

INTERDISCIPLINARY MINOR—ASIAN STUDIES

Director: David E. Staveley; *Executive Committee Members:* Inaam A. Al-Hashimi, Sachio Ashida, Sri Ram V. Bakashi, Betty W. Chan, Oh Kon Cho, Saladuddin Malik.

Asian Studies, an interdisciplinary minor of 21 credits, is designed to make students more knowledgeable about Asian societies and cultures in order to increase students' understanding of the region. This program will benefit organizations which employ college graduates who have acquired knowledge on Asia. Students can enhance their future career possibilities while strengthening their appreciation for this diverse region.

Students interested in this minor should contact the Department of Political Science, FOB 228, (585) 395-2584.

The curriculum consists of the following courses:

Core Courses (6 credits)

HST 387	Asian Survey
CMC 418	Cross-cultural Communication

Language Requirements (6 credits)

One of the following languages:

CHN 111	Beginning Chinese I
CHN 112	Chinese II

OR

JPN 111	Beginning Japanese I
JPN 112	Japanese II

The language requirement may be met in any Asian language including the above by demonstrating competency in these languages.

Electives (9 credits)

Any three courses from the following or other recommended courses:

ANT 330	World Poverty and Economic Underdevelopment
HST 361	History of Japan
HST 363	Islam
HST 388	Traditional China
HST 463	Revolution and Communism in China
PLS 348	Asian Politics
PLS 410	International Political Economy
SOC 306	Social Changes in The Third World
THE 490	Special Topics in Academic Theatre: Asian Theatre

In addition to the language requirement, courses taken at other institutions, or participation in overseas programs, up to 12 credits may be transferred with the approval of the Executive Committee of the program. For information and advisement contact: Dr. David E. Staveley, Director of Asian Studies Minor, Department of Political Science and International Studies, (585) 395-2584.

INTERDISCIPLINARY MINOR—CANADIAN STUDIES

An interdisciplinary minor in Canadian Studies is available to SUNY Brockport students who want to learn more about our neighbor to the north. Canada is the United States' number-one trading partner (exports and imports). Consequently, this minor is designed to assist students who wish to enhance their awareness of this important country. The Regents Plan for elementary and secondary schools in New York state requires the inclusion of Canadian Studies in the K–12 curriculum. For future teachers, business majors, and others interested in Canada, courses are offered in history, political science, literature, foreign language (French is strongly recommended), theatre, anthropology, and education.

Also included in this program is the opportunity to study at a Canadian university for a year. For more information, contact the director of Canadian Studies, 233 Faculty Office Building, (585) 395-5677 or (585) 395-2584, or Department of Political Science and International Studies, 228 FOB.

INTERDISCIPLINARY MINOR—JEWISH STUDIES

The Jewish Studies minor is an interdisciplinary liberal arts program focusing on the study of the Jewish people—their history, their literature, their language (Hebrew) and their culture. The program aims to enhance the student's knowledge of the Jewish people.

Students interested in the Jewish Studies Program should contact Dr. Herbert Fink, Department of Psychology, 137 Holmes Hall, (585) 395-5635.

Requirements (18 Credits)

Completion of the interdisciplinary Jewish Studies minor requires the completion of six of the courses listed below, from at least two different disciplines, selected with advisement.

ENL 353	The <i>Bible</i> and Modernism
ENL 354	The <i>Bible</i> as Literature
ENL 495	Literature of the Holocaust
HBR 111	Beginning Hebrew I
HST 351	Nazi Germany
PLS 383	The Middle East in World Politics
PSH 437	Psychology and Jewish Studies
	Relevant overseas courses (in Israel)

JEWISH STUDIES COURSES

HBR 111 Beginning Hebrew I (A). Provides an introduction to modern Hebrew. Emphasizes oral use. *3 Cr.*

ENL 353 The *Bible* and Modernism (A,C,I). Provides an interdisciplinary investigation of controversies surrounding the *Bible* in the modern world. *3 Cr.*

ENL 354 *Bible* as Literature (A). Provides an extensive examination of the design, moral, ethical and historical significance of the *Bible*, as well as its major literary forms, including short story, myth, proverbs, psalms, historical narrative and apocrypha. *3 Cr.*

ENL 495 Literature of the Holocaust (A,I,W). Provides for readings and discussions concerning Hitler's attempted destruction of the European Jews, both fiction and non-fiction, including the work of survivors and victims. Incorporates aesthetic, moral, and political perspectives, with special emphasis on the relevance for our time. *3 Cr.*

HST 351 Nazi Germany (A). Explores the creation and destruction of Hitler's Germany within the context of 20th-century Europe, and the ironies and complexities of this modern human catastrophe. *3 Cr.*

PLS 383 Mid-East in World Politics (A). Studies political conflict of global issues and international politics. Covers the Arab-Israeli conflict. *3 Cr.*

PSH 437 Psychology and Jewish Studies (A). Explores psychological factors related to Jewish people, the Arab-Israeli conflict, and the Holocaust. *3 Cr.*

INTERDISCIPLINARY MINOR—LATIN-AMERICAN STUDIES

The interdisciplinary minor in Latin-American Studies includes the following requirements:

1. Eighteen credits in 300–400-level courses focusing on Latin America and selected by advisement from at least three of the following disciplines: anthropology, art, economics, English, history, political science, sociology, and Spanish.
2. Proficiency in Spanish, demonstrated by successfully completing a Spanish course at the 300/400 levels or by obtaining a passing score in a proficiency exam. SPN 354 Literature and Culture of Spanish America I and SPN 364 Literature and Culture of Spanish America II are highly recommended to help students familiarize themselves with the cultural history and the literature of Spanish America.

NOTE: Students who successfully complete one semester of study through the SUNY Brockport program in Costa Rica or Cuernavaca, Mexico, may receive 12 credits toward the minor. To complete the minor, they need only one additional course in each of two disciplines.

Students wishing to undertake the minor should first consult the program director: Victor J. Rojas, Foreign Languages and Literatures, 103-A Tower Fine Arts Building, (585) 395-5231, or via e-mail to vrojas@brockport.edu.

JOURNALISM—SEE DEPARTMENT OF COMMUNICATION

LAW—SEE DEPARTMENT OF POLITICAL SCIENCE

DEPARTMENT OF MATHEMATICS

**200 Faculty Office Building
(585) 395-2036**

Chairperson: TBD; *Professors:* John G. Michaels, Sanford S. Miller; *Associate Professors:* Mihail Barbosu, Charles J. Sommer; *Assistant Professors:* Dawn M. Jones, Izuru Mori, Gabriel T. Prajitura, Howard J. Skogman, Rebecca Smith, Pierangela Veneziani, Ruhan Zhao.

An in-depth understanding of mathematics is of great importance to many careers in our technologically complex society. Moreover, the study of mathematics promotes analytical and critical thinking skills, and therefore is a valuable part of any program of study. The major and minor programs in mathematics are designed to provide the knowledge and skills necessary to pursue graduate study or to support career goals in a range of professions. Recent graduates who have majored in mathematics have found rewarding careers in business, teaching, computing, government, law, engineering, and medicine. A major or minor in mathematics is a natural adjunct to the study of physics, chemistry, biology, earth science, business, economics, computer science, computational science, or the social sciences.

The department offers a major in mathematics, a minor in mathematics, and a minor in mathematics/statistics. In addition, it supports a double major in mathematics and computer science. To complete a major in mathematics, students take nine required courses that provide a thorough foundation in several central areas of mathematics, a computer science course that emphasizes the design of algorithms, and a minimum of three advanced courses chosen to give special depth in at least one area. The two minor programs require students to take six mathematics courses that coherently complement their particular major.

Because of the sequential nature of the study of mathematics, students should meet with the department's advisement coordinator as soon as possible to declare a major or minor, be assigned a departmental advisor, and plan an academic program.

Major in Mathematics (40 credits)

Students must complete a minimum of 36 credits in mathematics and four credits in computer science, as follows:

		Credits
1. Required MTH courses (27 credits)		
MTH 201, 202, 203	Calculus I, II, III	9
MTH 281	Discrete Mathematics I	3
MTH 346, 446	Probability and Statistics I, II	6
MTH 324	Linear Algebra	3
MTH 425	Abstract Algebra	3
MTH 457	Real Analysis	3
2. Elective courses (9 credits)		9
Nine credits in mathematics, by advisement, from courses numbered MTH 399 or higher. CSC 483 may be substituted for one of these MTH courses.		
3. Computer science course: CSC 203 Fundamentals of Computer Science I		4
		Total: 40

Notes:

- (a) Students intending to obtain secondary education certification in mathematics must complete MTH 432.
- (b) At least three 400-level MTH courses must be taken at SUNY Brockport, including at least one of the following: MTH 425, 446, or 457.
- (c) Students receiving elementary certification may substitute MTH 314 for one of the Mathematics electives.

Students who have successfully completed a calculus course in high school may qualify for college credit for MTH 201 and 202. Qualifying students must contact the department before they register for their first calculus course at SUNY Brockport.

More details concerning the mathematics major, including sample programs of study and information on advisement for majors, student awards, computing facilities, library holdings, the Mathematics Club, and the Student Chapter of the Mathematical Association of America, can be found in the *Mathematics Majors Handbook*. Copies are available in the department office.

Minor in Mathematics (18 credits)

Students must complete a minimum of 18 credits in mathematics, as follows:

- 1. Required courses: MTH 201 and 202, Calculus I and II.
- 2. Elective courses: 12 credits in mathematics, chosen from MTH 203 or courses numbered MTH 243 or higher. Students should choose these electives after consultation with an advisor from their major department as well as with a mathematics faculty member.

At least nine credits toward the minor must be completed at SUNY Brockport.

Minor in Mathematics/Statistics (18 credits)

Students must complete either sequence A or B below.

A		B	
MTH 201	Calculus I	MTH 201	Calculus I
MTH 202	Calculus II	MTH 202	Calculus II
MTH 203	Calculus III	MTH 245	Finite Mathematics or
MTH 245	Finite Mathematics or	MTH 281	Discrete Mathematics I
MTH 281	Discrete Mathematics I	MTH 346	Probability and Statistics I
MTH 346	Probability and Statistics I	MTH 441	Statistical Methods I
MTH 446	Probability and Statistics II	MTH 442	Statistical Methods II

At least nine credits toward the minor must be completed at SUNY Brockport.

Secondary Certification in Mathematics

Students who wish to teach mathematics at the secondary level can pursue a program at SUNY Brockport that leads to provisional certification. The program requires completion of a major in mathematics, including a geometry course, and a prescribed group of professional courses offered chiefly by the Department of Education and Human Development. Students seeking certification should contact the Department of Education and Human Development as soon as possible.

MATHEMATICS COURSES

MTH 110 Introduction to Mathematics (A).

Placement for students with weak backgrounds in mathematics. Closed to students who have passed MTH 111 or 121 or higher or any statistics course. Places major emphasis on algebraic skills, basic operations on signed numbers (decimal and fractional forms); percents; techniques for solving linear and quadratic equations and systems of equations using two variables; algebraic operations on polynomials, roots and radicals. *3 Cr. Every Semester.*

MTH 111 Quantitative Skills (A). *Placement preparatory to MTH 112. Closed to students who have passed MTH 121 or higher (except MTH 243).* Covers basic mathematical concepts involving linear and non-linear relationships and graphic representations; basic concepts of probability and statistics. Requires students to perform at a satisfactory level during the course and pass the final exam, which is a comprehensive exam, in order to obtain a passing grade. *3 Cr. Every Semester.*

MTH 112 College Mathematics (A). *Placement for most students with good high school mathematics background. Meets Brockport General Education Mathematics course requirement.* Develops college-level skills in algebra, geometry, data analysis, and quantitative reasoning. Practice with linear and non-linear equations, geometric problem-solving, probability, algorithms, tabular and graphic techniques, modeling real world problems. Must pass final comprehensive examination to pass course. *3 Cr. Every Semester.*

MTH 121 College Algebra (A). *Prerequisite: Two years of high school mathematics. (Closed to students who have completed more than three years of high school mathematics or MTH 122 or a calculus course).* Covers algebra at the intermediate level, including operations on polynomials and algebraic fractions, solution of first- and second-degree equations, graphs of functions and equations, logarithms and exponential functions. *3 Cr. Every Semester.*

MTH 122 Pre-Calculus (A). *Prerequisite: Three years of high school mathematics or MTH 121. (Closed to students who have credit for MTH 201.)* Designed to prepare students for the study of calculus. Covers algebraic, exponential, logarithmic, and trigonometric functions. *3 Cr. Every Semester.*

MTH 132 Precalculus Lab (A). *Prerequisite: MTH 122.* Allows students to work in small groups on exercises related to topics being covered in Precalculus. Includes the use of calculators, computer software, or the writing of computer programs. *1 Cr.*

MTH 201 Calculus I (A). *Prerequisite: Three and-one-half-years of college preparatory mathematics or MTH 122.* Covers limits and continuity; derivatives and integrals of algebraic, trigonometric, exponential, and logarithmic functions; and applications of the derivative. *3 Cr. Every Semester.*

MTH 202 Calculus II (A). *Prerequisite: MTH 201 or one year of calculus in high school.* Covers techniques and applications of integration, approximation methods, Taylor polynomials, improper integrals and L'Hospital's rule, and an introduction to infinite series. *3 Cr. Every Semester.*

MTH 203 Calculus III (A). *Prerequisite: MTH 202.*

Covers polar coordinates, vectors and 3-space, functions of several variables, applications of partial derivatives, and multiple integrals. *3 Cr. Every Semester.*

MTH 211 Calculus I Laboratory (A). *Corequisite: MTH 201.*

Students work in small groups on problems related to topics being covered in Calculus I. Includes the use of calculators, computer software, or the writing of computer programs. *1 Cr.*

MTH 212 Calculus II Laboratory (A). *Corequisite: MTH 202.*

Allows students to work in small groups on problems related to topics being covered in Calculus II. Includes the use of calculators, computer software, or the writing of computer programs. *1 Cr.*

MTH 221 Calculus for Business, Social and Life Sciences I (A). *Prerequisite: MTH 121.*

Closed to students who have completed MTH 201 with a grade of "C" or better. Provides an introduction to calculus, with an emphasis on its applications to business and the behavioral sciences. Covers derivatives of functions of one and several variables, applied maximization and minimization problems, exponential growth and decay models, the natural logarithm function, and an introduction to integration. *3 Cr. Every Semester.*

MTH 243 Elementary Statistics (A).

