



the Bulletin

AUGUST 2009 - UNDERGRADUATE ISSUE

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School of Business Administration

(ECO) Economics and Finance (Collapse Description)

The Department of Economics and Finance offers majors in business economics and in finance for students in the School of Business Administration. The department also offers majors in economics and in applied mathematical economics for students in the College of Arts and Sciences (search these majors to view their requirements.) Minors in economics, business economics, and finance are available to all students.

Faculty

John Rapp, Chairperson
 Professors: Caporale, Chen, Frasca, Rapp
 Associate Professors: Gustafson, Mohan, Poitras, Ruggiero, Sauer, Wang
 Assistant Professors: Collier, Zhang
 Lecturers: Douglas, John, Shimmin

Sub-Categories / Concentrations / Focus Areas

Business Economics

Finance

Courses (Collapse All Courses)

Code	Title	Sem. Hrs.
ECO 203	PRINCIPLES OF MICROECONOMICS	3
An introduction to consumer and producer behavior in a market economy, demand and supply, pricing and firm behavior under perfect and imperfect competition, and the distribution of income. Discussion of current topics in microeconomics may be included. If credit is earned for ECO 203, it may not be earned for ECO 300.		
ECO 204	PRINCIPLES OF MACROECONOMICS	3
Introductory economic analysis of the macroeconomy; the determination of gross national product, employment, inflation and the interest rate in the U.S. economy. Government policy, money and banking, and international trade are analyzed. If credit is earned for ECO 204, it may not be earned for ECO 300.		
Prerequisite(s): ECO 203 recommended.		
ECO 300	PRINCIPLES OF ECONOMICS	3
An introductory, calculus enhanced analysis of consumer and producer behavior in a market economy, demand and supply, consumer choice theory, pricing and firm behavior under perfect and imperfect competition, game theory, the macro-economy, the determination of gross domestic product, employment, inflation, and the interest rate and the effect of government policy. If credit is earned for ECO 300, it may not be earned for ECO 203 or ECO 204.		
Prerequisite(s): (MTH 168; engineering major) or permission of department chairperson.		
ECO 310	ECONOMICS OF THE ENVIRONMENT	3
Introduction to the economics of the global environment including an analysis of market failure as a cause of environmental degradation. Topics covered include cost-benefits analysis, criteria for public investment, regulation of the environment, and the sustainable global environment.		
Prerequisite(s): ECO 203 or 300.		

[Search](#) [Academic Information](#) [General Information](#)

Explore by Department / Program:

Communication
 Computer Science
 Criminal Justice Studies
 Economics and Finance

[Explore](#)

Explore by Major / Minor:

Accounting (ACC)
 Adolescence to Young Adult Educatio... (EYA)
 Aerospace Engineering (AAE)
 Aerospace Engineering Concentration (AEC)

[Explore](#)

Explore by Courses:

Criminal Justice Studies (CJS)
 Decision Sciences (DSC)
 Developmental Skills (DEV)
 Economics and Finance (ECO)

[Explore](#)

ECO 340 MANAGERIAL ECONOMICS

3

Application of economic models to managerial decision making. Topics include demand analysis, forecasting demand, short-run cost analysis, long-run cost and production functions, pricing, and risk and uncertainty. May not get credit for both ECO 340 and ECO 346.

Prerequisite(s): ECO 203 or 300.

ECO 346 INTERMEDIATE MICROECONOMIC ANALYSIS

3

Analysis of the theory of consumer behavior, production theory, equilibrium of the firm, price determination in various market structures, distribution of income, allocation of resources, and welfare economics. May not get credit for both ECO 346 and ECO 340.

Prerequisite(s): ECO 203 or 300.

ECO 347 INTERMEDIATE MACROECONOMIC ANALYSIS

3

National income accounting and the determination of the level of income and employment; classical, Keynesian, and post-Keynesian models; private, government, and foreign sectors; theories of inflation and economic growth.

Prerequisite(s): ECO 204 or 300; ECO 203 recommended.

ECO 390 ANTITRUST ECONOMICS

3

Study of how economic analysis has been applied in the interpretation of the antitrust statutes. Examines major anti-trust laws and relevant case law; reviews economic theories of market behavior.

Prerequisite(s): ECO 203 or 300.

ECO 410 BUSINESS AND ECONOMIC FORECASTING

3

Forecasting techniques, including ARIMA time series models, econometric models, moving averages, exponential smoothing, and time series decomposition, are used to forecast business and economic variables. Data sources, selection of appropriate forecasting tools and models, and evaluation of forecast results are studied.

Prerequisite(s): (ECO 203, 204) or ECO 300; Statistics (DSC 211 or MTH 207 or MTH 367 or MTH 412).

ECO 415 GAME THEORY WITH BUSINESS APPLICATIONS

3

Introductory course in strategic decision making; provides a thorough discussion of the basic techniques of applied game theory and of systematic thinking in making business decisions. Among the topics covered with applications to business are equilibrium strategies, understanding situations involving conflict and cooperation, auction design and bidding strategy, and bargaining and negotiations.

Prerequisite(s): ECO 203 or 300.

ECO 441 ECONOMETRICS

3

Training in the art of making economic measurements from empirical data using regression analysis as the principle tool; use of computer software to estimate and test regression equations; interpretation of results using statistical inference.

Prerequisite(s): ((ECO 203, 204) or ECO 300; differential calculus and basic statistics) or permission of instructor.

ECO 442 MONEY AND BANKING

3

Principles of money and monetary systems; commercial banking and the role of the Federal Reserve System; monetary theory and policy; the mechanism of international payments.

Prerequisite(s): (ECO 203, 204) or ECO 300.

ECO 445 PUBLIC FINANCE

3

The economic aspects of government finance at the local, state, and especially the national level; the behavioral effects of various taxes, efficiency in spending, the changing role of the U.S. government, fiscal policy, and intergovernmental revenue and expenditure programs; emphasis on relating analytical tools to current developments.

Prerequisite(s): (ECO 203, 204) or ECO 300.

ECO 460 ECONOMIC DEVELOPMENT AND GROWTH

3

Study of various dynamic economic theories of growth and structural change; the role of particular factors of production and related noneconomic variables in the development process, primarily, though not exclusively, of Third World nations.

Prerequisite(s): (ECO 203, 204) or ECO 300.

ECO 461 INTERNATIONAL ECONOMICS 3

Major issues surrounding international trade and finance, the economic interdependence of nations and businesses, essential theoretical and empirical tools necessary to monitor and analyze international economic phenomena, and the application of these tools to contemporary business problems and issues.

Prerequisite(s): (ECO 203, 204) or ECO 300; ECO 346 recommended.

