature of the human person; Jesus as the model and source of moral life; the development of teachings in morality and the role of the authority of the Church. (3 cr)

**THL 4200 Ethics of Life and Death**

Explorations of selected issues in biomedical ethics (e.g., abortion, euthanasia). (3 cr)

**THL 4300 Ethical Issues in Peace and Justice**

Intensive study of one or two timely issues or problems in moral theology: Christian teaching on war, conscientious objection, pacifism, poverty, social justice. (3 cr)

**THL 4310 War and Morality**

Just war, pacifism, and feminist critique--three Christian traditions of reflection on ethics and warfare; conflict and overlap across these traditions; close examination of historical illustrations of the conduct of war. (3 cr)

**THL 4320 The Social Teachings of the Christian Churches**

Historical and systematic examination of major modern Christian movements in social ethics, e.g., the Social Gospel, Christian realism, Catholic social thought; the relevance of these schools to current reflection on war and peace, justice and injustice. (3 cr)

**THL 4330 Theology, Ethics, and Christian Tradition**

The methods and sources of Christian theological ethics; classic approaches of Augustine, Aquinas, Luther, Calvin and contemporary representatives; the meaning of Christian love; Christ and the

moral life; the relations between church and world. (3 cr)

**THL 4340 Ethics, Justice and the Family**

Interdisciplinary investigation of the moral and theological importance of the family in Christian ethics; traditional and revisionist approaches to sexuality and marriage; the family as a school for justice and virtue. (3 cr)

**THL 4350 Service and Education for Justice**

The integration of action and critical reflection; U.S. poverty, hunger, and homelessness: its victims, roots, and remedies; the Christian moral imperative to love the neighbor; service, advocacy and solidarity (3 cr) (15 hours of service required). Permission of instructor; cross-listed with *Peace & Justice*; diversity.

**THL 4400 Christian Marriage** Christian marriage in the 20th century; scriptural, historical, legal, and moral issues; preparations for the wedding liturgy and Christian married life. (3 cr)

**THL 4500 Christian Spirituality** The Christian spiritual experience through the centuries. (3 cr)

**THL 4600 North/South: Development Ethics** Promoting equitable, sustainable development: challenges and choices; Colonialism, trade, aid, investment, population, consumption, militarism, race and gender equality, ecology. (3 cr)

**THL 4690 Themes in Christian Living**

Courses of varying content offered on an occasional basis. (3 cr)

ECUMENICAL AND CULTURAL STUDIES

**THL 5100 The Heritage of Judaism**

Development of the religious tradition of the Jewish people; the Torah, the Talmud and other commentaries; Jewish ideals in ethnic literature. (3 cr) *Diversity*

**THL 5150 Introduction to Islam** Islam: history and development; beliefs and rituals; sects and intellectual movements. (3 cr) *Diversity, Africana Studies, concentration or minor in Arab/Islamic Studies.*

**THL 5160 Islamic Mysticism** Islamic mysticism: sources; development and principles; contribution and influence. (3 cr) *Diversity, concentration or minor in Arab/Islamic Studies; cross-listed with Philosophy.*

**THL 5170 Islamic Philosophy and Theology** Islamic rationalism and the crisis of moderate and conservative Muslim theologians; the dialectical struggle between Islamic philosophy and theology. (3 cr) *Diversity, concentration or minor in Arab/Islamic Studies; cross-listed with Philosophy.*

**THL 5180 Islamic Political Thought** Integration of Islamic philosophy, religion, political science and history; the state in pre-Islamic Arabia, the Qur'anic concept of the state, the crisis of succession, Muslim theorists, revival and reform. (3 cr) *Diversity, concentration or minor in Arab/Islamic Studies, cross-listed with Philosophy.*

**THL 5190 The Problem of Evil** Formulations of the problem and historical attempts to solve it. (3 cr) *Diversity,*

*medieval philosophy, concentration or minor in Arab/Islamic Studies.*

**THL 5260 Mysticism: East and West** A comparison of non-institutional forms of religion through the mystical texts from the Indian, Chinese, Buddhist and Christian traditions. (3 cr)

**THL 5270 Religion in India and Southeast Asia** The doctrinal and social history of the religious traditions of India and Southeast Asia: Hinduism, Buddhism, Jainism, Islam and Sikhism; the role of these religions in contemporary Indian and Southeast Asian societies. (3 cr)