Closed to students who have received academic credit for ECN 204, PSH 202, PLS 300, SOC 200, or transfer credit for an elementary statistics course at another institution. Covers the use and limitations of various statistical concepts, including frequency distributions, measures of central tendency and of variation, use of normal curve and t-tables, sampling, estimation, tests of significance for means, and correlation. *3 Cr. Every Semester.*

MTH 245 Finite Mathematics (A). *Prerequisite: Three*

years of college-preparatory mathematics, or MTH 121.

Closed to students who have successfully completed MTH 281. Covers linear equations, matrix algebra, linear programming, and probability theory. Uses these concepts to build mathematical models to solve problems arising in various disciplines. *3 Cr. Every Semester.*

MTH 255 Differential Equations (A). *Prerequisite: MTH 202.*

Covers first order differential equations and applications, second order and higher order linear differential equations, series solutions about ordinary points and the Laplace Transform. *3 Cr. Every Semester.*

MTH 281 Discrete Mathematics I (A). *Prerequisite: Three-and-one-half years of college preparatory mathematics, or MTH 122.*

Provides an introduction to discrete mathematics. Includes these topics: propositional and predicate logic, sets, functions, matrix algebra, algorithms, valid arguments, direct and indirect proofs, mathematical induction, permutations and combinations, and discrete probability. *3 Cr. Every Semester.*

MTH 313 Mathematics for Elementary Teachers I (A). *Prerequisite: MTH 121 or either MTH 111 or MTH 112 or three years of college-preparatory mathematics.*

Open only students seeking elementary teaching certification. Includes: sets, relations, number systems, elementary number theory, algebra, and mathematical systems. Uses a problem-solving approach where appropriate. *3 Cr. Every Semester.*

MTH 314 Mathematics for Elementary Teachers II (A). *Prerequisite: MTH 313 or any MTH course numbered 201 or higher.*

Covers various aspects of geometry, including area, volume, coordinate and transformational geometry, probability and statistics. Emphasizes problem solving and the instructional use of calculators and computers. *3 Cr. Every Semester.*

MTH 324 Linear Algebra (A). *Prerequisites: MTH 202 and either MTH 245 or MTH 281.*

Covers matrices, determinants, vector spaces and subspaces, dimension, linear transformations, and Euclidean vector spaces. *3 Cr. Every Semester.*

MTH 343 Sampling Methods (A). *Prerequisite: MTH 243 or an equivalent elementary statistics course.*

Introduces the concepts and techniques in statistical sampling having applications to sample surveys used in a variety of disciplines. Covers the estimation of means, totals and proportions, calculation of variance of estimates and sample size determinations when using simple random sampling, stratified sampling, cluster sampling and systematic sampling methods. *3 Cr.*

MTH 346 Probability and Statistics I (A). *Prerequisites: MTH 202 and either MTH 245 or MTH 281.*

Covers random variables and vectors, moments and moment generating functions, discrete and continuous probability distributions, and sampling distributions. *3 Cr. Every Semester.*

MTH 353 Actuarial Problem Solving: Exam P (A). *Prerequisite: MTH 446.*

Emphasizes the development of strong problem-solving skills in preparation for the Course P exam of the Society of Actuaries. Develops rigorously the concepts of calculus, mathematical probability and statistics. *3 Cr.*

MTH 399 Independent Study in Mathematics (A).

To be defined in consultation with the instructor sponsor and in accordance with the procedures of the Office of Academic Advisement prior to registration. *1-3 Cr.*

MTH 405 Mathematical Problem Solving (A). *Prerequisite: MTH 202 and instructor's permission.*

Develops problem-solving ability in mathematics. Includes how to get started, methods of proof, devising a strategy, and "looking back." Places strong emphasis on critical reasoning and clarity of written expression. *3 Cr.*

MTH 412 History of Mathematics (A). *Prerequisite:* MTH 203. Covers the history and development of mathematical ideas from primitive origins to the present. Includes topics such as arithmetic, number theory, geometries, algebra, calculus, and selected advanced topics. 3 Cr. *Spring*

MTH 421 Number Theory (A). *Prerequisites:* MTH 202 and MTH 281. Covers mathematical induction, divisibility, primes, arithmetic functions, congruences, Diophantine problems, Gaussian primes, and the distribution of primes. 3 Cr. *Fall*

MTH 425 Abstract Algebra (A). *Prerequisites:* MTH 203 and MTH 324. Provides a study of algebraic systems, with special attention to groups and rings and their classification properties. Emphasizes theory and proofs, but clarifies the ideas by means of specific examples involving modular arithmetic, real and complex numbers, permutations, matrices, and the factorization of polynomials over fields. Requires extensive writing. 3 Cr. *Every Semester*

MTH 429 Topics in Algebra (A). *Prerequisite:* *Instructor's permission*. Addresses specific topics in abstract algebra not covered in other courses. A list of topics to be covered will be announced before course is offered. 3 Cr.

MTH 432 College Geometry (A). *Prerequisite:* MTH 324. Provides a study of geometry from the synthetic, analytic, transformational, and vector viewpoints. Includes these topics: axiomatic systems, finite geometries, absolute geometry, Euclidean geometry, non-Euclidean geometries, geometric transformations, and projective geometry. Requires extensive writing. 3 Cr. *Every Semester*

MTH 439 Topics in Geometry (A). Addresses specific topics in geometry and topology not covered in other courses. A list of topics to be covered will be announced before course is offered. 3 Cr.

MTH 441 Statistical Methods I (A). *Prerequisites:* MTH 243 or MTH 346. Covers estimation, hypothesis testing, simple regression, categorical data, and non-parametric methods. Uses computer statistical analysis packages such as MINITAB and SPSS. 3 Cr. *Fall*

MTH 442 Statistical Methods II (A). *Prerequisite:* MTH 441 or *instructor's permission*. Covers one- and two-way analysis of variance, multiple regression, experimental design, and linear models. Uses computers for data analysis. 3 Cr. *Spring*

MTH 446 Probability and Statistics II (A). *Prerequisites:* MTH 203 and MTH 346. Covers the Central Limit Theorem, maximum likelihood estimation, unbiased and sufficient statistics, minimum variance, confidence intervals, Neyman-Pearson Lemma, power calculations, and likelihood ratio tests. 3 Cr. *Every Semester*

MTH 449 Topics in Applied Mathematics (A). *Prerequisite:* *Instructor's permission*. Addresses specific topics in probability, statistics, applied analysis, and numerical methods not covered in other courses. A list of topics to be covered will be announced before course is offered. 3 Cr.

MTH 451 Advanced Calculus (A). *Prerequisite:* MTH 203. Covers vector differential calculus, line integrals including Green's theorem, independence of path, and surface integrals with Gauss' and Stokes' theorems. 3 Cr.

MTH 456 Advanced Differential Equations (A). *Prerequisites:* MTH 255, MTH 324 or *some exposure to matrix theory*. Covers series solutions about singular points, systems of linear first-order differential equations, plane autonomous systems, Fourier series, Sturm Liouville problems, partial differential equations of physics including the heat, wave and Laplace equation. 3 Cr. *Spring*

MTH 457 Real Analysis (A). *Prerequisites:* MTH 203 and MTH 324. Provides a study of functions of a real variable. Emphasizes theory, proof techniques, and writing skills. Includes: real numbers, denseness of the rational numbers, convergence of sequences of real numbers, Cauchy sequences, Bolzano-Weierstrass theorem, continuous functions, uniform continuity, differentiable functions, and integrable functions. Enhances understanding of the topics through a series of required writing tasks. 3 Cr. *Every Semester*

MTH 459 Topics in Analysis (A). *Prerequisite:* *Instructor's permission*. Addresses specific topics in real and complex analysis not covered in other courses. A list of topics to be covered will be announced before course is offered. 3 Cr.

MTH 461 Deterministic Mathematical Models (A). *Prerequisites:* MTH 245 or MTH 281. Teaches applied mathematics techniques to be used in engineering, business, finance, and other management fields. Topics covered include linear programming, sensitivity analysis, the simplex method, shortest path method, integer linear programming and network models. 3 Cr. *Fall*

MTH 462 Stochastic Mathematical Models (A). *Prerequisite:* MTH 346. Teaches applied mathematics techniques to be used in engineering, business, finance, and other management fields. Topics covered include project scheduling, decision theory, simulation, risk analysis, multicriteria decision problems, inventory and queuing models, forecasting, dynamic programming, and Markov analysis. 3 Cr. *Spring*

MTH 463 Graph Theory (A). *Prerequisite:* MTH 281. An introduction to graph theory, including distance concepts, symmetry and structure, trees and connectivity, Eulerian and Hamiltonian Graphs, pla-

nar graphs and imbeddings, and applications of graphs. *3 Cr. Spring.*

MTH 471 Numerical Analysis I (A). *Prerequisites: MTH 203 and CSC 203.* Provides a survey of methods used to numerically approximate the solutions of a variety of mathematical problems. Covers the generation and propagation of round-off errors, convergence criteria, and efficiency of computation. Includes: roots of non-linear equations, systems of linear or non-linear equations, polynomial approximations, and an introduction to numerical differentiation and integration. Mathematical software, such as MAPLE, will be used. *3 Cr.*

MTH 481 Discrete Mathematics II (A). *Prerequisites: MTH 201 and MTH 281.* A second course in discrete mathematics. Includes: complexity of algo-

rithms, recurrence relations, inclusion-exclusion principle, partial order and equivalence relations, graph theory, trees, Boolean algebra, grammars, formal languages, and finite-state machines. *3 Cr. Every Semester.*

MTH 492 Mathematics Internship (A). Allows for a supervised experience in applying mathematical skills and techniques in a practical work environment. Requires projects that may include applications in business, the social sciences, or physical sciences. A maximum of three credits can be applied toward the mathematics major. *1-6 Cr.*

MTH 499 Independent Study in Mathematics (A). To be defined in consultation with the instructor/sponsor and in accordance with the procedures of the Office of Academic Advisement prior to registration. *1-3 Cr.*

MEDICAL, DENTAL, VETERINARY AND ALLIED FIELDS; PRE-PROFESSIONAL PREPARATION; MEDICAL TECHNOLOGY—SEE DEPARTMENT OF BIOLOGICAL SCIENCES

METEOROLOGY—SEE DEPARTMENT OF THE EARTH SCIENCES

DEPARTMENT OF MILITARY SCIENCE— UNITED STATES ARMY ROTC

**C29 Cooper Hall
(585) 395-2249**

Chairperson: John D. Cushman; *Assistant Professors:* Daniel Fletcher, Nicholas A. Teta; *Instructors:* Robert Wilson, George Pepper.

The military science program offers courses of study leading to an academic minor in military science and an officer's commission in the United States Army. Students may enroll in lower-division courses without military service obligation. The courses provide theoretical and practical training in leadership and management principles and applications, basic military skills and officer responsibilities.

The military science program at the upper-division level consists of instruction in military skills, tactics, communications, and practical leadership experience.

The lower-division portion must be completed before enrollment in the upper division is approved. All students in the upper-division receive stipends of \$350-400 per month for each month in school up to \$4,000 per academic year. Admission to the upper-division program requires the acceptance and approval of the Professor of Military Science, (585) 395-2249.

Additional military training available through participation in the program includes, the US Army's Airborne School, Air Assault School, Northern Warfare School, and Army Nurse Training. Other typical activities during a semester include field training exercises at an Army installation, and military formals. Merit-based scholarships are available to interested and qualified students. All scholarships pay for full tuition and fees, a flat rate for textbooks valued at \$900

(\$450 each semester), and an allowance of up to \$4,000 for every year the scholarship is in effect.

The department offers minors under two options.

Option 1—Academic Minor and US Army Officer's Commission

Lower Division Course Prerequisites:	Credits
MSC 101 Leadership and Personal Development	2
MSC 102 Foundations in Leadership	2
MSC 201 Innovative Tactical Leadership	3
MSC 202 Leadership in Changing Environments	3
Four approved three-credit liberal arts core courses with grades of "C" or better (standard breadth components)	12
Total:	22

There are three alternatives for completing the lower division course prerequisites.

1. Satisfy any or all of the following requirements with the approval of the Professor of Military Science:
 - A. Completion of a special accelerated "compression" program of study
 - OR**
 - B. Prior military service participation (honorable), which includes as a minimum successful completion of military basic training
 - OR**
 - C. Completion of a special five-week summer training program (Leadership Training Course), conducted off campus; all expenses paid by the department 10
 2. Complete four approved three-credit liberal arts core courses with grades of "C" or better (standard breadth components) 12
- Total: 22**

¹Upper Division Course Prerequisites for the Minor

MSC 301 Adaptive Team Leadership	4
MSC 302 Leadership Development and Assessment	4
MSC 401 Developing Adaptive Leaders	4
MSC 402 Leadership in a Complex World	4
One approved Military History Course with grade of "C" or better	3

Total: 19

Option 2—Minor in Military Science Only³

Lower Division Course Prerequisites:	Credits
MSC 101 Leadership and Personal Development	2
MSC 102 Foundations in Leadership	2
MSC 201 Innovative Tactical Leadership	3
MSC 202 Leadership in Changing Environments	3
Four approved three-credit liberal arts core courses with grades of "C" or better (standard breadth components)	12
Subtotal:	22

There are three alternatives for completing the lower division course prerequisites.

Meet one of the requirements listed below with the approval of the professor of military science:

- A. Completion of a special "compression" program of study.

OR

B. Prior military service participation (honorable), which includes as a minimum successful completion of military basic training.

OR

C. Completion of a special five-week summer training program (Leadership Training Course), conducted off campus; all expenses paid by the department. 10

²Upper Division Course Requirements for the Minor

MSC 301³ Adaptive Team Leadership 4

MSC 302³ Leadership Development and Assessment 4

One approved Military History Course with grade of "C" or better 3

Subtotal: 11

Total: 21

¹ Applicants for commissioning credit will complete the National Advanced Leadership course following their junior year.