ECO 471 LABOR ECONOMICS 3

Theory of labor supply and demand, human capital theory, and the process by which wages are determined in various factor markets; applications to topics of unemployment, unions, migration, discrimination, and skill differentials.

Prerequisite(s): (ECO 203, 204) or ECO 300.

ECO 480 SPORTS ECONOMICS 3

The application of economic analysis to the sports industry. Examines demand and efficiency in the product market; the labor market for professional athletes and mechanisms for restricting competition in that market; problems in achieving an efficient allocation of resources in the sports industry.

Prerequisite(s): (ECO 203 or 300); (DSC 211 or MTH 207) or equivalent.

ECO 485 URBAN AND REGIONAL ECONOMICS 3

Treatment of certain theoretical concepts such as location theory and theories of land use and land rent; an economic interpretation for the existence of cities; applying economic analysis to the problems of traffic congestion, pollution, race, poverty, and urban sprawl.

Prerequisite(s): (ECO 203 or 300); (DSC 211 or MTH 207); ECO 346 recommended.

ECO 488 PRODUCTION ECONOMICS AND PERFORMANCE EVALUATION 3

Intermediate course in theoretical and applied microeconomic production theory; provides a thorough discussion of the basic techniques of applied production theory and performance evaluation of decision making units. Topics include returns to scale, technical and allocative efficiency, benchmarking, environmental costs, and programming.

Prerequisite(s): ECO 203 or 300.

ECO 490 SENIOR SEMINAR IN APPLIED ECONOMICS 3

Economic analysis applied in an area of topical interest chosen by the instructor; includes the application of theoretical, mathematical, and statistical methods mastered in previous economics courses. This capstone course provides students an opportunity to extend their proficiency in economic analysis through application and discussion in a small group setting.

Prerequisite(s): Twelve semester hours in Economics.

ECO 491 HONORS THESIS 3

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

ECO 492 HONORS THESIS 3

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

ECO 494 SEMINAR 3

Subject varies from time to time. May be taken more than once if topic changes. Prerequisites to be announced.

ECO 496 COOPERATIVE EDUCATION 3

Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details.) Does not count toward economics major. Permission of chairperson required. Economics or Business Economics majors only.
Prerequisite(s): Permission of department chairperson.

ECO 497 INTERNSHIP FOR GENERAL ELECTIVE CREDIT 3

Practical work experience associated with career development and career exploration relating to the student's major. Permission of the department chair or designee required. Does not replace economics courses for the economics major. Economics or Business Economics majors only.
Prerequisite(s): Forty-five semester hours of credit.

ECO 498 INDEPENDENT STUDY IN ECONOMICS 1 - 6

Directed readings and research in selected fields of economics. The number of semester hours will depend on the amount of work chosen. The course will involve periodic discussions with faculty and other students in the course. May be taken more than once for additional credit.
Prerequisite(s): 3.0 GPA in economics with a minimum of nine semester hours in economics; nomination by faculty; permission of the department chairperson.

FIN 250 PERSONAL FINANCE 3

Principles and techniques for handling personal financial decisions: personal budgeting, obtaining credit, life and casualty insurance, buying a home, buying an automobile, and savings and investments. For both business and nonbusiness majors. Does not count toward the finance major.

FIN 301 INTRODUCTION TO FINANCIAL MANAGEMENT 3

Principles and techniques used by business firms in managing and financing their current and fixed assets; sources of funds within the capital markets; determinants of the financial structure; analytical techniques.
Prerequisite(s): (ACC 200 or 207 or 301); (ECO 203 or 300); junior standing.

FIN 310 INVESTMENT CENTER PEER MENTOR 1

Members of the Center for Portfolio Management and Security Analysis Staff mentor peers in effectively utilizing the various software and database package resources within the Center for Portfolio Management and Security Analysis and assist in a range of developmental programs. Requires permission of the CFPM director. Does not count toward the finance major. Grading option 2.
Prerequisite(s): Permission of Center for Portfolio Management.

FIN 321 FINANCING ENTREPRENEURIAL VENTURES 3

Focuses on financial aspects of starting, growing, and harvesting entrepreneurial ventures. Includes emphasis placed on how common financing deals are structured, common financing pitfalls, and various legal documentation used to consummate financial transactions. Same as MGT 321.
Prerequisite(s): FIN 301 or MGT 320; junior standing.

FIN 330 INSURANCE AND RISK MANAGEMENT 3

Study of the basic concepts of business and personal risks from the standpoint of creation, identification, reduction, elimination, and evaluation of risks; the use of insurance in meeting problems of risk.
Prerequisite(s): FIN 301 with minimum grade of "C".

FIN 336 PRINCIPLES OF REAL ESTATE 3

Survey of real estate industry with emphasis on its structure, regulation, growth, needs, financing, and future. Analysis of the methods for determining land use and evaluation of the theories of city development.
Prerequisite(s): FIN 301 with minimum grade of "C".

FIN 360	INVESTMENTS	3
The principles and techniques used by the investor in selecting securities, emphasis on the stock and bond markets; security valuation methods leading to the selection of individual issues; portfolio theory. Prerequisite(s): FIN 301 with minimum grade of "C".		
FIN 371	FINANCIAL MARKETS AND INSTITUTIONS	3
Study of financial markets and financial institutions, including the Federal Reserve, interest rate theories, money and capital market securities, interest rate futures, options and swaps, international financial markets, such as commercial banking, insurance, and investment banking. Prerequisite(s): FIN 301 with minimum grade of "C".		
FIN 401	ADVANCED FINANCIAL ANALYSIS	3
Advanced study of current developments in financial planning, acquisition of funds, and asset management valuation; policy strategy and techniques in financial decision making. Prerequisite(s): FIN 301 with minimum grade of "C".		
FIN 402	MERGERS, ACQUISITIONS, CAPITAL RESTRUCTURING AND CORPORATE GOVERNANCE	3
In depth study of company valuation techniques and the influence of the governance structure - the CEO, President, and the Board of Directors - on company value. Prerequisite(s): FIN 301, 360.		
FIN 410	INVESTMENT CENTER OPERATING COMMITTEE	1
Members of the Center for Portfolio Management and Security Analysis Operating Committee provide leadership within the CFPM structure. Responsible for achieving assigned unit objectives, managing a team, and taking a leadership position for a range of center initiatives and projects that directly impact the effective implementation of the Center's overall strategic objectives. Requires permission of the CFPM director. Does not count toward the finance major. Grading option 1. Prerequisite(s): Permission of Center for Portfolio Management.		
FIN 430	SHORT-TERM FINANCIAL MANAGEMENT	3
Covers several areas of the corporate treasury function with a focus on managing current assets and liabilities to enhance the firm's liquidity, profitability, and value. Specific areas include analyzing short-term financial decisions such as financing inventory and receivables, granting, trade credit, and making short-term investments and short-term risk management for interest rates and foreign exchange. This course introduces students to the techniques and practices used to evaluate short-term financial decisions. Prerequisite(s): FIN 301; (FIN 360 or 401).		
FIN 450	INTERNATIONAL BUSINESS FINANCE	3
Introduction to problems facing financial management of international companies, including foreign exchange risk, working capital and capital budgeting decisions for multinational corporations, international financing, accounting and control. Prerequisite(s): FIN 301 with minimum grade of "C".		
FIN 460	PORTFOLIO MANAGEMENT AND SECURITY ANALYSIS	3
Advanced valuation theory and security analysis; portfolio construction, evaluation, and management. Prerequisite(s): FIN 360.		
FIN 460L	PORTFOLIO MANAGEMENT LAB	1
Provide analyst support for the Seminar in Investments course and the Flyer Investments team. Requires previous or concurrent enrollment in FIN 460 and instructor permission. Does not count toward the finance major. Grading option 2.		
FIN 470	FIXED INCOME SECURITIES	3