**THL 5280 Religion in China and Japan** The doctrinal and social history of the religious traditions of East Asia: Confucianism, Taoism, Shinto, Buddhism; popular religion and state cults; the role of these religions in contemporary Asian societies. (3 cr)

**THL 5285 The Buddhist Tradition** The doctrinal and social history of Buddhism: its origins in India, its current forms in Central, East and Southeast Asia; the role of Buddhism in contemporary Asian societies. (3 cr)

**THL 5300 Eastern Christian Life and Thought** The historical and theological developments of the Eastern Christian tradition, relationship with other contemporary religious traditions. (3 cr)

**THL 5400 Science and Religion** The interaction of science and religion from Galileo to the contemporary period. Theological implications of recent developments in the natural sciences. (3 cr)

**THL 5500 One Church, Many Churches**

The issues that divided Christians in the past; developments in the major traditions since the divisions; factors which may aid in the reunion of Christians; confront issues at this time. (3 cr)

**THL 5510 Religion in Russia** An introduction to the history, mind, spirit and life of Russian Orthodoxy; its influence in its adherents in the modern, complex and pluralistic world. (3 cr) *Diversity; Russian Concentration.*

**THL 5700 Black Religious Experience** Black religious experience and heritage; African and Afro-American perspectives. (3 cr) *Diversity.*

**THL 5800 Religion and Contemporary Literature** Religious attitudes and experience in contemporary literature. (3 cr)

**THL 5820 Religion and Education in American Culture** The role of religion and education in the formation of American Culture; historical perspectives on Catholic and Protestant strategies in the education of the public; contemporary issues of religious pluralism and the search for the common good; religion and education in a culture of disbelief. (3 cr)

**THL 5840 Feminist Ethics: Women, Identity and Moral Development** Theories of moral development and the cultural construction of identity. Impact of women's ways of being and knowing on ethical decision making. (3 cr) *Diversity, Women's Studies.*

**THL 5850 Women in Religion and Society** Examination of women's experiences in religious traditions with special emphasis on Christianity. (3 cr) *Diversity, Women's Studies.*

**THL 5900 Religion and Psychology** Attempts of James, Freud, Jung, Fromm, Allport, Maslow, Erikson and others to relate religion and psychology. (3 cr)

**THL 5950 Death and Dying** Psychological, philosophical, and theological contributions to the search for meaning

regarding dying, death, and belief in afterlife; practical issues; biblical perspectives; the views of other religions; contemporary Christian theological reflections. (3 cr)

**THL 5990 Themes in Ecumenical and Cultural Studies** Courses of varying content of ecumenical and cultural studies offered on an occasional basis. (3 cr)

**THL 6400 Independent Study** (3 cr)

## WOMEN'S STUDIES

**Director:** Wall

**Associate Director:** Asher

**Office:** 478 St. Augustine Center, tel. 519-4798

The Women's Studies Program is an interdisciplinary program providing courses, a minor and a concentration in Women's Studies. It is open to students in all degree programs.

**MINOR:** an Integrating Seminar and 5 additional courses of which at least 2 must be from Category A. The Integrating Seminar is required of all students and is offered every spring.

**CONCENTRATION:** An Integrating Seminar and 7 additional courses of which at least 3 must be from Category A. The Integrating Seminar is required of all students and is offered every spring.

Category A:

CA 3200 - Gender and Communication  
ENG 2300 - Women in Literature  
HIS 2296 - Changing Roles for Women in American Society

**or**

HIS 3361 - Women and Society in Modern Europe  
PHI 2425 - Philosophy of Women

PJ 5300 - Race, Class and Gender  
SOC 3500 - Sociology of Gender Roles  
THL 5850 - Women in Religion and Society  
WS 5000 - Integrating Seminar

Category B:

AAH 3001 - Women in Art  
CA 2015 - Women in Film

Villanova University

CA 2018 - Families on Film  
CLA 3051 - Women in Classical World  
ECO 3118 - Women in the Economy  
NUR 4800 - Women's Health Issues  
PHI 2430 - Eco-feminism  
PSC 2700 - Women and Politics  
PSY 3000 - Psychology of Women  
SOC 2300 - Sociology of the Family  
THE 4014 - Women and Theatre  
WS 3000 - Independent Study

TOPICS - Courses in several departments are offered each semester. (Please see Director, Women's Studies.)

**WS 5000 Required Integrating Seminar**

An interdisciplinary course that focuses on a topic through a methodology that requires Women's Studies minors to provide input from the research areas of their majors. (3 cr)

*Prereq: permission of the director.*