² Cross-enrolled students who are under contract with AFROTC or students who complete another commissioning program (such as Marine PLC) may apply with the PMS for alternate upper division credit.

³ Applicants for the minor will receive only academic credit but not commissioning credit.

MILITARY SCIENCE COURSES

MSC 101 Leadership and Personal Development (B). Introduces students to the personal challenges and competencies critical for effective leadership. Students learn how personal development of life skills such as goal setting, time management, physical fitness and stress management relate to leadership, officership and the Army profession. Focus is placed on developing basic knowledge and comprehension of Army Leadership Dimensions while gaining an understanding of the ROTC program, its purpose in the Army, and its advantages for the student. Classes meet for one hour of classroom instruction and two hours of leadership lab per week. Students incur no military obligation. Meets GEP 100 requirement. See Option 1 Academic Minor MSC 101. *2 Cr. Fall.*

MSC 102 Foundations in Leadership (B). Provides an overview of leadership fundamentals such as setting direction, problem-solving, listening, presenting briefs, providing feedback and using effective writing skills. Explores dimensions of leadership values, attributes, skills and actions in the context of practical, hands-on and interactive exercises. Classes meet for one hour of classroom instruction and two hours of leadership lab per week. Students incur no military obligation. *2 Cr. Spring.*

MSC 103 Military Fitness and Conditioning (B). Provides skills necessary to develop a balanced military-type fitness program for a group while maintaining focus on the individual's needs and progression. Also provides an understanding of the whole-body fitness and conditioning principals used by the Army. Helps students develop skills necessary to plan, implement, evaluate and manage a military fitness program. Students incur no military obligation. *2 Cr. Fall.*

MSC 104 Military Conditioning Lab (B). Provides hands-on application of the Army whole body fitness concept. This progressive program enhances strength, flexibility and endurance. Requires participation in group organization activities, cardiovascular training, muscle strengthening exercises and agility events contained in *Army Field Manual 21-20*. Includes monthly fitness tests to measure individual progression. Students incur no military obligation. *2 Cr. Spring.*

MSC 201 Innovative Tactical Leadership (B). Explores dimensions of creative and innovative tactical leadership strategies and styles by studying historical case studies and engaging in interactive student exercises. Students practice aspects of personal motivation and team building in the context of plan-

ning, executing and assessing team exercises. Focuses on the continued development of the knowledge of leadership values and attributes, through an understanding of rank, uniform, customs and courtesies. Classes meet for two hours of classroom instruction and two hours of leadership lab per week. Students incur no military obligation. *3 Cr. Fall.*

MSC 202 Leadership in Changing Environments (B). Examines the challenges of leading in complex contemporary operational environments. Dimensions of the cross-cultural challenges of leadership in a constantly changing world are highlighted and applied to practical Army leadership tasks and situations. Develops greater self-awareness as students practice communication and team-building skills. Contemporary Operating Environment case studies give insight into the importance and practice of teamwork and tactics in real-world scenarios. Classes meet for two hours of classroom instruction and two hours of leadership lab per week. Students incur no military obligation. *3 Cr. Spring.*

MSC 301 Adaptive Team Leadership (B). Challenges cadets to study, practice, and evaluate adaptive leadership skills as they are presented with the demands of the ROTC Leader Development Assessment Course (LDAC). Challenging scenarios related to small unit tactical operations are used to develop self-awareness and critical-thinking skills. Cadets receive systematic and specific feedback on their leadership abilities. Cadets begin to analyze and evaluate their own leadership values, attributes, skills and actions. Primary attention is given to preparation for LDAC and the development of leadership qualities. Classes meet for three hours of classroom instruction and two hours of leadership lab per week. *4 Cr. Fall.*

MSC 302 Leader Development and Assessment (B). Uses increasingly intense situational leadership challenges to build cadet awareness and skills in leading small units. Skills in decision-making, persuading and motivating team members are explored,

evaluated, and developed. Aspects of military operations are reviewed as a means of preparing for the ROTC Leader Development Assessment Course (LDAC). Cadets are expected to apply basic principles to Army training, and motivation to troop-leading procedures. Emphasis is also placed on conducting military briefings and developing proficiency of operation orders. Classes meet for three hours of classroom instruction and two hours of leadership lab per week. *4 Cr. Spring.*

MSC 401 Developing Adaptive Leaders (B). Develops cadet proficiency in planning, executing and assessing complex operations, functioning as a member of a staff, and providing leadership performance feedback to subordinates. Cadets are given situational opportunities to assess risk, make ethical decisions and provide coaching to fellow ROTC cadets. Cadets are challenged to analyze, evaluate and instruct younger cadets. Both their classroom and battalion leadership experiences are designed to prepare cadets for their first unit of assignment. Cadets identify responsibilities of key staff, coordinate staff roles, and use situational opportunities to teach, train and develop subordinates. Classes meet for three hours of classroom instruction and two hours of leadership lab per week. *4 Cr. Fall.*

MSC 402 Leadership in a Complex World (B). Explores the dynamics of leading in the complex situations of current military operations. Cadets examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. Aspects of interacting with non-governmental organizations, civilians on the battlefield, and host nation support are examined and evaluated. Significant emphasis is placed on preparing cadets for their first unit of assignment. Case studies, scenarios and "What Now, Lieutenant?" exercises are used to prepare cadets to face the complex ethical and practical demands of leading as commissioned officers in the United States Army. Classes meet for three hours of classroom instruction and two hours of leadership lab per week. *4 Cr. Spring.*

MODERN WAR AND SOCIETY—INTERDISCIPLINARY MINOR

Modern War and Society, an interdisciplinary minor that requires 18 credits, provides a broad gauged perspective on a vital contemporary issue. The nature of human conflict, international power relations, the battlefield in various contexts, the literature of war, and myriad sub-topics make up the substance of the program. The Departments of English, History and Political Science offer an array of 17 mostly upper-level courses. Students must meet the following requirements:

- A. HST 355 Modern War, 1740–1939
- B. Five electives which must include courses from at least two departments and at least one 400-level offering from the following:
 - ENL 495 Literature of the Holocaust
 - HST 327 American Military Experience
 - HST 351 Nazi Germany
 - HST 356 War Since 1945
 - HST 362 World War II
 - HST 417 The American Revolution
 - HST 419 The Civil War Era, 1848–1877
 - HST 441 World War I
 - PLS 111 World Politics
 - PLS 333 American Foreign Policy
 - PLS 448 Leadership

For further information, contact Dr. Arden Bucholz, Department of History, 130 Faculty Office Building, (585) 395-2377.

OTHER MILITARY TRAINING— UNITED STATES AIR FORCE ROTC

Air Force ROTC is available to all full-time students through cross-registration with Rochester Institute of Technology (RIT). Details concerning Air Force ROTC classes and scholarships may be obtained by calling RIT at (585) 475-5196.

MUSIC COURSE OFFERINGS

(585) 395-2496

The School of Arts and Performance offers music, General Education, and music appreciation courses. Although there is no major in music, music events, including the Brockport Community-College Chorus and Gospel Music are offered. A unique collaboration has been developed with Rochester Philharmonic Orchestra, which includes RPO performances on the SUNY Brockport campus; a RPO member teaching a music course on campus and invited musicians presenting lecture-demonstrations. Music courses also serve as a component of the Arts for Children program.

MUSIC COURSES

MUS 105 Introduction to Music (A,P). Open to all students. Required of Arts for Children majors. No musical background required. Covers music fundamentals, such as reading music in treble and bass clefs, keyboard, scales, intervals, and chords. Also in-

cludes a performance component in which students learn to perform rhythm patterns and play the recorder. *3 Cr. Every Semester.*

MUS 112 World Music (A,C,E,W). Examines the universal principles that connect music around the

world. Includes the music of India, Africa, Japan, South America, the United States and Europe. Includes a unit on the contribution of women composers. *3 Cr. Every Semester.*

MUS 130 Beginning Piano Class (B). Allows development of practical skills in reading music at the keyboard, including some knowledge of scales and chords to provide basic accompaniment. *2 Cr.*

MUS 139 Beginning Voice Class (B). Allows development of basic vocal skills, including breathing, placement, sight reading; study of vowels, consonants, and appropriate song literature. *2 Cr.*

MUS 201 Computers and Music (A,T). Provides an introduction to computer basics and hands-on experience with music software. Explores computers as used by musicians and artists. Emphasizes sound analysis and digital music production. Surveys electronic and computer music. *3 Cr. Every Semester.*

MUS 210 Music Appreciation with the RPO (A,F). Open to all students; no musical background required. Explores the inner world of orchestral music contra-bassoon; 3 Bs of classical music; contemporary composers; and the influence of changing historical, social, and artistic trends on the orchestra. Studies the use of Howard Gardner's Theory of Multiple Intelligences in learning music. Examines the influence of other cultures upon Western music. Helps students to become educated and discriminating listeners through guided listening and required attendance at Rochester Philharmonic Orchestra concerts. *3 Cr. Every Semester.*

MUS 230 Advanced Piano Class (B). Allows development of more advanced skills in piano performance techniques, including pedaling, phrases and fingering, and study of polyphonic and homophonic styles. *2 Cr.*

MUS 239 Advanced Voice Class (B). Studies standard vocal repertoire, improvement of technical vocal problems through performance, and stage awareness. *2 Cr.*

MUS 320 Brockport Chorus (B). Includes performance of standard choral works from many styles and periods. *1 Cr.*

MUS 322 Gospel Music I (B). *Cross-listed as AAS 322.* Provides a basic history of black American gospel music and its relationship to contemporary music form; and includes performances of Gospel Music. *1 Cr.*

MUS 326 Brockport Symphony Orchestra (B). Includes performance of standard orchestral repertoire. Allows students to develop orchestral techniques and an understanding of musical styles. *1 Cr.*

MUS 399 Independent Study in Music (A). To be defined in consultation with the instructor-sponsor and in accordance with the procedures of the Office of Academic Advisement prior to registration. *1-3 Cr.*

MUS 413 American Music (A). Provides a study of representative music styles and idioms of North America from Colonial times to the present; analysis of visual and aural, structural and stylistic characteristics of the music; and recognition of important composers and musicians who contributed to the development of American music. *3 Cr.*

MUS 414 American Musical Theatre (A). Surveys the American musical theatre, including Broadway shows, through investigation of its form. Provides analyses, discussions, viewing and research of selected works to serve as a basis for a more aware listening technique. *3 Cr.*

MUS 485 American Folk Music (A). Takes a performance approach to the history, styles, and repertoire of North-American folk music. Allows students to learn approximately 100 folk songs, covering all geographic regions, from performances by the instructor, guest artists, members of the class, films, and recordings. Especially recommended for arts for children, recreation and leisure, education, and music education majors. *3 Cr.*

MUS 487 Music and the Child (A). *Prerequisite: MUS 105.* Covers current approaches in using music with children and ways in which music can contribute to the total growth of the child. Explores existing vocal and instrumental materials suitable for children, creating original songs, rhythmic games, and sound stories. *3 Cr. Spring.*

MUS 499 Independent Study in Music (A). To be defined in consultation with the instructor-sponsor and in accordance with the procedures of the Office of Academic Advisement prior to registration. *1-3 Cr.*

DEPARTMENT OF NURSING

B361 Tuttle North
(585) 395-2355

Chairperson: Linda Snell; *Associate Professors:* Margie Lovett-Scott, Kathleen Peterson-Sweeney; *Assistant Professors:* Zara Brenner, Elizabeth Heavey, Nancy Iafrati, Sparki Mangles, Patricia Lee Sharkey, Joanne Stevens; *Lecturers:* Susan Glose, Pamela Reamer.

Philosophy

The curriculum of the Department of Nursing is derived from the program's mission, purpose, objectives and organizing framework. The philosophy describes the faculty's beliefs concerning the purpose of nursing, the focus of baccalaureate and graduate nursing education, and the expectations for program graduates.

The philosophy of the Department of Nursing states that:

The faculty of the Department of Nursing at the State University of New York College at Brockport believes that education is a lifelong process which fosters the cultural, psychosocial, and intellectual development of the individual. The faculty fully supports the mission of the College, recognizing that students bring to the educational setting a diversity of abilities, motivations, experiences, and cultures. Accordingly, opportunities are provided, which allow each individual to build on past knowledge and experience and to develop within the educational philosophy of the State University of New York.

The faculty believes that nursing is a profession, science, and art with the primary purpose of assisting clients—individuals, families and communities—to retain, attain, and maintain an optimal level of wellness through purposeful interventions. The faculty believes that clients are a composite of physiological, psychological, developmental, sociocultural, and spiritual dimensions. Professional nurses utilize the nursing process to manage care of clients throughout the life cycle. Nurses work independently and in collaboration with other health professionals.

Nursing education utilizes knowledge drawn from nursing, the liberal arts, sciences, and humanities. Nursing curricula emphasize the development of concepts and skills which are essential to nursing practice, leadership and research, and fosters the development of critical thinking. Students are active, responsible participants in the learning process.

The faculty believes that baccalaureate education serves as the foundation for graduate study and continuing professional and personal growth.

Baccalaureate Nursing Program

Nursing is one of the most rewarding and challenging health care professions. The baccalaureate nursing program at SUNY Brockport prepares a generalist professional practitioner to utilize the nursing process and interpersonal skills in providing health care to clients, families and groups of all ages in any setting. The program also prepares the graduate to interpret and promote professional nursing and to accept responsibility for personal and professional growth.

The nursing program is accredited by the Commission on Collegiate Education and the New York State Department of Education. The College is a member of the American Association of Colleges of Nursing. The program is designed to help students become scientifically and humanistically prepared professional nurses, and to provide a foundation for graduate study in nursing.

Beginning practitioners are most frequently employed in either hospital or community settings. Hospitals offer challenging opportunities for the baccalaureate graduate as do long-term health care facilities. In the community, nurses are employed by public health departments, health maintenance organizations, outpatient clinics, voluntary health organizations, and hospices. Increasingly, nurses have opportunities to participate in entrepreneurial endeavors as independent health care providers. The armed services also offer excellent career opportunities for graduates.