Introduction to the analytical/computational techniques for pricing fixed income securities, interest rate derivatives, and implementing effective portfolio strategies to control interest rate risk and enhance return.

Prerequisite(s): FIN 360 or 371.

FIN 471 MANAGEMENT OF FINANCIAL INSTITUTIONS 3

Integrated and comprehensive analysis of financial institutions that include depository institutions, insurance companies, securities firms, and investment companies.

Prerequisite(s): FIN 371.

FIN 475 COMMERCIAL BANK MANAGEMENT 3

Explores the environment in which banks must operate, the financial statements of banks, and a thorough study of bank management topics which include: asset-liability management, the investment portfolio, sources of funds, and the loan portfolio.

Prerequisite(s): FIN 301; (FIN 360 or 371).

FIN 479 BOND PORTFOLIO MANAGEMENT 3

Theory and practice in active bond portfolio management. Literature and practical issues related to managing a bond fund. Seminar format; students are divided into teams, each responsible for a specific sector of the fixed income market.

Prerequisite(s): Permission of department chairperson.

FIN 480 OPTIONS AND FUTURES MARKETS 3

Study of options, futures, and other derivatives fundamentals, trading strategies, hedging, speculation, and arbitrating, pricing theories, and market regulations.

Prerequisite(s): FIN 301; (FIN 360 or 371).

FIN 488 ENERGY MARKETS PORTFOLIO MANAGEMENT 3

Study of energy market portfolio skills, physical natural gas and power, natural gas pricing and risk management power pricing, oil products pricing and hedging, weather derivatives pricing and risk management, and credit derivatives.

Prerequisite(s): Permission of department chairperson.

FIN 489L TRADING LAB 3

Focuses on five areas and crowd psychology, maintaining trading journals. Career management resources for finding position in trading, risk management, structuring, operations, scheduling, and analysis.

Prerequisite(s): Permission of department chairperson.

FIN 490 SEMINAR 3

Subject varies from time to time. May be taken more than once if the topic changes.

FIN 491 HONORS THESIS 3

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

FIN 492 HONORS THESIS 3

Selection, design, investigation, and completion of an independent original research thesis under the guidance of a departmental faculty member. Restricted to students in the University Honors Program with permission of the director of the program and the departmental chairperson.

FIN 493 SEMINAR IN INVESTMENTS 3

Application of investment theory and techniques in a real-world setting. Students manage a funded portfolio in terms of establishing objectives, selecting securities to buy (sell), and evaluating portfolio performance. Emphasis is placed upon attempting to identify undervalued common stocks. Admission to the course is limited and must be approved by the instructor.

Prerequisite(s): FIN 360; FIN 460 highly recommended.

FIN 493L SEMINAR IN INVESTMENTS LAB 1
Provide leadership in facilitating the supporting analyst role for the Seminar in Investments course. Requires previous or concurrent enrollment in FIN 493 and instructor permission. Does not count toward the finance major. Grading option 1.

FIN 494 SEMINAR IN COMMODITIES, DERIVATIVES, AND EQUITIES TRADING 3
Application of derivatives trading strategies and financial data mining techniques based on equity, futures, options, and swaps in a real-world setting. Simulated derivatives trading using professional trading platform and strategies. Admission to the course is limited.
Prerequisite(s): FIN 480; permission of instructor.

FIN 495a CORPORATE CAPSTONE COURSE 1 - 3
Integrates all prior corporate related courses through cases, analysis of current events, and a project related to local organizations. This course should be taken during the student's last academic year.
Prerequisite(s): Permission of Instructor.

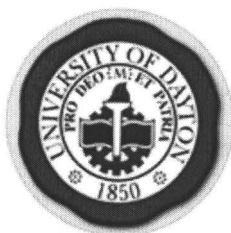
FIN 495b INSTITUTIONS CAPSTONE 1 - 3
Integrates all prior institutions related courses through cases, analysis of current events, and a project related to local organizations. This course should be taken during the student's last academic year.
Prerequisite(s): Permission of instructor.

FIN 496 COOPERATIVE EDUCATION 3
Optional full-time work period off campus alternating with study period on campus. (See Chapter X; consult Cooperative Education Office for details.) Does not count toward finance major. Finance majors only.
Prerequisite(s): Permission of department chairperson.

FIN 497 INTERNSHIP FOR GENERAL ELECTIVE CREDIT 3
Practical work experience associated with career development and career exploration relating to the student's major. Permission of department chair or designee required. Does not replace finance courses for the finance major. Finance majors only.
Prerequisite(s): Forty-five semester hours of credit.

FIN 498 INDEPENDENT STUDY IN FINANCE 1 - 6
Directed readings and research in selected fields of finance. The number of semester hours will depend on the amount of work chosen. The course will involve periodic discussions with other students and faculty in the program. May be taken more than once for additional credit.
Prerequisite(s): 3.0 GPA in Finance; minimum of nine semester hours in Finance; nomination by faculty; permission of department chairperson.





the Bulletin

AUGUST 2009 - UNDERGRADUATE ISSUE

→ Explore a Different Issue

School of Engineering

Electrical and Computer Engineering (Collapse Description)

The Department of Electrical and Computer Engineering offers two ABET accredited undergraduate programs leading to the Bachelor of Electrical Engineering and the Bachelor of Science in Computer Engineering. The department offers masters and doctoral degrees in electrical engineering and is closely coupled to the graduate program in electro-optics where both master's and doctoral degrees are offered. The electrical and computer engineering department offers an accelerated 5 year B.S. - M.S. program, where students completing their baccalaureate degree can attain their Master of Science in Electrical Engineering within one additional year. The department also offers an undergraduate concentration in electro-optics, in collaboration with the Physics Department and the Electro-Optics Program.