The nursing curriculum involves classroom, field and clinical experience in nursing theory and practice. The curriculum uses a variety of teaching modalities. Students are expected to assume an active role in the learning process and are responsible for achieving learning outcomes. The focus on learner responsibility lays the foundation for the graduate's assuming accountability for professional practice and continued individual growth.

Achievement of a grade of 75 or better in all nursing courses is required for continued progress through the nursing program. Successful completion of the following courses is required for graduation:

NUR 321	Introduction to Pharmacology
NUR 328	Medication Administration and Techniques
NUR 329	Nursing: A Systems Approach
NUR 330	Foundations for Professional Practice for Nursing
NUR 331	Health Assessment
NUR 339	The Childbearing Family and Women's Health
NUR 337	Client System Response I
NUR 341	Client System Response II
NUR 450	Issues and Trends Affecting Health Care
NUR 452	Management and Leadership
NUR 460	Complex Interpersonal Processes in Mental Health Nursing
NUR 462	Critical Care Nursing
NUR 464	Community Health Nursing
NUR 467	Child and Adolescent Responses to Health Stressors
NUR 478	Problem Solving in Nursing
PRO 310	Research: Process and Critique

Curriculum and program requirements are subject to change as necessary. Students should consult department faculty for current information.

Clinical experiences provide students with an opportunity to apply theory in the following areas of nursing: adult health, mental health, child health, maternal health, critical care, and community health. Clinical experiences involve either day or evening hours, depending on the agency and the specialty area. Students need to keep Tuesdays and Thursdays free of all other commitments.

Requirements for a Bachelor of Science in Nursing

To qualify for the degree of Bachelor of Science in Nursing, students must complete all nursing course requirements, and achieve and maintain a cumulative grade of 75 in each nursing course. Students are also responsible for meeting the General Education requirements of the College. All degree requirements must be completed within five years after beginning the clinical component of the major.

Admission to the Program

Admission policies provide an opportunity for a baccalaureate education in nursing to qualified students in each of three groups: 1) students enrolled in this College, 2) transfer students from other colleges and universities, and 3) registered nurses. The Department of Nursing is limited in the number of students it can accept for clinical placement. Affiliating agencies require strict faculty-student ratios. Admission criteria are subject to change. Consult the Department of Nursing for current information.

Minimum Criteria for Admission:

- 1) a cumulative college grade point average of 2.75 by the end of fall semester of sophomore year;
- 2) junior status with a minimum of 54 non-nursing liberal arts credits;
- 3) current CPR (Basic Life Support for the Professional Rescuer) certification through the American Red Cross or Health Provider course through the Heart Association);
- 4) satisfactory references, personal statement and health form.

- 5) completion of an application to the Department of Nursing by January 20 of the applicant's sophomore year and acceptance by SUNY Brockport. (**Please note, these are two separate applications.**);
- 6) achievement of a "C" or better in all nursing prerequisites with no more than one of these courses repeated; and
- 7) completion of all but two prerequisites by May of the year the student plans to start the nursing program. Maximum prerequisite courses to be taken in the summer is two.

SUNY Brockport Students—Freshmen

Admission to nursing is competitive. Students who enter Brockport as a freshman with an intent to major in nursing will be given priority; but there is no guarantee of admission to nursing. There is a separate application process for nursing and this must be submitted no later than January 20 of the applicant's sophomore year. Students must have a 2.75 GPA by the end of the fall semester of their sophomore year to be considered for admission to the nursing program and maintain this average as they continue to complete their course work.

To document successful completion of these criteria, students should file an application with the Department of Nursing by January 20 of their sophomore year. These students' forms will be reviewed by the Admissions Committee early in the spring semester and students will then be notified about acceptance into nursing.

Transfers

Students transferring into the College should apply directly to the Department of Nursing for admission to the nursing program. Consideration of admission is contingent upon acceptance to the College by January 20 and completion of the criteria listed above. Acceptance is on a space-available basis. There is no guarantee of admission to the nursing program.

Registered Nurses

Registered nurses should also apply directly to the Department of Nursing for admission to the nursing program. Since clinical placement is limited, registered nurses are encouraged to apply as early as possible. Admission is on a space-available basis. RN students should note that a maximum of 64 credits may be transferred from the associate's degree level.

For further information concerning opportunities for transfer credit and credit by exam, contact the Department of Nursing.

Required Prerequisite Courses

All students must complete the following courses (or their equivalent) prior to admission to the program:

	Credits
Anatomy and Physiology I, II	6–8
Microbiology	4
Chemistry (not a preparatory course)	4
Nutrition	3
Statistics	3
Sociology	3
Psychology	3
Development Assessment or Psychology (must cover entire lifespan from birth to death)	3

Total: 29–31

Prerequisite and corequisite requirements may undergo change. Contact the Department of Nursing for current information.

Student Health Requirements

Because of the special demands of the nursing program and the need to protect patients and students, junior and senior students in the nursing program are required to have a physical examination and prescribed lab tests prior to the start of the school year. The health form may

be obtained from the Office of Undergraduate Admissions or the Department of Nursing. A current, complete health form including the prescribed lab tests must be on file in the Department of Nursing by the date specified in the admission letter in order for the student to participate in clinical learning experiences. Nursing students are required to discuss with their nursing faculty advisors any health factors that may affect their capacity to perform as professional nurses. (Note: New York State Department of Health and individual health care agencies require additional protective measures prior to caring for patients. Presently, health care agencies require a positive rubella titer, a tine test or PPD, and Hepatitis B vaccination or its declination.)

Transportation

The majority of the clinical facilities are located in Rochester, 16 miles east of the SUNY Brockport campus. Transportation to and from clinical sites is the student's responsibility.

Uniforms

Uniforms must be purchased before the beginning of the junior year. Students accepted into the program are advised concerning arrangements for fittings and costs.

Requirements for RN Licensure

Graduates of this nursing program meet the education requirements for admittance to the RN licensure exam; however, there is a requirement that the applicant be of "good moral character," and a fee must be paid for the test. On the application for the test, the applicant is required to truthfully answer the following questions:

- Have you ever been convicted of a crime (felony or misdemeanor) in any state or country?
- Are charges pending against you for a crime (felony or misdemeanor) in any state or country?
- Have you ever been found guilty of professional misconduct, unprofessional conduct or negligence in any state or country?
- Are charges pending against you for professional misconduct, unprofessional conduct or negligence in any state or country?

If the answer to any of the questions is yes, the applicant must offer full explanation and establish his/her good moral character with the State Education Department.

NURSING COURSES

NUR 321 Introduction to Pharmacology (A). Presents drugs used therapeutically and their mechanisms of actions. Emphasizes classes of drugs, the major drugs in each class, and how they are used to promote client stability. Considers important side effects and drug interactions relevant to the role of the nurse in client care. *2 Cr. Spring.*

NUR 328 Medication Administration and Techniques (B). Provides guided learning experiences designed to develop the skills necessary for safe administration of medications. Open to pre-nursing sophomores with faculty permission only. *1 Cr. Fall.*

NUR 329 Nursing: A Systems Approach (B). Examines the four major concepts of the Neuman Systems Model: health, environment, client, and nursing. Focuses on defining and promoting client health, recognizing that clients may be communities, families, or individuals. Discusses aspects of therapeutic communication, the development of nurse-client relation-

ships, spirituality, culture and ethnicity, values and ethics and professional issues in nursing. Open to pre-nursing sophomores with faculty permission only. *2 Cr. Fall.*

NUR 330 Foundations for Professional Practice (B). *Course fee.* Presents both the skills and theoretical basis for professional practice in nursing with an emphasis on a systems approach. Introduces the components and use of the nursing process and basic nursing techniques. Provides for the opportunity for implementation in the lab and clinical setting. *3 Cr. Fall.*

NUR 331 Health Assessment (B). *Prerequisites: BIO 321 and BIO 322.* Bridges the gap between the basic sciences and their application in assessing the client. Includes history taking and systematic assessment of the person. Teaching and practice of examination skills and techniques are taught and practiced in a lab setting. *2 Cr. Fall.*

NUR 337 Client System Response I (B). *Course fee.* Examines the response of adult clients to stressors affecting essential body systems. The course emphasizes primary and secondary preventions for clients experiencing major health problems in the US today. Students use the nursing process to help clients strengthen their flexible lines of defense and to diminish the impact of stressors on core stability. *4 Cr. Fall.*

NUR 339 The Childbearing Family and Women's Health (B,W). Examines the responses of families to expected and high-risk obstetrical and neonatal stressors, and complications that occur during the prenatal, intrapartum and post-partum periods. Also examines stressors inherent in women's health care such as gynecological health concerns. Utilizes the nursing process and provides an opportunity for implementation of nursing care in a variety of obstetrical and women's health care clinical care settings. *6 Cr. Spring.*

NUR 341 Client System Response II (B). Examines more complex adult client responses to stressors affecting body systems, including musculoskeletal, respiratory, gastrointestinal, renal and neurologic function. Emphasis is placed on methods that strengthen the lines of defense/resistance applied to the clinical setting with clients from diverse backgrounds. *6 Cr. Spring.*

NUR 450 Issues and Trends Affecting Health Care (A,W). Helps students sharpen their written and verbal communication skills as well as examine issues and trends in health care that have, do, or will influence their professional practice. Examines gender and women's rights issues within the nursing profession as an underlying theme and includes social, historical, legal, economic, ethical and professional trends affecting nursing practice and education. Helps students develop oral communication skills through participation in one debate and evaluation of several debates. *2 Cr. Every Semester.*

NUR 452 Management and Leadership (A). Examines theories of management, organization, change and motivation. Addresses techniques for effective leadership, communication, conflict resolution, quality management and decision making. *2 Cr. Every Semester.*

NUR 460 Complex Interpersonal Processes in Mental Health Nursing (B). *Course fee. Prerequisites: NUR 339 and NUR 341.* Examines the use of the nursing process in situations that require complex interpersonal skills. Focuses on the use of these skills in promoting the ability of clients to respond to stressors. Includes the provision of primary, secondary and tertiary interventions with clients who are experiencing violence, sexual dysfunction, crisis, and the major mental illnesses. Provides an opportunity for clinical implementation. *6 Cr. Every Semester.*

NUR 462 Critical Care Nursing (B). *Course fee. Prerequisites: NUR 339 and NUR 341.* Implements secondary and tertiary preventions for the critically ill client. Includes topics such as health problems seen in emergency departments, intensive care units, burn centers and trauma units. Provides an opportunity for clinical implementation. *6 Cr. Every Semester.*

NUR 464 Community Health Nursing (B). *Course fee. Prerequisites: NUR 338 and NUR 340.* Examines the provision of primary, secondary and tertiary preventions within the home health care and public health domain. Utilizes the nursing process to promote optimal client stability. Provides an opportunity for clinical implementation. *6 Cr. Every Semester.*

NUR 467 Child and Adolescent Responses to Health Stressors (B). *Prerequisites: NUR 328, NUR 329, NUR 321, NUR 330, NUR 331, NUR 337, NUR 339 and NUR 341.* Examines the multiple stressors in the critically and chronically ill child and adolescent and their effects on the child, family and community. Utilizes the nursing process to promote optimal stability. Provides an opportunity for implementation in the clinical setting. *6 Cr.*

NUR 478 Problem Solving in Nursing (B). Focuses on problem solving and decision making in nursing. Emphasizes synthesis of knowledge as it applies to the care of clients with multiple needs. Examines test-taking skills, relaxation and stress management techniques. *2 Cr. Spring.*

PRO 204 Developmental Assessment (A). *Cross-listed as NUR 304.* Investigates the physiological, psychological, sociocultural, spiritual and developmental influences on the client. Emphasizes the use of multidisciplinary tools in assessing clients along the age continuum. Examines environmental forces that influence developmental outcomes. Investigates variables which will promote the optimal stability for each of eight stages of life. Examines normal lines of defense for each stage to retain the greatest internal resistance. *3 Cr. Fall.*

PRO 310 Research: Process and Critique (A). Introduces and examines the research process as it is evidenced in published professional journals. Includes the scientific method as utilized in research: problem formulation, literature review, research design and methodology, data analysis, and interpretation of findings. Presents and applies criteria for critically evaluating research to current published research. Emphasizes active learning throughout. *3 Cr. Fall.*

DEPARTMENT OF PHILOSOPHY

101 Hartwell
(585) 395-2420

Chairperson and Professor: Georges Dicker; *University Professor:* Paul Yu; *Professor:* Harold Greenstein; *Assistant Professors:* Gordon Barnes, Catherine McKeen; *Visiting Assistant Professor:* Keith McPartland.

The Department of Philosophy promotes the ideals of impartiality, intellectual rigor and clarity of thought. Its curriculum is designed to contribute to the enrichment and refinement of students' analytical, conceptual and communicatory abilities. The study of philosophy develops rational self-consciousness and cultivates habits of critical thought. Examining the best writings in the history of philosophy provides a broader perspective from which to view one's place in nature, the world and society.

The study of philosophy is excellent preparation not only for a career as an academic philosopher, but also for careers in all fields that require clear, analytical thinking, writing, and speaking, including teaching and education, government, the ministry, business and management, publishing, and many other fields. Philosophy is also an excellent major for pre-law students.

Major in Philosophy

Philosophy majors must earn a minimum of 30 credits in philosophy, 18 of which must come from six required courses, and at least 15 of which must come from upper-division courses.

Specifically, the program requirements are as follows:

Credits

I. Six required courses

PHL 101	Introduction to Philosophy	3
PHL 102	Introduction to Ethics	3
PHL 205	Modern Logic	3
PHL 304	Ancient Philosophy	3
PHL 305	History of Modern Philosophy	3
PHL 396	Seminar on Philosophical Problems	
	or	
PHL 491	Seminar on Individual Philosophers	3

II. Elective courses

Four PHL courses, at least two of which must be upper-division courses	12
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Total: 30

Minor in Philosophy

Philosophy minors must complete 18 credits in philosophy, at least nine of which must come from upper-division courses.

Transfer credit is reviewed by the department chairperson on a course-by-course basis.

PHILOSOPHY COURSES

PHL 101 Introduction to Philosophy (A,G). *Cross-listed as HON 211.* Provides a general introduction to the study of philosophy, including discussion of major problems of philosophy, based on the writings of historical and contemporary thinkers. *3 Cr. Every Semester.*

PHL 102 Introduction to Ethics (A,G). Provides for the study of major ethical systems in Western philosophy, including their intuitive, authoritarian, deontological, utilitarian, pragmatic or other justifications, through study of selected works of the chief moral philosophers. *3 Cr. Every Semester.*

PHL 103 Introduction to Philosophy of Religion (A,G). Examines basic issues such as arguments for the existence of God, the coherence of the concept of God, the problem of evil, the relation between faith and reason, and the evidence of religious experience and miracles. *3 Cr. Spring.*

PHL 104 Critical Thinking (A,D,H). Provides a study of the kinds of fallacious reasoning and arguments found in editorials, political statements, advertising, philosophical works, textbooks and statistics. Focuses on the functions of language, the construction of valid arguments, the avoidance of fallacy, and the relationships among opinion, belief, evidence and fact. *3 Cr. Every Semester.*

PHL 202 Logic (A,H). Provides a study of deductive and inductive processes of reasoning, including the relation of logic to scientific inquiry and method, and the identification of fallacies in reasoning and discourse. *3 Cr. Every Semester.*

PHL 205 Modern Logic (A). Uses the mechanism of an artificial language to provide a systematic study of deductive reasoning. Students will learn to translate English sentences into an artificial language and construct formal proofs of validity for deductive arguments. Covers classical sentential logic. Other topics that might be introduced include: predicate logic, identity, and modal logic. *3 Cr. Every Year.*

PHL 207 Asian Wisdom (A). Explores the history and content of the ancient philosophical traditions of India, China and Japan. Our task will be both to outline and interpret the philosophical approaches of the Eastern schools of thought and to become aware of the connections and disparities between the latter and the Western philosophical narratives. *3 Cr.*

PHL 304 Ancient Philosophy (A). Provides a critical analysis of the central ideas of the ancient Greek philosophers, especially those of Plato and Aristotle. *3 Cr. Spring.*

PHL 305 History of Modern Philosophy (A). Provides a systematic study of the views of major modern philosophers such as Descartes, Spinoza, Leibniz, Locke, Hume and Kant. *3 Cr. Fall.*

PHL 308 The Arts in Society (A,I). Considers various issues concerning the arts and human values by examining the main arguments on all sides, and the philosophical underpinnings of those arguments. Includes issues such as moral criticism of the arts, censorship versus free expression, decisions about public art, government support of the arts, and the role of criticism. *3 Cr.*

PHL 321 Medical Ethics (A,I). Using case studies, examines some of the complex ethical issues in medicine today: abortion on demand; euthanasia for defective newborns and for the terminally ill; medical experimentation and informed consent; psychosurgery and behavior control; genetic counseling and research; and allocation of medical resources. *3 Cr. Spring.*

PHL 322 Intermediate Logic (A). Covers translation of English into propositional and quantified forms; construction and analyses of well-formed arguments using propositional and quantified calculi; and symbolization of relational expressions and their use in argument forms for understanding the nature of deductive systems. *3 Cr.*

PHL 323 Human Knowledge (A). Offers a careful consideration of competing answers to basic philosophical questions such as: What is truth? What is the difference between belief and knowledge? Is knowledge based on reason or experience? How much force do skeptical arguments regarding sense perception, reason, memory and induction have? *3 Cr.*

PHL 325 Perception, Illusion and Reality (A). Presents a philosophical study of questions such as: Do we perceive reality as it is, or only as it appears to us? In what ways, if any, do the objects that we consider to be real differ from those that we seem to see in hallucinations, illusions and dreams? Is it possible that we might be hallucinating or dreaming all the time? *3 Cr.*

PHL 326 Political Philosophy (A,D,I,W). Studies major political theories in the Western tradition, and critically examines such salient questions as: Why should some people have political power over others? Why should people obey any government? What are the alternatives, if any, to a political society? *3 Cr.*

PHL 332 Death and Dying (A,I). Critically examines competing answers to controversial philosophi-

cal issues surrounding death and dying. Includes topics such as defining death, the morality and rationality of suicide, euthanasia, ethical problems of pain alleviation, and the rights of the terminally ill. *3 Cr.*

PHL 333 God, Self and World (A). Provides an introduction to certain basic metaphysical problems, such as the existence of God, freedom vs. determinism, the mind/body problem, personal identity, the problem of immortality, substance, universals, primary and secondary qualities. *3 Cr.*

PHL 335 Feminism and Philosophy (A,D,I,W). *Cross-listed as WMS 335.* Feminist theory and philosophy converge on some basic questions of enduring importance—questions concerning, e.g., personhood, knowledge and reality. Explores some varieties of feminism, such as liberal, radical, multicultural, postmodern and cyberfeminism. Investigates how these feminisms engage issues of contemporary moment, such as work equity, sexuality, pornography and technology, and examines the philosophical significance of these engagements. *3 Cr.*

PHL 342 Business Ethics (A,D,I). Studies ethical issues arising in business practice. Considers, for example, corporate responsibility, the nature of meaningful work, the morality of the marketplace, and competition. *3 Cr. Every Semester.*

PHL 352 Dimensions of Mind (A). Studies the nature of the mind from various philosophical perspectives. Considers phenomena such as consciousness, volition, intentionality, motivation and emotion. *3 Cr. Spring.*

PHL 390 Topics of Instruction (A). A 300-level philosophy course transmitted to SUNY Brockport from any of the SUNY Colleges participating in the Interactive Television Philosophy Consortium. The mode of transmission is synchronous and interactive, and the course content varies. *3 Cr.*

PHL 391 Tai Chi and Chinese Culture (A,C). An examination of the theory and practice of Tai Chi,

with special focus on its integration with Chinese philosophy, culture and art. *3 Cr.*

PHL 396 Seminar on Philosophical Problems (A). Studies specific philosophic problems and issues (e.g., justice, freedom, skepticism, etc.). Subject matter varies as topics change. *3 Cr.*

PHL 397 Abortion Controversy (A,I). Explores the moral issues involved in the controversy about anti-abortion and pro-choice stands on legalized abortion. Emphasis is placed on relevant moral principles and arguments with a consideration of the anthropological, psychological, medical, legal and social policy issues related to this controversy. *3 Cr.*

PHL 414 Plato and Aristotle (A). Examines selected dialogues of Plato and the thought of Aristotle as found in his major works. *3 Cr.*

PHL 428 Philosophy of Art (A). Critically examines competing answers to selected central questions in the philosophy of art using contemporary as well as historical writings. *3 Cr.*

PHL 439 Practicum in Teaching Philosophy (A). Allows students to assist philosophy faculty in lower-division courses. Their specific duties are determined by the supervising faculty member(s). Not repeatable for multiple credit for assisting with the same course. Graded exclusively on a Satisfactory/Unsatisfactory basis. *3 Cr.*

PHL 490 Topics of Instruction (A). A 400-level philosophy course transmitted to SUNY Brockport from any of the SUNY Colleges participating in the Interactive Television Philosophy Consortium. The mode of transmission is synchronous and interactive, and the course content varies. *3 Cr.*

PHL 491 Seminar on Individual Philosophers (A). Provides an in-depth study of the writings of one or two major philosophers, such as Descartes, Hume, Kant, Dewey, Sartre and Rawls. Content varies with appropriate subtitles provided. May be repeated as subtitle varies. *3 Cr. Spring.*

DEPARTMENT OF PHYSICAL EDUCATION AND SPORT

B212 Tuttle North
(585) 395-5332

Chair and Associate Professor: Susan C. Petersen; *Distinguished Service Professors:* William F. Stier, Jr., Joseph P. Winnick; *Professor:* Merrill J. Melnick; *Associate Professors:* Heidi K. Byrne, Luz M. Cruz, Timothy J. Henry, Cathy Houston-Wilson, Lauren J. Lieberman, Donald Murray, Reginald T. A. Ocansey, Robert C. Schneider, Danny Too, Christopher Williams; *Assistant Professors:* Gail Arem, Rikki A. Cannioto, Douglas H. Collier, Peter Hager, Pamela Haibach, Alisa James, Craig O. Mattern, Cesar Torres; *Lecturers:* Michele Carron, John Feeney, Gregory A. Kenney, Peter Matthews, Rocco P. Salomone, Joan Schockow; *Athletic Trainers:* Lee Cohen, Susan Wielgosz, Michael Militello.

Programs in Physical Education and Sport

The major in physical education and sport provides opportunities for the study of physical activity including sport, exercise, play, and other physical activities. The academic major curriculum provides students with an opportunity to know how and why a physical activity-enriched lifestyle contributes to the good life. The curriculum provides numerous opportunities for students to participate and reflect upon their personal experiences in physical activity.

The aim of the physical education major curriculum is to graduate students who are "physically educated." As such, the core of the major is focused on the study of motor skill and physical fitness. Students learn the principles of acquiring skill and fitness, seek to improve their own levels of skill and fitness, and learn to appreciate the contributions of skill and fitness to human development. (Please note that all physical education majors must pass all components of a health-related physical fitness test that includes measures of body composition, aerobic functioning, muscular strength and endurance, and flexibility.) Students complete the academic major by selecting courses which cover disciplinary content most relevant to their professional (or non-professional) interests.

The department also prepares its graduates for careers as physical education teachers, adapted physical education teachers, coaches, athletic trainers, fitness consultants, exercise specialists, and administrators of sport-related programs and businesses. In addition to the 33-credit academic major, therefore, the department offers professional concentrations in: (1) teacher certification; (2) teacher certification and adapted physical education; (3) athletic training; (4) sport management; and (5) exercise physiology. Acceptance into a professional concentration is *not* guaranteed; interested students should consult the admission requirements for each of the concentrations outlined on the following pages. Teacher certification programs are offered only in conjunction with the major in physical education. The concentrations in athletic training, sport management, and exercise physiology are available to both physical education majors and non-majors. (Additional prerequisites may be required for students lacking a strong background in physical education.) The department also offers a minor in coaching. Since individuals who complete the teacher certification program in physical education are also certified to coach upon completion of their program, the minor in coaching is directed to non-certification students (and is also open to non-majors). Of course, teacher certification students may select coaching courses as part of their program of study. Specific requirements for the major and for each special program are described below.

1. Academic Major in Physical Education (33 credits)

A. Required Academic Core Courses: (21 credits)

The major in physical education consists of 21 credits of specific required courses plus 12 credits chosen from a list of approved elective courses:

		Credits
PES 305	Significance of Physical Activity	3
PES 315	Fitness for Healthful Living	3

PES 325	Kinesiological Bases for Exercise and Sport	4
PES 335	Physiological Bases for Exercise and Sport	4
PES 345	Skill Acquisition and Performance	4
PES 3XX	Advanced Performance	3

Total: 21

B. Elective Courses: (12 credits)

Students in each of the professional concentrations will complete the physical education major by taking 12 credits of upper-division liberal arts electives identified by the professional concentration.

Students in each of the professional concentrations may not exceed six credits of elective, upper division, liberal arts performance courses for the completion of the academic major. Additional performance electives include both advanced sport and honors performance courses.

		Credits
PES 3XX	Advanced Performance	3
PES 350	History of Sport, Play, and Exercise	3
PES 360	Philosophy of Sport, Play, and Exercise	3
PES 399	Independent Study	1–3
PES 410	Physiology of Exercise	3
PES 411	Introduction to Sport Medicine	3
PES 412	Sport Medicine	3
PES 413	Human Development and Movement	3
PES 414	Assessment in Physical Education and Sport	3
PES 416	Lab Techniques in Exercise Physiology	3
PES 420	Biomechanical Skill Analysis	3
PES 430	Psychology of Sport	3
PES 441	Sport and Society	3
PES 445	Social Psychology of Sport	3
PES 446	Sports Spectating in the United States	3
PES 460	Ethics in Sport Contests	3
PES 461	Theories of Play	3
PES 475	Physical Education Honors—Performance	1–3
PES 485	Physical Education Honors—Theory	1–3
PES 490	Physical Education Exchange Program	15
PES 495	Topics in Physical Education	1–3
PES 499	Independent Study	1–3

Electives Total: 12

2. Contractual Liberal Arts Physical Education Major (Total for Major 33)

The Contractual Liberal Arts Physical Education Major (CLAPEM) is an option that permits the student to design an individualized physical education major program drawn from the total academic offerings of the Department of Physical Education and Sport. This option is intended to accommodate the interests of physical education major students who choose not to apply to any of the department's professional concentrations. While the student is required to take the six course, 21-credit academic core, the remaining 12 credits are elective opportunities to be decided upon in consultation with the student's major advisor.

3. Professional Programs (A through F below)

A. Teacher Certification

The teacher education program leads to "initial certification" to teach physical education in grades PreK-12 in New York state. (To obtain "permanent certification" students must earn a master's degree within five years of completing the bachelor's degree). This program also certifies successful students to coach in New York. Depending on how students meet requirements in general education, the academic major in physical education, and in teacher education, it may take more than 120 credits to complete this program.

Admission: In order to meet NYS Education Department standards for teacher certification programs, only a limited number of students each semester can be admitted in the program as evidenced by enrollment in PEP 441. To be eligible for one of those seats, students must have a minimum of 45 college credits and a 2.5 SUNY Brockport grade point average (for at least 12 credits of work, where no more than 25 percent of the credits are in activity classes). Depending on the level of student interest in the program, it is possible that students who are otherwise eligible for the program (i.e., credits and GPA) still may get “closed out” of one of the available seats in a given semester. These students, providing they maintain the necessary GPA, can attempt to enroll again in the next semester.

1. Required Courses for the Elective Component in the Major (12 credits)

		Credits
PES 413	Human Development and Movement	3
PES 414	Assessment in Physical Education and Sport	3
PES 420	Biomechanical Skill Analysis	3
PES XXX	Elective	3
Total:		12

2. Required Professional Sequence (29 credits)

		Credits
PEP 441	Introduction to Teaching Physical Education	3
PEP 442	Secondary Instruction and Methods	4
PEP 444	Elementary Instruction and Methods	4
PEP 445	Adapted Physical Education	3
PEP 483	Early Childhood Physical Education	3
PEP 476	Teaching/Coaching Seminar	2
PEP 487	Elementary Student Teaching	5
PEP 488	Secondary Student Teaching	5
Total:		29

3. Required Cognate Courses (5 credits)

		Credits
HLS 210	First Aid and CPR for Coaches	2
HLS 301	Principles of Healthful Living	3
Total:		5

4. Skill Requirements (13 credits)

In addition to the advanced performance and physical fitness requirements in the major, teacher education students are required to take 10 PEP activity classes totaling 13 credits. These PEP classes incorporate both skill development and teaching techniques in the curriculum.