The mission of the Department of Electrical and Computer Engineering is to develop in students the skills and knowledge to learn, lead and serve in their profession and their community.

Our electrical engineering alumni will be prepared to:

1. find rewarding careers as engineering professionals. As electrical engineers they will be prepared to design and develop new products, technologies and processes that incorporate one or more of the following elements: analog and digital circuits, signals and systems, propagation and processing of signals, and control systems.
2. continue their professional education either formally, in graduate school, professional schools, or through industrial training programs; or informally, through activities such as continuing education, attendance in short courses, professional workshops and conferences.
3. exercise and further develop their skills in professional communication through activities such as project briefings, conference presentations, technical reports and manuals, and journal publications.
4. participate in activities for the betterment of society, and carry on the traditions of the University of Dayton by maintaining high ethical standards in their professional activities, and by serving their country and community through service, leadership and mentoring.

Our computer engineering alumni will be prepared to:

1. find rewarding careers as engineering professionals. As computer engineers they will be prepared to design and develop new products, technologies and processes that incorporate one or more of the following elements: analog and digital circuits, signals and systems, computer design, software development, and hardware/software integration.
2. continue their professional education either formally, in graduate school, professional schools, or through industrial training programs; or informally, through activities such as continuing education, attendance in short courses, professional workshops and conferences.
3. exercise and further develop their skills in professional communication through activities such as project briefings, conference presentations, technical reports and manuals, and journal publications.
4. participate in activities for the betterment of society, and carry on the traditions of the University of Dayton by maintaining high ethical standards in their professional activities, and by serving their country and community through service, leadership and mentoring.

Electrical engineering is an exciting field within the engineering discipline. It offers the opportunity to enter some of the most rewarding and challenging careers available. The explosion of capabilities in the computer, communication, automotive, medical, entertainment and aerospace industries, as well as homeland security has resulted from advances in the electronics field. Electrical engineers are equipped to enter this dynamic arena as well as equally challenging and rewarding careers in the fields of electro-optics, communication, radar, signal and image processing, biomedicine,

Search Academic Information General Information

Explore by Department / Program:

Computer Science
Criminal Justice Studies
Economics and Finance
Electrical and Computer Engineering

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Explore by Major / Minor:

Quality Assurance (QUA)
Religious Studies (REL)
Secondary Catholic Religious Educat... (ERL)
Signals and Systems (SAS)

Explore

Explore by Courses:

Decision Sciences (DSC)
Developmental Skills (DEV)
Economics and Finance (ECO)
Electrical and Computer Engineering (ECE)

Explore

controls, robotics and instrumentation, and many more. Electrical engineers work in all phases of technological programs. They are involved from the conception of the basic ideas through design, fabrication, verification, manufacturing, and marketing of the final product.

Computer engineering represents perhaps the most sought-after professional component of an engineering team which develops the technological possibilities inherent in the design, construction, and operation of computer systems. The computer engineer performs a wide variety of tasks involving hardware, software, peripherals, computer-controlled systems, and hardware-software integration, as well as computer applications in the multitude of areas listed in the previous paragraph.

Both electrical engineering and computer engineering are broad-based engineering disciplines that provide for a wide range of career choices within the engineering field as well as providing an excellent basis for careers in such diverse areas as business, law, and medicine.

The electrical engineering curriculum is designed to provide an understanding of basic electrical engineering principles with emphasis on the development of problem solving skills. The computer engineering curriculum draws from software courses taken in computer science and hardware related courses taken from Electrical and Computer Engineering, culminating in the integration of hardware and software in computer design. An extensive laboratory experience is integrated with the classroom work to assure that the student develops a working knowledge of the fundamentals. Upper level courses integrate the knowledge base with current technology and computational tools resulting in a graduate capable of making a contribution to the engineering profession by either entering the work force or pursuing a graduate education.

The computer engineering curriculum is designed to provide an understanding of basic computer engineering principles with emphasis on the development of problem solving skills. The software aspects of computer engineering are introduced in the first year, while hardware and hardware-software integration topics are emphasized starting in the sophomore year. An extensive hands-on laboratory experience is integrated with the classroom work to assure that the student develops a working knowledge of the fundamentals.

Faculty

Don Moon, Chairperson
Distinguished Service Professor: Schmidt
Professors Emeriti: Evers, Kee, Rogers, Scarpino, Thiele, Williamson
Professors: Banerjee, Chatterjee, Duncan, Hardie, Moon, Subramanyam, Weber
Associate Professors: Daniels, Loomis, Ordonez, Penno, Smari
Assistant Professor: Balster
Adjunct Professors: Berrera, Gauder, Guliants, Repperger

Majors/Minors (Collapse All)

Major/Minor Name

Bachelor of Electrical Engineering (ELE)

	Sem. Hrs.
First-Year	32-38
CHM 123 GENERAL CHEMISTRY	3
CPS 150 ALGORITHMS AND PROGRAMMING I	4
ECE 101 INTRODUCTION TO ELECTRICAL AND COMPUTER ENGINEERING	0
EGR 100 ENRICHMENT WORKSHOP	0 - 3
EGR 103 ENGINEERING INNOVATION	2
ENG 101-102 or COLLEGE COMPOSITION I (ENG 101)	3 - 6
114 or 198 COLLEGE COMPOSITION II (ENG 102)	
FRESHMAN WRITING SEMINAR (ENG 114)	
ENGLISH SCHOLARS' SEMINAR (ENG 198)	
HST 103 or 198 THE WEST AND THE WORLD (HST 103)	3
HISTORY SCHOLARS' SEMINAR (HST 198)	
MTH 168 ANALYTIC GEOMETRY AND CALCULUS I	4
MTH 169 ANALYTIC GEOMETRY AND CALCULUS II	4
PHL 103 INTRODUCTION TO PHILOSOPHY	3
PHY 206 GENERAL PHYSICS I - MECHANICS	3
REL 103 INTRODUCTION TO RELIGION	3

Sophomore-Year

First-Term			16
ECE 200	PROFESSIONAL DEVELOPMENT SEMINAR		0
ECE 201L	CIRCUIT ANALYSIS LABORATORY		1
ECE 203	INTRODUCTION TO MATLAB PROGRAMMING		1
EGR 201	ENGINEERING MECHANICS		3
EGR 203	ELECTRICAL AND ELECTRONIC CIRCUITS		3
MTH 218	ANALYTIC GEOMETRY AND CALCULUS III		4
PHY 210L	GENERAL PHYSICS LABORATORY I		1
General Education elective			3
Second-Term			17
ECE 200	PROFESSIONAL DEVELOPMENT SEMINAR		0
ECE 204-204L	ELECTRONIC DEVICES (ECE 204) ELECTRONIC DEVICES LABORATORY (ECE 204L)		4
ECE 215-215L	INTRODUCTION TO DIGITAL SYSTEMS (ECE 215) DIGITAL SYSTEMS LABORATORY (ECE 215L)		4
EGR 202	ENGINEERING THERMODYNAMICS		3
MTH 219	APPLIED DIFFERENTIAL EQUATIONS		3
PHY 232	THE PHYSICS OF WAVES		3
Junior-Year			
First-Term			16
CMM 110	GROUP DECISION MAKING		1
CMM 111 or 112	INFORMATIVE PUBLIC SPEAKING (CMM 111) PERSUASIVE PUBLIC SPEAKING (CMM 112)		1
ECE 303-303L	SIGNALS AND SYSTEMS (ECE 303) SIGNALS AND SYSTEMS LABORATORY (ECE 303L)		4
ECE 314-314L	FUNDAMENTALS OF COMPUTER ARCHITECTURE (ECE 314) FUNDAMENTALS OF COMPUTER ARCHITECTURE LAB (ECE 314L)		4
ECE 332	ELECTROMAGNETICS		3
MTH 343	MATHEMATICS FOR ELECTRICAL AND COMPUTER ENGINEERS		3
Second-Term			17
CMM 113	INTERVIEWING		1
ECE 304-304L	ELECTRONIC SYSTEMS (ECE 304) ELECTRONIC SYSTEMS LABORATORY (ECE 304L)		4
ECE 333	APPLIED ELECTROMAGNETICS		3
ECE 334	DISCRETE SIGNALS AND SYSTEMS		3
ECE 340	ENGINEERING PROBABILITY AND RANDOM PROCESSES		3
PHL 316 or 319	ENGINEERING ETHICS (PHL 316) INFORMATION ETHICS (PHL 319)		3
Senior-Year			
First-Term			17
ECE 401-401L	COMMUNICATION SYSTEMS (ECE 401) COMMUNICATION SYSTEMS LABORATORY (ECE 401L)		4
ECE 415	CONTROL SYSTEMS		3
ECE 431L	MULTIDISCIPLINARY DESIGN I		1
General Education elective			3
Technical electives ¹			6
Second-Term			16
ECE 432L	MULTIDISCIPLINARY DESIGN II		3
ECE 433	PROJECT MANAGEMENT AND INNOVATION		1
General Education electives			6

Technical electives¹

6

¹Select from list approved by the Department of Electrical and Computer Engineering.

Bachelor of Science in Computer Engineering (CPE)

		Sem. Hrs.
First-Year		32-38
CHM 123	GENERAL CHEMISTRY	3
CPS 150	ALGORITHMS AND PROGRAMMING I	4
ECE 101	INTRODUCTION TO ELECTRICAL AND COMPUTER ENGINEERING	0
EGR 100	ENRICHMENT WORKSHOP	0 - 3
EGR 103	ENGINEERING INNOVATION	2
ENG 101-102 or 114 or 198	COLLEGE COMPOSITION I (ENG 101) COLLEGE COMPOSITION II (ENG 102) FRESHMAN WRITING SEMINAR (ENG 114) ENGLISH SCHOLARS' SEMINAR (ENG 198)	3 - 6
HST 103 or 198	THE WEST AND THE WORLD (HST 103) HISTORY SCHOLARS' SEMINAR (HST 198)	3
MTH 168	ANALYTIC GEOMETRY AND CALCULUS I	4
MTH 169	ANALYTIC GEOMETRY AND CALCULUS II	4
PHL 103	INTRODUCTION TO PHILOSOPHY	3
PHY 206	GENERAL PHYSICS I - MECHANICS	3
REL 103	INTRODUCTION TO RELIGION	3
Sophomore-Year		
First-Term		17
CPS 151	ALGORITHMS AND PROGRAMMING II	4
ECE 200	PROFESSIONAL DEVELOPMENT SEMINAR	0
ECE 201L	CIRCUIT ANALYSIS LABORATORY	1
ECE 203	INTRODUCTION TO MATLAB PROGRAMMING	1
EGR 201	ENGINEERING MECHANICS	3
EGR 203	ELECTRICAL AND ELECTRONIC CIRCUITS	3
MTH 218	ANALYTIC GEOMETRY AND CALCULUS III	4
PHY 210L	GENERAL PHYSICS LABORATORY I	1
Second-Term		17
CPS 350	DATA STRUCTURES AND ALGORITHMS	3
ECE 200	PROFESSIONAL DEVELOPMENT SEMINAR	0
ECE 204-204L	ELECTRONIC DEVICES (ECE 204) ELECTRONIC DEVICES LABORATORY (ECE 204L)	4
ECE 215-215L	INTRODUCTION TO DIGITAL SYSTEMS (ECE 215) DIGITAL SYSTEMS LABORATORY (ECE 215L)	4
EGR 202	ENGINEERING THERMODYNAMICS	3
MTH 219	APPLIED DIFFERENTIAL EQUATIONS	3
Junior-Year		
First-Term		17
ECE 303-303L	SIGNALS AND SYSTEMS (ECE 303) SIGNALS AND SYSTEMS LABORATORY (ECE 303L)	4
ECE 314-314L	FUNDAMENTALS OF COMPUTER ARCHITECTURE (ECE 314) FUNDAMENTALS OF COMPUTER ARCHITECTURE LAB (ECE 314L)	4
ECE 340	ENGINEERING PROBABILITY AND RANDOM PROCESSES	3
MTH 343	MATHEMATICS FOR ELECTRICAL AND COMPUTER ENGINEERS	3
General Education elective		3

Second-Term			17
CMM 110	GROUP DECISION MAKING		1
CPS 346	OPERATING SYSTEMS I		3
ECE 304-304L	ELECTRONIC SYSTEMS (ECE 304) ELECTRONIC SYSTEMS LABORATORY (ECE 304L)		4
ECE 444	ADVANCED DIGITAL DESIGN		3
PHL 319	INFORMATION ETHICS		3
PHY 232	THE PHYSICS OF WAVES		3
Senior-Year			
First-Term			17
CMM 111 or 112	INFORMATIVE PUBLIC SPEAKING (CMM 111) PERSUASIVE PUBLIC SPEAKING (CMM 112)		1
CPS 444	SYSTEMS PROGRAMMING I		3
ECE 334	DISCRETE SIGNALS AND SYSTEMS		3
ECE 431L	MULTIDISCIPLINARY DESIGN I		1
ECE 449	COMPUTER SYSTEMS ENGINEERING		3
General Education elective			3
Technical elective ¹			3
Second-Term			17
CMM 113	INTERVIEWING		1
ECE 432L	MULTIDISCIPLINARY DESIGN II		3
ECE 433	PROJECT MANAGEMENT AND INNOVATION		1
Computer Science elective			3
General Education electives			6
Technical elective ¹			3

¹Select from list approved by the Department of Electrical and Computer Engineering.