PEP 201	Educational Dance	1
PEP 202	Adventure/Challenge Activities	2
PEP 203	Multicultural/Contemporary Act.	1
PEP 204	Track and Field/Softball	1
PEP 205	Golf/Archery	1
PEP 206	Educational Gymnastics	2
Invasion 1 & 2	(Lax/Field Hockey or Speedball/Team Handball or Soccer/Frisbee or Basketball/Football)	2
Net-Wall	(Volley/Racquetball or Tennis/Badminton)	1
Aquatics	(Swimming, Lifeguarding or WSI)	2
Total:		13

5. Electives (5 credits)

Each student is required to select a minimum of five credits from the list of courses below. The intent of these options is to offer the student opportunities to pursue special areas of interest and/or to develop new strengths in areas of limited experience.

	Credits
PEP 351 Coaching Sports	3
PEP 353 Administration of Intramurals	3
PEP 3XX Coaching Clinic(s)	1
PEP 379 Athletic Training for the Teacher/Coach	3
PEP 400 Microcomputers in Sport and Physical Education	3
PEP 481 Instructional Strategies in Adapted Physical Education	3
PEP 482 Adapted Physical Activity and Sport	3
EDI 325 Understanding Exceptional Learner	3
PEP 399 Independent Study	1-3
PEP 499 Independent Study	2
DNS 483 Children's Dance	3
	5

6. Other Requirements

(a) Pre-acceptance requirements

1. Complete a required application form
2. Pay a College-mandated application fee

(b) Pre-student teaching requirements

1. Demonstrate satisfactory completion of the health-related physical fitness test
2. Complete a student teaching application
3. Obtain a "C" or better in all professional courses (PEP 441, 442, 444, 445, 483)
4. Obtain a grade of "C" or better in all PEP activity classes
5. Obtain an overall Brockport GPA of 2.5 or better

B. Adapted Physical Education Concentration

The concentration in adapted physical education prepares the student for a position in the field, provides a background for graduate study and offers elective opportunities for physical education majors.

The concentration includes completion of the 33-credit physical education major, the teacher certification program in physical education and the 12-credit adapted physical education program listed below. Several prerequisites/corequisites and courses in the adapted physical education program may be completed in meeting requirements for the physical education major and teacher education certification program.

Admission: The adapted physical education concentration is open to any teacher certification student who has successfully completed PEP 441.

Credits**1. Requirements for the concentration.**

Student must be pursuing the academic major in physical education and teacher certification program in physical education.

2. Course Prerequisites/Corequisites

PES 413 Human Development and Movement	3
PES 445 Adapted Physical Education	3
PSH 110 General Psychology	3

3. Adapted Physical Education Program

PEP 481 Instructional Strategies in Adapted Physical Education	3
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PEP 482	Adapted Physical Activity and Sport	3
PEP 483	Early Childhood Physical Education	
OR		
EDI 321	Understanding the Exceptional Learner	3
PEP 485	Adapted Physical Education Practicum	3

(PEP 485 may be waived if at least 50 percent of the 10-credit student teaching requirement for teacher certification involves pupils with unique physical education needs.)

C. Sport Management Concentration

This program prepares students for a career in the management of sports in profit and non-profit organizations. The sport management concentration includes a core of 15 credits and 12 credits in cognate courses related to each student's special professional interests. Cognate courses may be taken in a variety of departments. Students must complete an internship experience in sport management. The internship, at a minimum, requires the equivalent of one-half semester working full-time, one semester working half-time, or a summer experience. Students must be prepared to meet all transportation and living expenses while interning.

Admission: Students applying for and continuing in the sport management program must have and maintain an overall GPA of 2.0 and must complete a major in physical education or in another approved academic area.

For Physical Education Majors and Non-physical Education Majors

1. Sport Management Core (required—15 credits)

(A 2.2 GPA must be maintained in the Sport Management Core)

		Credits
PEP 360	Introduction to Sport Management Theory	3
PEP 460	Administrative Practices in Sport Management	3
PEP 461	Problems in Sport Management	3
PEP 467	Internship in Sport Management	6

Total: 15

2. Cognate Courses (required—12 credits)

Cognate courses are selected from business administration, computer science, communication, recreation, and public administration departmental offerings. Other courses may be chosen with departmental permission.

		Credits
ENL 308	Business Writing and Computers	3
OR		
BUS 317	Introduction to Information Systems	3
BUS 335	Principles of Marketing	3
BUS 365	Principles of Management	3
BUS 366	Organizational Behavior	3
BUS 375	Business Law	3
BUS 435	Senior Conference in Marketing—Consumer Behavior	3
BUS 437	Promotional Policy and Sales Management	3
BUS 438	Marketing Channels and Logistics	3
BUS 439	Retail Management	3
BUS 465	Personnel Administration	3
CMC 312	Argumentation and Debate	3
CMC 316	Interpersonal Communication in Business and the Professions	3
CMC 332	Public Relations Principles and Practices	3

PEP 351	Coaching Sports	3
PEP 353	Administration of Intramurals	3
	An Approved Statistics Course	3
	An Approved Computer Literacy Course	3
PEP 399	Independent Study (with prior approval)	3

Students majoring in physical education and also pursuing the Sport Management concentration must select an additional 12 credits (in addition to the 21 credits comprising the Academic Core) from the list provided below:

PES 350	History of Sport, Play, and Exercise	3
PES 360	Philosophy of Sport, Play, and Exercise	3
PES 399	Independent Study (with prior approval)	3
PES 430	Psychology of Sport	3
PES 441	Sport and Society	3
PES 445	Social Psychology of Sport	3
PES 446	Sports Spectating in the United States	3
PES 460	Ethics in Sport Contests	3
PES 485	Physical Education Honors—Theory	1–3
PES 490	Physical Education Exchange Program	15
PES 495	Topics in Physical Education (with prior approval)	3
PES 499	Independent Study (with prior approval)	1–3

Plus other courses approved by the advisor of the sport management concentration.

In addition to taking 15 credits from the Sport Management Core and 12 credits from the cognate courses, **non-majors** must complete 9–12 credits from the academic major in physical education. It is recommended that students complete as many prerequisite courses as possible before taking PEP 360 Introduction to Sport Management. Students must complete three of the following courses (9–12 credits):

		Credits
PES 305	Significance of Physical Activity	3
PES 315	Physical Fitness for Healthful Living	3
PES 325	Kinesiological Bases for Exercise and Sport	4
PES 335	Physiological Bases for Exercise and Sport	4
PES 345	Skill Acquisition and Performance	4
PES 3XX	Advanced Performance	3
PES 350	History of Sport, Play, and Exercise	3
PES 360	Philosophy of Sport, Play, and Exercise	3

In addition, **non-physical education majors** must complete an additional three credits from the following upper-division physical education courses for a grand total of 39–42 credits.

		Credits
PEP 351	Coaching Sports	3
PEP 352	Scientific Foundations of Coaching	3
PES 392	Why People Play	3
PES 396	Women in Sport	3
PES 399	Independent Study (with prior approval)	1–3
PES 430	Psychology of Sport	3
PES 441	Sport and Society	3
PES 445	Social Psychology of Sport	3
PES 446	Sport Spectating in the United States	3
PES 460	Ethics in Sport Contests	1–3
PES 485	Physical Education Honors—Theory	15
PES 490	Physical Education Exchange Program	3
PES 495	Topics in Physical Education (with prior approval)	3
PES 499	Independent Study (with prior approval)	3

NOTE: Non-physical education majors must successfully complete the requirements for a major in another academic discipline offered at SUNY Brockport with the approval of the sport management coordinator.

D. Athletic Training Concentration

Athletic Training is an allied health profession dealing with the prevention, recognition, management and rehabilitation of athletic injuries. In this role, the athletic trainer can successfully decrease injury time and promote a quick, safe return to competition. Certified Athletic Trainers (ATC's) typically work in a variety of settings including colleges and universities, professional teams, high schools, and sports medicine clinics. Recently, the recognition and demand for ATC's has increased greatly due to the athletic and recreational nature of our society.

The undergraduate Athletic Training Program at SUNY Brockport is accredited through the Commission for Accreditation of Allied Health Education Programs (CAAHEP).

Athletic Training is a concentration within the Department of Physical Education and Sport. The concentration is open to any major, although physical education is the most common choice of our students. The program is carefully designed to meet competencies identified by the National Athletic Trainers' Association (NATA) and prepares students to successfully complete the NATA Board of Certification exam. The program at Brockport is supervised by Certified Athletic Trainers who have teaching and clinical responsibilities.

Admission: Admission into the Athletic Training Concentration is competitive and requires formal application (refer to Athletic Training Web site for the current admission criteria). The application process occurs in the spring semester of each academic year. Students may apply to the Athletic Training Concentration if they are enrolled in or have completed PES 385 Basic Athletic training and BIO 221 Survey of Anatomy and Physiology with grades of "C" or better. Current certification in First Aid and CPR/AED (Professional Rescuer) must also be demonstrated prior to admission.

The following must be completed prior to admission:

1. Application for Admission to Athletic Training Program
2. Copies of all previous transcripts:
 - Freshmen send high school and all college transcripts
 - Transfers send all college transcripts
3. Provide two letters of recommendation from former or present supervising athletic trainer, team physician, instructor, coach, etc.
4. Must possess a current GPA of 2.5 or better on a 4.0 scale
5. Must have attained a grade of "C" or better in all courses required for Athletic Training
6. Provide documentation of current certification in First Aid and CPR/AED (Professional Rescuer)
7. Documentation of fulfillment of Technical Standards for Athletic Training (includes health screening and proof of immunizations)
8. After completion of 1-7, interview with Athletic Training Staff

During the interview the athletic training staff will be considering the following factors:

- Motivation
- Enthusiasm for athletic training
- Established professional goals
- Confidence
- Good academic ability
- Good study habits
- Professional appearance
- Reliability

- Understanding of the time commitment to athletic training
- Initiative

The following must be completed in order to be retained in the Program

To be retained in the Athletic Training Concentration, students must:

1. Complete all required course work
2. Complete required clinical experiences (four consecutive semesters)
All clinical proficiencies associated with each semester of clinical experiences must be completed in order to progress to the next clinical experience course.
3. Complete required competencies and clinical proficiencies
4. Maintain a grade of "C" in all courses within the curriculum
5. Compliance with technical standards and immunization requirements (see Athletic Training Web site)
6. Adhere to all policies and procedures outlined in the Athletic Training Handbook
7. Adhere to regulations governing the practice of Athletic Training in New York State (Article 162, Section 8350)
8. Adhere to National Athletic Trainers' Association Code of Ethics
9. Maintain certification in First Aid and CPR/AED

Failure to comply with the above criteria will result in dismissal from the Athletic Training Program.

For Physical Education Majors:

Academic core in physical education (21 credits) plus 12 credits of electives in the academic major in physical education and 37 credits from the professional concentration as described below.

(1) Electives in the Academic Major (12 credits)		Credits
PES 411	Advanced Athletic Training	3
PES 412	Athletic Injury Assessment	3
PES 414	Assessment in Physical Education and Sport	3
Choose one of the following courses: (3 credits)		
PES 343	Advanced Weight Training	3
PES 410	Physiology of Exercise II	3
PES 413	Human Development and Movement	3
PES 416	Lab Techniques in Exercise Physiology	3
PES 420	Biomechanical Skill Analysis	3
PES 430	Psychology of Sport	3
PES 460	Ethics in Sports Contests	3
(2) Professional Concentration (37 credits)		
HLS 301	Principles of Healthful Living	3
OR		
HLS 306	Contemporary Issues in Health	3
HLS 311	Nutrition	3
PEP 255	Taping for Athletic Training	1
PEP 356	Therapeutic Modalities	3
PEP 357	Muscle Testing	3
PEP 358	Therapeutic Exercise	3
PEP 359	Organization and Administration of Athletic Training	3
PEP 471	Clinical Experience in Athletic Training I	1
PEP 472	Clinical Experience in Athletic Training II	1
PEP 473	Clinical Experience in Athletic Training III	1
PEP 474	Clinical Experience in Athletic Training IV	1
BIO 221	Survey of Anatomy and Physiology	4

BIO 321	Anatomy and Physiology I	4
	OR	
BIO 322	Anatomy and Physiology II	4
PSH 110	Principles of Psychology	3
	Total:	52

For Non-physical Education Majors

In addition to the courses required in the professional concentration listed above, non-majors must complete the following 14 credits:

PES 325	Kinesiological Bases for Exercise and Sport	4
PES 335	Physiological Bases for Exercise and Sport	4
PES 411	Advanced Athletic Training	3
PES 412	Athletic Injury Assessment	3
	Total:	14

Clinical Experience

The Athletic Training program at SUNY Brockport requires that all students in the concentration complete four semesters of clinical experience under the supervision of a NATA-certified athletic trainer before taking the certification examination. At SUNY Brockport, students are supervised by certified athletic trainers and by the team physician. Students acquire their clinical hours through PEP 471–474, Clinical Experience in Athletic Training I–IV course work. These Clinical Experience classes are taken over a period of four consecutive semesters after acceptance into the program.

A clinical instruction fee (liability insurance) will be charged to each student enrolled in PEP 471-PEP 474.

Certification

The National Athletic Trainers' Association Board of Certification (NATABOC) requires that all candidates seeking certification meet the following criteria:

1. Complete two years of clinical practical experience (four semesters) under the supervision of a NATA Certified Athletic Trainer
2. Possess current First Aid and CPR/AED (Professional Rescuer)
3. Possess a bachelor's degree, and
4. Successfully complete the NATA BOC examination

For the most current information on the Athletic Training Program, please refer to the program Web site: <http://www.brockport.edu/pes/undergrad/atrain/index.html>.

E. Exercise Physiology Concentration

This concentration prepares students for graduate study in exercise physiology and for employment in clinics, fitness corporations, industrial settings, and sport research centers. It will also prepare students for certification exams conducted by the American College of Sports Medicine, Aerobics Institute, National Strength and Conditioning Association, and International Dance in Education Association.

Admission: The exercise physiology curriculum is open to all interested students. Upon completion of the required course work, however, students must apply for acceptance into the internship component of the program. Assignment to an internship site is based upon meeting the following criteria:

- Minimum concentration GPA of 2.5 or above,
- Minimum of a "C" grade in each course in the concentration, including BIO 221, PES 325 and 335, and

- Satisfactory performance in an interview and oral exam conducted by the exercise physiology faculty.

Course Requirements For Physical Education Majors

Academic core in the physical education major (21 credits) plus elective component in the major (12 hours) and professional concentration (29–31 credits).

1. Required Courses in the Elective Component of the Major (12 credits)

	Credits
PES 360 Philosophy of Sport, Play and Exercise	3
Students may elect any three upper-level PES electives except PES 410 and PES 416 to complete the major.	9

2. Professional Concentration (29–31 credits)

(a) Corequisites (8 credits)

CHM 205 College Chemistry I	4
CHM 206 College Chemistry II	4

(b) Required Exercise Physiology Core (12 credits)

PES 410 Physiology of Exercise II	3
PES 416 Lab Techniques in Exercise Physiology	3
PEP 361 Cardiac Rehabilitation	3
PEP 458 Internship	3

(c) Electives (9–11 credits)

PES 343 Advanced Weight Training	3
BIO 321 Anatomy and Physiology I	4
BIO 322 Anatomy and Physiology II	4
BIO 466 General Endocrinology	3
BIO 467 Biochemistry I	3
BIO 468 Biochemistry II	3
CHM 305 Organic Chemistry I	4
CHM 306 Organic Chemistry II	4
HLS 311 Nutrition	3
MTH 201 Calculus I	3
CSC XXX Computer Programming	3
An approved statistics course	3

For Non-physical Education Majors

In addition to meeting all requirements described above under (2) Professional Concentration, non-majors also must complete the following:

BIO 221 Survey of Anatomy and Physiology	4
PES 325 Kinesiological Bases for Exercise and Sport	4
PES 335 Physiological Bases for Exercise and Sport	4

F. Minor in Coaching Athletics

The regulations of the Commissioner of Education of the New York State Education Department require individuals who coach an interscholastic athletic team to complete an approved program for coaches prior to or within the first three years of their employment. (Valid first aid, CPR and child abuse certificates are required for initial employment.)

The SUNY Brockport coaching minor, which is designed for students who are not in the physical education teacher certification program, fulfills this requirement and also provides greater depth in preparation for prospective coaches in schools, sports clubs, community programs, colleges, or other athletic organizations.

Courses:	Credits
PEP 351 Coaching Sports	3
PEP 352 Scientific Foundations of Coaching	3

PEP 3XX	Coaching Clinics (3 required)	3
PEP 3XX	Advanced Performance	3
HLS 210	First Aid and CPR for Coaches (OR an approved substitute course from a community agency such as the American Red Cross)	2
PEP 354	Coaching Practicum	4

Total: 18*

*Plus a state-approved child abuse class/workshop (typically 2–3 clock hours in length).

PHYSICAL EDUCATION MAJOR COURSES

Beginning-level Courses

		Credits
PES 112	Beginning Diving	1
PES 114	Beginning Swimming	1
PES 121	Aerobic Dance	1
PES 122	Rhythmic Skills I	1
PES 131	Beginning Gymnastics	1
PES 141	Beginning Bowling (fee)	1
PES 142	Beginning Handball	1
PES 143	Beginning Weight Training	1
PES 144	Beginning Fencing	1
PES 145	Beginning Ice Skating	1
PES 146	Beginning Judo	1
PES 147	Tae Kwon Do	1
PES 151	Beginning Archery	1
PES 152	Beginning Cycling	1
PES 154	Beginning Golf (fee)	1
PES 155	Beginning Jogging	1
PES 156	Beginning Skiing (fee)	1
PES 157	Beginning Track & Field	1
PES 161	Beginning Badminton	1
PES 162	Beginning Racquetball	1
PES 163	Beginning Table Tennis	1
PES 164	Beginning Tennis	1
PES 171	Beginning Basketball	1
PES 172	Beginning Volleyball	1
PES 181	Beginning Baseball	1
PES 183	Beginning Lacrosse	1
PES 186	Beginning Soccer	1
PES 187	Beginning Softball	1
PES 137	Beginning Field Hockey	1

Intermediate Courses

		Credits
PES 212	Intermediate Diving	1
PES 213	Scuba Diving (fee)	2
PES 214	Intermediate Swimming	1
PES 222	Rhythmic Skills II	1
PES 231	Intermediate Gymnastics	1
PES 241	Intermediate Bowling (fee)	1
PES 243	Intermediate Weight Training	1
PES 244	Intermediate Fencing	1
PES 245	Intermediate Ice Skating	1
PES 246	Intermediate Judo	1

PES 248	Intermediate Wrestling	1
PES 251	Intermediate Archery	1
PES 252	Intermediate Bicycle Touring	1
PES 253	Intermediate Climbing/Backpacking	2
PES 254	Intermediate Golf (fee)	1
PES 255	Intermediate Distance Running	1
PES 256	Intermediate Skiing (fee)	1
PES 257	Intermediate Track and Field	1
PES 261	Intermediate Badminton	1
PES 262	Intermediate Racquetball	1
PES 263	Intermediate Table Tennis	1
PES 264	Intermediate Tennis	1
PES 271	Intermediate Basketball	1
PES 272	Intermediate Volleyball	1
PES 281	Intermediate Baseball	1
PES 282	Intermediate Football	1
PES 283	Intermediate Lacrosse	1
PES 286	Intermediate Soccer	1
PES 287	Intermediate Softball	1
PES 237	Intermediate Field Hockey	1

Advanced Courses**Credits**

(Also meet requirements in physical education major.)

PES 314	Advanced Swimming	3
PES 331	Advanced Gymnastics	3
PES 343	Advanced Weight Training	3
PES 348	Advanced Wrestling	3
PES 353	Advanced Climbing/Backpacking	3
PES 354	Advanced Golf (fee)	3
PES 355	Advanced Distance Running	3
PES 356	Advanced Alpine Skiing (fee)	3
PES 357	Advanced Snowboarding	3
PES 361	Advanced Badminton	3
PES 362	Advanced Racquetball	3
PES 364	Advanced Tennis	3
PES 371	Advanced Basketball	3
PES 372	Advanced Volleyball	3
PES 373	Advanced Ice Hockey	3
PES 381	Advanced Baseball	3
PES 382	Advanced Football	3
PES 386	Advanced Soccer	3
PES 387	Advanced Softball	3

Athletic Elective Skill Area

Please note: Each course in the athletic elective skill area can be taken only once for credit toward graduation requirements.

ATH 200	Varsity Baseball (spring)	1
ATH 201	Varsity Basketball—Men (spring)	1
ATH 202	Varsity Cross Country—Men and Women (fall)	1
ATH 203	Varsity Football (fall)	1
ATH 206	Varsity Lacrosse	1
ATH 207	Varsity Soccer—Men (fall)	1
ATH 208	Varsity Swimming—Men and Women (spring)	1
ATH 210	Varsity Track and Field—Men and Women (spring)	1
ATH 211	Varsity Wrestling (spring)	1
ATH 212	Varsity Ice Hockey (spring)	1

ATH 221	Varsity Basketball—Women (spring)	1
ATH 224	Varsity Field Hockey (fall)	1
ATH 226	Varsity Gymnastics (spring)	1
ATH 229	Varsity Softball (spring)	1
ATH 230	Varsity Tennis (fall)	1
ATH 231	Varsity Volleyball (fall)	1
ATH 234	Varsity Soccer—Women (fall)	1

Note: Participation in a varsity sport does not satisfy the advanced performance requirements in the major.

Physical Education Professional Skill Area

Professional skill classes are open only to students who intend to pursue the physical education teacher certification curriculum. Professional skill classes place a premium on learning to teach skills associated with a specific physical activity and include development of lesson plans and practice teaching.

PEP 201	Educational Dance	1
PEP 202	Adventure/Challenge Activities	2
PEP 203	Multicultural/Contemporary Activities	1
PEP 204	Track and Field/Softball	1
PEP 205	Golf/Archery	1
PEP 206	Educational Gymnastics	2
PEP 211	Lacrosse/Field Hockey	1
PEP 212	Speedball/Team Handball	1
PEP 213	Soccer/Frisbee	1
PEP 214	Basketball/Flag Football	1
PEP 221	Volleyball/Racquetball	1
PEP 222	Tennis/Badminton	1

PHYSICAL EDUCATION MAJOR COURSES

PES 290 Ethics of Fair Play in Sport and Life (A,H). Enables students to examine and understand fair play as a moral concept, and to develop students' abilities to ascertain the demands of fair play in sports contests and other applicable life situations. Provides for clarification and evaluation of different types of reasons for action, examination of different standards for fair action, and an opportunity to evaluate fair actions in areas of interest to students. Gives attention to the evaluation of moral maturity. *3 Cr.*

PES 305 Significance of Physical Activity (A). Discusses the intrinsic and extrinsic values of physical activity across the lifespan from philosophical and historical perspectives; critical analysis of the contribution physical activity makes to healthful living, personal pleasure, self-knowledge, and the liberating consequences of skill acquisition; identification of major societal trends impacting on physical education and sport and their implications. *3 Cr. Every Semester.*

PES 315 Physical Fitness for Healthful Living (A). Requires student to pass all components of a health-related fitness test. Emphasizes developing health-related components of physical fitness through physical activity. Allows student to gain understanding of how physical activity enhances health-related

physical fitness. Includes laboratory. *3 Cr. Every Semester.*

PES 325 Kinesiological Bases for Exercise And Sport (A). *Prerequisites: BIO 221 or either BIO 321 or BIO 322.* Involves study of the anatomical bases of movement in exercise and sport and application of kinesiological principles to movement and sport-specific skills. Includes laboratory experiments to provide opportunity for the analysis of exercise and sport from both anatomical and mechanical perspectives, muscle roles, types of muscle contractions, movement sequencing, and mechanical analysis. *4 Cr. Every Semester.*

PES 335 Physiological Basis for Exercise and Sport (A). *Prerequisites: BIO 221, BIO 321 or BIO 322.* Focuses on the physiological bases of active living. Addresses functional capacity of the human body to adjust to demands of work entailing various duration, intensities and technical requirements. Considers all age populations, as well as both genders. Makes comparisons between sedentary and nonsedentary or trained individuals. Assesses individual limitations to performance, as well as possibilities for safely extending these limitations. Includes laboratory. *4 Cr. Every Semester.*

PES 345 Skill Acquisition and Performance (A).

Focuses upon the study of the acquisition and performance of motor skills emphasizing relevant concepts from motor learning and sport psychology. Provides students with an opportunity to learn new sport skills. Includes laboratory. *4 Cr. Every Semester.*

PES 350 History of Sport, Play and Exercise (A).

Provides a broad look at the history of physical activity from ancient to modern times, and the effects of social institutions (e.g., war, religion, politics) on the development and role of sport in the Western world. *3 Cr. Spring.*

PES 360 Philosophy of Sport, Play and Exercise (A).

Examines descriptive characteristics of sport, play, exercise, games and, to a lesser extent, dance; value and sport, play, exercise and games; and the conception of mind/body and the valuational consequences. *3 Cr. Fall.*

PES 385 Basic Athletic Training (A).

Focuses on the fundamental knowledge of sports injuries and their care. Introduces and explains various techniques in treatment, prevention and rehabilitation of sports injuries. *3 Cr. Every Semester.*

PES 391 Stress and Tension (A,I).

Thoroughly evaluates concepts of stress and tension in terms of their philosophic bases (mind-oriented, body-oriented or interactional models), and supported by evolutionary explanations of physical, mental and cultural phenomena contributing to a variety of stress and tension-related disorders. Critically evaluates contemporary approaches in therapy designed to impact upon stress and tension, enabling the student to construct a personal coping strategy. *3 Cr.*

PES 396 Women in Sport (A,I,W).

Cross-listed as WMS 396. Examines the historical, contemporary and future perspectives of women in sport. Reviews insights from history, psychology and sociology related to women in sport, as well as athletes' perceptions of their performance. Focuses on information and issues which are fundamental to understanding women's participation in sport. *3 Cr. Every Semester.*

PES 399 Independent Study (A).

To be defined in consultation with the instructor-sponsor and in accordance with the procedures of the Office of Academic Advisement prior to registration. *1-6 Cr. Every Semester.*

PES 410 Physiology of Exercise II (A).

Examines the physiologically related effects of sport activities on the body's systems, including fatigue, strength, flexibility; physiological responses of the body before, during and after training; scientific research in exercise physiology; and the use of lab equipment for sport physiology. *3 Cr. Every Semester.*

PES 411 Advanced Athletic Training (A).

Prerequisite: PES 285. Covers muscles, tendons and ligaments, and the injury mechanism involved in given injuries for each major articulation of the body; inflammatory responses and wound healing; the effects of locally applied heat and cold on each; prevention, care and reconditioning techniques for sport injuries; and methods used during each phase of injury conditioning-reconditioning. *3 Cr. Every Semester.*

PES 412 Athletic Injury Assessment (A).

Prerequisite: PES 411. Focuses on various anatomical/physiological systems of the human body as they relate to athletic injury. Emphasizes identifying anatomical structures and landmarks in the human body, as well as recognizing and assessing injuries occurring during athletic participation. *3 Cr. Every Semester.*

PES 413 Human Development and Movement (A).

Focuses on the relationship between physical activity and selected aspects of physiological, psychological, intellectual and social growth and development. Investigates atypical, as well as typical, human conditions influencing movement. *3 Cr. Every Semester.*

PES 414 Assessment in Physical Education (A).

Explores how to measure and evaluate performance in physical activity and sport. Includes content related to understanding and applying the following criteria when selecting tests: purpose, types, technical adequacy, nondiscriminatory considerations, economy, and flexibility. Teaches students basic statistical protocols used to analyze and interpret test data. *3 Cr. Every Semester.*

PES 416 Laboratory Techniques in Exercise Physiology (A).