Minor in Computer Systems (COS)

This minor is open to chemical, civil, and mechanical engineering majors, and other students with appropriate prerequisite background who receive permission from the ECE Department Chair. The program builds strength in the area of computer systems and digital design, with emphasis on computer hardware.

Computer Systems (non-MEE majors)			Sem. Hrs. 14-15
ECE 201L ¹	CIRCUIT ANALYSIS LABORATORY		1
ECE 215-215L	INTRODUCTION TO DIGITAL SYSTEMS (ECE 215) DIGITAL SYSTEMS LABORATORY (ECE 215L)		4
ECE 314	FUNDAMENTALS OF COMPUTER ARCHITECTURE		3
EGR 203 ¹	ELECTRICAL AND ELECTRONIC CIRCUITS		3
- - - CPS 150 or ECE 444	ALGORITHMS AND PROGRAMMING I (CPS 150) ADVANCED DIGITAL DESIGN (ECE 444)	3 - 4	
Computer Systems (MEE majors)			14
CPS 150 ²	ALGORITHMS AND PROGRAMMING I		4
ECE 215-215L ¹	INTRODUCTION TO DIGITAL SYSTEMS (ECE 215) DIGITAL SYSTEMS LABORATORY (ECE 215L)		4
ECE 314	FUNDAMENTALS OF COMPUTER ARCHITECTURE		3
ECE 444	ADVANCED DIGITAL DESIGN		3

¹ECE-323 satisfies the ECE-201 prerequisite requirement for this course.

²Or equivalent.

Minor in Signals and Systems (SAS)

This minor is open to chemical, civil, and mechanical engineering majors, and other students with appropriate prerequisite background who receive permission from the ECE Department Chair. The program provides the essential background in signals and systems theory including continuous and discrete systems. An advanced course is selected by the students to allow them to specialize in controls or signal processing.

	Sem. Hrs.
Signals and Systems	15
ECE 201L ¹ CIRCUIT ANALYSIS LABORATORY	1
ECE 203 INTRODUCTION TO MATLAB PROGRAMMING	1
ECE 303-303L SIGNALS AND SYSTEMS (ECE 303) SIGNALS AND SYSTEMS LABORATORY (ECE 303L)	4
ECE 334 DISCRETE SIGNALS AND SYSTEMS	3
ECE 415 or 445 CONTROL SYSTEMS (ECE 415) SIGNAL PROCESSING (ECE 445)	3
EGR 203 ¹ ELECTRICAL AND ELECTRONIC CIRCUITS	3

¹ECE-323L can be substituted for ECE 201L and EGR 203.**Courses (Collapse All Courses)**

Code	Title	Sem. Hrs.
ECE 101	INTRODUCTION TO ELECTRICAL AND COMPUTER ENGINEERING	0
	Introduction to electrical and computer engineering faculty, facilities, and curriculum. Career opportunities in electrical and computer engineering and areas of specialization are discussed.	
ECE 198	MULTIDISCIPLINARY RESEARCH AND INNOVATION LABORATORY	1 - 6
	Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis, and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.	
ECE 200	PROFESSIONAL DEVELOPMENT SEMINAR	0
	Presentations on contemporary and professional engineering subjects by students, faculty, and engineers in active practice. The seminar addresses topics in key areas that complement traditional courses and prepare distinctive graduates, ready for life and work. Registration required for all sophomore students.	
ECE 201	CIRCUIT ANALYSIS	4
	Principles of linear circuit analysis and problem solving techniques associated with circuits containing both passive and active components. Analysis of both transient and steady-state behavior of circuits with D.C. and sinusoidal excitation. Prerequisite(s): MTH 138 or 168. Corequisite(s): ECE 201L.	
ECE 201L	CIRCUIT ANALYSIS LABORATORY	1
	Laboratory course stressing experimental techniques, laboratory reporting, safety, and instrumentation. Experimental investigation of basic steady-state and transient circuits. Corequisite(s): ECE 201 or EGR 203.	
ECE 203	INTRODUCTION TO MATLAB PROGRAMMING	1

MATLAB system and development environment, vector and matrix operations using MATLAB, linear algebra and calculus using MATLAB, MATLAB graphics, flow control, symbolic math toolbox.

Prerequisite(s): (CPS 132 or 150) or equivalent.

ECE 204 ELECTRONIC DEVICES 3

Study of the terminal characteristics of electronic devices and basic single stage amplifier configurations using bipolar junction transistors and field-effect transistors. Analysis of the devices includes a qualitative physical description, volt-ampere curves, and the development of small- and large-signal equivalent circuit models.

Prerequisite(s): EGR 203.

Corequisite(s): ECE 204L.

ECE 204L ELECTRONIC DEVICES LABORATORY 1

Laboratory investigation of electronic devices: diodes, bipolar junction transistors, field-effect transistors and operational amplifiers.

Corequisite(s): ECE 204.

ECE 211 PROBABILITY AND STATISTICS 1

Introduction to the topics of random variables, probability density functions, cumulative distribution functions, mean values and moments.

Prerequisite(s): MTH 168.

ECE 215 INTRODUCTION TO DIGITAL SYSTEMS 3

Introduction to binary systems, logic circuits, Boolean algebra, simplification methods, combinational circuits and networks, programmable logic devices, flip flops, registers, counters, memory elements, and analysis and design of sequential circuits.

Prerequisite(s): EGR 203.

Corequisite(s): ECE 215L.

ECE 215L DIGITAL SYSTEMS LABORATORY 1

Laboratory investigation of digital logic circuits and systems covered in ECE 215. Logic gate characteristics; combinational logic design and analysis; latches and flip-flops; synchronous and asynchronous sequential logic; simple digital systems. Experiments include design and analysis of digital systems using breadboarding, FPGA boards, modeling and simulation tools, hardware description languages, and logic synthesis tools.

Prerequisite(s): ECE 201, 201L.

Corequisite(s): ECE 215.

ECE 298 MULTIDISCIPLINARY RESEARCH AND INNOVATION LABORATORY 1 - 6

Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis, and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

ECE 303 SIGNALS AND SYSTEMS 3

Mathematical framework associated with the analysis of linear systems including signal representation by orthogonal functions, convolution, Fourier and Laplace analysis, and frequency response of circuits and systems.

Prerequisite(s): ECE 204; MTH 218.

Corequisite(s): ECE 303L.

ECE 303L SIGNALS AND SYSTEMS LABORATORY 1

Laboratory investigation of signals and systems including signal decomposition, system impulse response, convolution, frequency analysis of systems, and filter design and realization.

Prerequisite(s): ECE 204.

Corequisite(s): ECE 303.

ECE 304 ELECTRONIC SYSTEMS 3

Study of cascaded amplifiers, feedback amplifiers, linear integrated circuits, and oscillators including steady state analysis and analysis of frequency response.

Prerequisite(s): ECE 303.

Corequisite(s): ECE 304L.

ECE 304L ELECTRONIC SYSTEMS LABORATORY 1

Design, construction and verification of multistage feedback amplifiers, passive and active filters, and oscillators.

Prerequisite(s): ECE 303.

Corequisite(s): ECE 304.

ECE 314 FUNDAMENTALS OF COMPUTER ARCHITECTURE 3

Study of computer systems organization, representation of data and instructions, instruction set architecture, processor and control units, memory devices and hierarchy, I/O devices and interfacing peripherals, high- to low-level language mapping, system simulation and implementation, applications and practical problems.

Prerequisite(s): (CPS 132 or 150); ECE 215.

Corequisite(s): ECE 314L.

ECE 314L FUNDAMENTALS OF COMPUTER ARCHITECTURE LAB 1

Laboratory investigation of digital computer architecture covered in ECE 314. Computer sub-systems such as central processing units, control units, I/O units, and hardware/software interfaces will be experimentally considered. Simulation and implementation will be used to study applications and practical problems.

Prerequisite(s): ECE 215.

Corequisite(s): ECE 314.

ECE 323 BASIC ELECTRONIC CIRCUITS 3

Analysis and design of passive and active electrical and electronic circuits using time-domain and frequency-domain methods. Includes amplifiers, switches, and other types of electronic circuits. Lectures will be reinforced with practical and computer exercises. For chemical, civil, environmental and mechanical engineering students.

Prerequisite(s): MTH 218; PHY 207.

ECE 323L BASIC ELECTRONIC CIRCUITS LABORATORY 1

Construction and debugging of electronic circuits. Includes introduction to electronic measurement methods. Covers passive and active elements. This class is intended as a visualization and reinforcement of the material in ECE 323 for non-electrical engineers.

Corequisite(s): ECE 323.

ECE 332 ELECTROMAGNETICS 3

Study of vector calculus, electro- and magneto-statics, Maxwell's equations, and electromagnetic plane waves and their reflection and transmission from discontinuities.

Prerequisite(s): PHY 232.

ECE 333 APPLIED ELECTROMAGNETICS 3

Electromagnetic theory applied to problems in the areas of waveguides, radiation, electro-optics and electromagnetic interference and electromagnetic compatibility.

Prerequisite(s): ECE 332.

ECE 334 DISCRETE SIGNALS AND SYSTEMS 3

Introduction to discrete signals and systems including sampling and reconstruction of continuous signals, digital filters, frequency analysis, the z-transform, and the discrete Fourier transform.

Prerequisite(s): ECE 303.

ECE 340 ENGINEERING PROBABILITY AND RANDOM PROCESSES 3

Axiomatic probability, derived probability relationships, conditional probability, statistical independence, total probability and Bayes' Theorem, counting techniques, common random variables and their distribution functions,

transformations of random variables, moments, autocorrelation, power spectral density, cross correlation and covariance, random processes through linear and nonlinear systems, linear regression, and engineering decision strategies.

Prerequisite(s): MTH 218.

ECE 398 MULTIDISCIPLINARY RESEARCH AND INNOVATION 1 - 6
LABORATORY

Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis, and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

ECE 401 COMMUNICATION SYSTEMS 3

Study of amplitude, angle, pulse, and digital communication systems including generation, detection, and analysis of modulated signals and power, bandwidth, and noise considerations.

Prerequisite(s): ECE 304, 340.

Corequisite(s): ECE 401L.

ECE 401L COMMUNICATION SYSTEMS LABORATORY 1

Design, fabrication, and laboratory investigation of modulators, detectors, filters, and associated communication components and systems.

Prerequisite(s): ECE 304.

Corequisite(s): ECE 401.

ECE 414 ELECTRO-MECHANICAL DEVICES 3

Properties and theory of electro-mechanical devices: nonlinear electromagnetic actuators; rotating machine analysis; field and circuit concepts; rotating fields; direct current, synchronous, and induction machines; special-purpose machines; and fractional horsepower machines.

Prerequisite(s): ECE 202, 332.

ECE 415 CONTROL SYSTEMS 3

Study of mathematical models for control systems and analysis of performance characteristics and stability. Design topics include pole-placement, root locus, and frequency domain techniques.

Prerequisite(s): ECE 303.

ECE 431L MULTIDISCIPLINARY DESIGN I 1

Multidisciplinary engineering design projects and problems. Introduction to product development using the Product Realization Process. Concentration on proposals, specifications, conceptualization and decision analysis. Projects result in final design and prototyping in the follow-on course.

Prerequisite(s): ECE 304, 314.

ECE 432L MULTIDISCIPLINARY DESIGN II 3

Combination of lecture and laboratory experiences. The focus of the lecture is on project management aspects of engineering design, including communication, collaboration, project tracking methods, cost estimating, overhead, direct labor costs, time value of money, depreciation, and return on investment. The focus of the lab is on a multidisciplinary team design project. Detailed evaluation of the Product Realization Process (PRP), including specifications, innovation, conceptualization, decision analysis, embodiment design, final design and prototyping. Analysis of the design criteria for safety, ergonomic, environmental, financial, ethical, and socio-political impact. Periodic oral and status reports. Culminates in a comprehensive written report and oral presentation.

Prerequisite(s): CPE majors: ECE 340, 431L, 444; ELE majors: ECE 340, 431L, (ECE 401 or 415).

ECE 433 PROJECT MANAGEMENT AND INNOVATION 1

Introduces students and teams to project management, entrepreneurship, and innovation. Topics include project management, cost estimating, time value of money, patent law, marketing, finance, and business plan

development.

Prerequisite(s): Junior status.

ECE 440 PHYSICAL ELECTRONICS 3

Introduction to wave mechanics, electron ballistics, theory of metals and semiconductors, electron emission, space charge flow, and modern electron devices.

Prerequisite(s): MTH 219; PHY 232.