Cross-listed as BIO 416. Complements the theoretical preparation of students in exercise physiology. Provides experiences in the measurement of acute and chronic adaptations to exercise, the use of technology in the measurement and assessment of physiological functioning during such conditions, and the maintenance and calibration of such equipment. Actively immerses students in the subject to better conceptualize, and internalize, what it means to administer tests, and analyze and interpret data in a meaningful and systematic manner. *3 Cr. Spring.*

PES 420 Biomechanics (A).

Corequisite: PES 325. Focuses on the observation, analysis, and description of movement skills. Emphasizes qualitative analyses, including descriptive systems, and the application of basic laws and principles of physics; and recognition and correction of errors. *3 Cr. Every Semester.*

PES 430 Psychology of Sport (A).

Studies the application of such psychological concepts as cognition, emotions, perception and memory to sport and sport participation. Discusses factors such as moti-

vational cognition, imagery and cognitive interventions. *3 Cr. Every Semester.*

PES 441 Sport and Society (A). As an introductory survey course, investigates linkages between sport and society from a sociological perspective. Examines the sport institution using structural-functional, conflict and critical theoretical frameworks. Organized around several curiosity-arousing issues, sport and sport-related behaviors, discusses within several social and cultural contexts. Challenges students to discover how sport can be made more democratic, more socially just, more accessible to all people. *3 Cr. Every Semester.*

PES 445 Social Psychology of Sport (A). Studies the individual as an exercise and/or sport participant and the social influence processes which affect his or her self, behavior and performance. Emphasizes the social context in which the sport participants participate, and the influence social processes and significant others have on individual and group behavior. Includes topics such as self-esteem, the coach-athlete dyad, audience effects, leadership, cohesiveness, and team building. *3 Cr. Fall.*

PES 446 Sports Spectating in the United States (A). Provides an in-depth, interdisciplinary study of the phenomenon of sport spectatorship in American society. Discusses selected topics pertaining to sports spectating from theoretical, empirical and experiential perspectives, e.g., spectator demographics, patterns of sport consumption, sports spectating in popular culture, economics of sports spectating, psychology of sports fandom, and spectator violence. Provides opportunities for student-initiated sports event field trips. *3 Cr. Spring.*

PES 451 The Modern Olympic Games (A). Explores theoretical foundations for multicultural physical education. Emphasizes issues of race, class, and gender relative to physical activity. Discusses implications of multiculturalism for physical education in culturally diverse settings. *3 Cr. Spring.*

PES 460 Ethics of Sports Contests (A). Increases skills in reading, writing, speaking and thinking philosophically; and provides a philosophical analysis of significant historical and contemporary issues related to personal involvement in sport. *3 Cr. Every Semester.*

PES 475 Physical Education Honors - Performance (A). Emphasizes the refinement of one activity skill at the level of master. Theory work determined in consultation with instructor. *3 Cr. By Arrangement.*

PES 490 Physical Education Exchange Program (A). Provides several opportunities for physical education majors of at least junior status to spend one

or more semesters studying in Canada (Dalhousie University), or at one of several overseas locations, e.g., Chelsea School of Human Movement (England), Dunfermline College of Physical Education (Scotland), University of Ulster (Northern Ireland), College of Winneba (Ghana), or Zinman College of Physical Education (Israel). *15 Cr. Every Semester.*

PEP 495 Problems in Physical Education (A). To be defined by the instructor in accordance with the specific topic to be covered that semester. May be repeated, but under another topic area in physical education. Additional information may be obtained from the department. *1-3 Cr.*

PEP 499 Independent Study (A). To be defined in consultation with the instructor-sponsor and in accordance with the procedures of the Office of Academic Advisement prior to registration. *1-6 Cr. Every Semester.*

Professional Studies Courses

PEP 276 Softball Officiating (B). *Spring. 1 Cr.*

PEP 277 Volleyball Officiating (B). *Fall. 1 Cr.*

PEP 278 Basketball Officiating (B). *Fall. 1 Cr.*

PEP 279 Football Officiating (B). *Spring. 1 Cr.*

PEP 281 Water Safety Instructor (B). Provides for the analysis and correction of skills, sound teaching progressions, and learning proper techniques of swimming and life-saving skills. Successful completion results in Red Cross Certification. *2 Cr. Fall.*

PEP 282 Lifeguard Training (B). Improves life guarding skills necessary to save one's own life or the lives of others in the event of an emergency, in accordance with American Red Cross requirements. *2 Cr. Spring.*

PEP 350 Scientific Foundations of Coaching (B). For non-physical education majors who wish to develop a beginning understanding of the scientific foundations of coaching athletic teams. Includes exposure to the biological sciences, the psycho-social aspects of sport, as well as growth and development of athletes. Meets New York state requirements for Health Sciences Applied to Coaching. *3 Cr.*

PEP 351 Coaching Sports (B). Covers the rules, duties, legal aspects and administrative methods of coaching an athletic team, and the philosophies, methods and strategies involved in coaching. *3 Cr. Every Semester.*

PEP 353 Administration of Intramurals (B). Covers the philosophy of intramural sport organization and administration of an intramural activity, admin-

istrative problems, and current trends in intramural programming. *3 Cr. Every Semester.*

PEP 354 Coaching Practicum (B). *Course fee. Prerequisites: PEP 350 and PEP 351.* Requires students to perform as members of a coaching staff for one season; also requires goal setting and planning communication. *4 Cr. Every Semester.*

PEP 356 Therapeutic Modalities (B). *Prerequisites: HLS 211, HLS 212 and PES 285.* Emphasizes the use and knowledge of various therapeutic modalities used in athletic training. Stresses a working knowledge of each modality as well as its practical application. *3 Cr. Every Semester.*

PEP 357 Muscle Testing (B). *Prerequisites: PES 285 and PES 411.* Develops knowledge of muscle testing and joint stress testing in relation to athletic injuries. Provides experience in the training room and working with athletic teams. *3 Cr. Spring.*

PEP 358 Therapeutic Exercise (B). *Prerequisites: PES 411, PES 412, PEP 356 and PEP 357.* Provides extensive experience with an athletic team, including applying techniques related to preventive, protection and emergency care measures. *3 Cr. Fall.*

PEP 359 Organization and Administration Athletic Training (B). *Prerequisites: PES 285, PES 385, PES 411, PES 412, PEP 356 and PEP 357.* Provides intensive experience in athletic training in a seminar format. Examines athletic training room techniques, and the design of a training room facility including budget, equipment and supplies. *3 Cr. Fall.*

PEP 360 Introduction to Sport Management Theory (B). Examines the implications of management theory for sport organizations, and management considerations in retail, manufacturing, professional sports, sport services and athletic settings. *3 Cr. Fall.*

PEP 361 Cardiac Rehabilitation: Theory and Applications (B). *Prerequisites: BIO 221, BIO 321 or BIO 322.* Studies physiological responses to exercise, graded exercise testing, and program prescriptions for prevention and rehabilitation. Provides experience in exercise tolerance testing and the reading of EKGs. *3 Cr. Spring.*

PEP 379 Athletic Training for the Teacher/Coach (B). Focuses on the fundamental knowledge of athletic injuries; their prevention and care. Introduces and explains various techniques in prevention and care of injuries, strength and conditioning, pre-in-off-season training, nutrition, taping and wound care. *3 Cr. Every Semester.*

PEP 381 Coaching Basketball (B). *1 Cr.*

PEP 382 Coaching Football (B). *1 Cr.*

PEP 383 Coaching Gymnastics (B). *1 Cr.*

PEP 384 Coaching Soccer (B). *1 Cr.*

PEP 385 Coaching Softball (B). *1 Cr.*

PEP 386 Coaching Swimming (B). *1 Cr.*

PEP 387 Coaching Volleyball (B). *1 Cr.*

PEP 388 Coaching Wrestling (B). *1 Cr.*

PEP 399 Independent Study (B). To be defined in consultation with the instructor-sponsor and in accordance with the procedures of the Office of Academic Advisement prior to registration. *1-3 Cr. Every Semester.*

PEP 400 Computer Applications to Physical Education and Sport (B). Offers students a hands-on introduction to the use of computers in sport performance analysis, individual sport-related hypertext application programs, brochures and flyers, hypertext sport information links, and studying sport sites on the Internet. *3 Cr.*

PEP 441 Introduction to Teaching Physical Education (B). *Course fee.* Focuses on factors which influence the development of a K-12 curriculum. Allows students to examine various curriculum models. Provides opportunities for observing and learning about school. Examines variables associated with the teaching and learning process. Includes the use of observation instruments for systematic development of teaching skills. Includes laboratory/clinical field experiences. *3 Cr. Every Semester.*

PEP 442 Secondary Methods and Instruction (B). *Prerequisites: PEP 441, PES 413 (may be taken concurrently).* Allows students to develop a knowledge of current concepts and trends in secondary physical education and the ability to plan and implement a physical education program designed to meet the needs of middle school and high school youth. Requires a field experience. *4 Cr. Every Semester.*

PEP 444 Elementary Methods and Instruction (B). *Prerequisite: PEP 441.* Allows students to acquire the skills and knowledge for a fundamental foundation necessary for sequencing and teaching physical education activities in the elementary school setting. Requires a field experience. *4 Cr. Every Semester.*

PEP 445 Adapted Physical Education (B). *Prerequisite: PEP 441.* Develops a knowledge of current concepts and trends in adapted physical education and students' ability to assess, plan and implement a physical education program designed to meet the unique needs of individuals with disabilities. *3 Cr. Every Semester.*

PEP 458 Internship in Exercise Physiology (B).

Course fee. Provides a supervised, practical experience in a fitness organization, including opportunities for students to participate in the day-to-day duties of a fitness organization and to observe techniques of medical personnel. *3 Cr. Every Semester.*

PEP 460 Administrative Practices in Sport Management (B).

Prerequisite: PEP 360. Covers the management functions involved in amateur, business, services, educational and professional sports organizations. Includes topics such as business procedures, legal and financial responsibilities, management of sporting events, health aspects, staff requirements and relationships, public relations, players recruiting and eligibility, employee relationships, and leadership techniques. *3 Cr. Spring.*

PEP 461 Problems in Sports Management (B).

Prerequisite: PEP 460. Considers current problems in sport management in a seminar format. Requires solution of practical problems, and visits to sport facilities to consider management problems. *3 Cr. Every Semester.*

PEP 467 Internship in Sport Management (B).

Course fee. Prerequisites: PEP 360, PEP 460 and PEP 461. Provides entry-level experience in a selected sport organization, including participation in its day-to-day duties and observation of higher level management operations. *6 Cr. Every Semester.*

PEP 471 Clinical Experience in Athletic Training I (B).

Course fee. Prerequisite: PES 385. Provides initial athletic training clinical experience. Focuses on the application of basic psychomotor skills involved in the prevention, management, and rehabilitation of athletic injuries and the daily operation of the athletic training room. *1 Cr. Fall.*

PEP 472 Clinical Experience in Athletic Training II (B).

Course fee. Prerequisites: PES 385, PES 411 and PEP 471. Provides intermediate level athletic training clinical experience. Focuses on evaluation and management of athletic injuries as well as performing daily practice and game coverage for athletic teams. *1 Cr. Spring.*

PEP 473 Clinical Experience in Athletic Training III (B).

Course fee. Prerequisites: PES 385, PES 411, PES 412, PEP 471 and PEP 472. Provides advanced-level athletic training clinical experience. Focuses on evaluation and management of athletic injuries as well as the application of therapeutic modalities and therapeutic exercise in the rehabilitation of athletic injuries. In addition, includes daily practice and game cover age. *1 Cr. Fall.*

PEP 474 Clinical Experience in Athletic Training IV (B).

Course fee. Prerequisites: PES 411, PES 412, PEP 471, PEP 472 and PEP 473. Provides advanced-level athletic training clinical experience.

Focuses on organization and administrative aspects of athletic training, as well as interaction with other allied health personnel. Begins focus toward NATA certification exam. *1 Cr. Spring.*

PEP 476 Seminar in Student Teaching/Coaching (B).

Provides the opportunity to discuss issues and problems which arise in student teaching. Also provides for coaching competencies to be met in the student teaching practicum, including such topics as planning, assessment and evaluation in a coaching environment. *2 Cr. Every Semester.*

PEP 481 Instructional Strategies in Adapted Physical Education (B).

Provides a study of instructional strategies relevant and appropriate to adapted physical education. Emphasizes instruction for students with mental retardation, learning disabilities, and/or behavioral/emotional disabilities. *3 Cr. Fall.*

PEP 482 Adapted Physical Activity and Sport (B).

Prerequisite: PES 413. Examines the effects of physical and sensory disabilities on the physical/motor performance of children and youth. Emphasizes the effects of spinal cord injuries, cerebral palsy, and auditory and visual impairments. In addition, discusses implications for the selection and modification of appropriate activities. *3 Cr. Fall.*

PEP 483 Early Childhood Physical Education (B).

Prerequisite: PEP 441. Involves teaching physical education to children ages 0-5 with and without disabilities. Emphasizes assessment and program planning for an early childhood population. Incorporates a field experience to supplement lectures and discussion. *3 Cr. Every Semester.*

PEP 485 Adapted Physical Education Practicum (B).

Prerequisite: PEP 445. Requires students to teach physical education under the supervision of a sponsor-teacher. May take place off-campus at a school or agency. Requires students to teach a minimum of 90 hours and to utilize knowledge obtained in prerequisite and corequisite courses. *3 Cr. Every Semester.*

PEP 487 Elementary Student Teaching/Coaching (B).

Requires working cooperatively for a quarter in an elementary school with a master teacher and a college supervisor to achieve a variety of specified teaching competencies. *5 Cr. Every Semester.*

PEP 488 Secondary Student Teaching/Coaching (B).

Requires working cooperatively for a quarter in a secondary school with a master teacher and College supervisor to achieve a variety of specified teaching competencies. *5 Cr. Every Semester.*

PEP 499 Independent Study (B).

To be defined in consultation with the instructor-sponsor and in accordance with the procedures of the Office of Academic Advisement prior to registration. *1-6 Cr. Every Semester.*