ECE 441 INTEGRATED CIRCUIT ELECTRONICS 3

Integrated circuit design, construction and verification including the study of biasing, multistage differential and analog power amplification, and computer assisted design tools for "on-chip" design and layout.

Prerequisite(s): ECE 304.

ECE 442 ENGINEERING ELECTROMAGNETICS 3

Processing Maxwell's equations and applying the predictions to the analysis and design of engineering systems that make use of electromagnetic energy from ELF through optical frequencies. Topics include propagation, radiation, interactions with matter, guided waves, and antenna fundamentals.

Prerequisite(s): ECE 333.

ECE 443 INTRODUCTION TO ELECTRO-OPTICS 3

Introductory overview of electro-optics starting with Maxwell's equations and leading to lasers, holography, and other timely applications.

Prerequisite(s): ECE 332.

ECE 444 ADVANCED DIGITAL DESIGN 3

Systems approach to digital design including: structured top-down development process using simple and complex logic modules from various logic families; practical aspects of the design, construction, and verification of digital subsystems; application of microcomputer and/or controller as a flexible logic device; real-time embedded systems design; and the use of HDL tools and simulation.

Prerequisite(s): ECE 314.

ECE 445 SIGNAL PROCESSING 3

Study of signal conditioning, digital signal processing, and data processing. Topics include transducers, high gain amplifier design, digital filtering, and spectrum estimation. Specialized application determined by instructor.

Prerequisite(s): ECE 334.

ECE 446 MICROELECTRONIC SYSTEMS DESIGN 3

Basic integrated circuit design concepts, system layout, application of design methodology, the fabrication process, manufacturing limitations of the design process, and CAD/CAE utilization to realize the design process.

Prerequisite(s): ECE 304.

ECE 447 DIGITAL CONTROL SYSTEMS 3

Analysis and synthesis of feedback control systems including digital compensators. Topics include performance and stability analysis, regulator and servomechanism design using time and frequency domain methods, and digital implementation case studies.

Prerequisite(s): ECE 415; ECE 334 or equivalent.

ECE 448 FIBER OPTIC COMMUNICATIONS 3

General light guidance principles; ray optics; dispersion; single mode, multimode, and graded index fibers; basic laser and LED source principles; photodetectors; error probability in digital optical systems; rise time analysis; loss budget analysis; local area networks and long haul communication links.

Prerequisite(s): ECE 333.

Corequisite(s): ECE 401.

ECE 449 COMPUTER SYSTEMS ENGINEERING 3

An introduction to advanced computer architecture and computer systems design. Topics include: exploration of principle architecture features of modern computers, pipelining, memory hierarchy, I/O devices,

interconnection networks, introduction to parallel and multiprocessor systems, and the use of hardware description languages (HDLs) in system implementation.

Prerequisite(s): ECE 444; (CPS 346 or permission of instructor).

ECE 450L PROJECTS LABORATORY

1 - 3

Project-oriented laboratory applying engineering skills in the design, development, and demonstration of electrical and electronic systems.

Prerequisite(s): Permission of project advisor.

ECE 498 MULTIDISCIPLINARY RESEARCH AND INNOVATION
LABORATORY

1 - 6

Students participate in 1.) selection and design, 2.) investigation and data collection, 3.) analysis, and 4.) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming, and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

ECE 499 SPECIAL PROBLEMS IN ELECTRICAL AND COMPUTER
ENGINEERING

1 - 6

Particular assignments to be arranged and approved by the department chairperson.





School of Engineering

(ENM) Engineering Management (Collapse Description)

Majors/Minors (Collapse All)

Major/Minor Name

Minor in Engineering Management (ENM)

This twelve credit hour minor is open to all engineering and engineering technology majors. Completion of this minor will provide the student with understanding of basic concepts relevant to the management of engineering operations. Students who anticipate moving from technical to managerial positions during their careers may wish to consider this minor.

Engineering Management		Sem. Hrs.
ENM 505	MANAGEMENT OF ENGINEERING SYSTEMS	3
ISE 430 or ENM 530	ENGINEERING ECONOMY	3
Select two courses from:		6
ENM 515	HUMAN FACTORS ENGINEERING	3
ENM 539	SYSTEMS ENGR/PROJECT MANAGEMENT	3
ENM 582	ENGR ORGANIZATIONAL DEVELOPMENT	3
ISE 300 or ENM 500	PROBABILITY AND STATS FOR ENGRS	3
or ISE 421 or MSC 521 INTRO TO OPERATIONS RESEARCH ¹		
or ENM 534 DECISION MAKING ¹		
ISE 455 or MSC 555	SYSTEM DYNAMICS I	3
ISE 460 or ENM 560	QUALITY ASSURANCE ¹	3
ISE 465 or ENM 565	RELIABILITY ENGINEERING I ¹	3
MSC 572	SYSTEM SIMULATION ¹	3

¹ENM 500 (or ISE 300 or MTH 367) is a prerequisite.

Minor in Operations Engineering (OPE)

This twelve hour minor is open to all engineering and engineering technology majors. Completion of this minor will provide the student with a strong foundation in the analytical tools needed to plan, design, optimize, and manage complex engineering operations. Students who anticipate moving into problem-solving and decision-support roles during their engineering careers may wish to consider this minor.

Operations Engineering	Sem. Hrs.
	12



Search

Academic Information

General Information

Explore by Department / Program:

- Criminal Justice Studies
- Economics and Finance
- Electrical and Computer Engineering
- Engineering Management

Explore

Explore by Major / Minor:

- Music Technology (MUS)
- Music Therapy (MUT)
- Nutrition & Fitness (EHN)
- Operations Engineering (OPE)

Explore

Explore by Courses:

- Accounting (ACC)
- Air Force Aerospace Studies, ROTC (AES)
- American Studies (AMS)
- Anthropology (ANT)

Explore

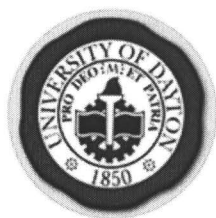
MTH 367	STATISTICAL METHODS I	3
or ENM 500 or ISE 300 ENGRS	PROBABILITY & STATS FOR	
ISE 421 or MSC 521	INTRO TO OPERATIONS	3
RESEARCH ¹		
Select one course from:		3
ENM 560 or ISE 460	QUALITY ASSURANCE ²	3
ENM 561 or ISE 461	DESIGN & ANALYSIS OF	3
EXPERIMENTS ²		
ENM 565 or ISE 465	RELIABILITY ENGINEERING	3
MSC 572	SYSTEM SIMULATION ²	3
Select one course from:		3
ENM 541 or ISE 441	PRODUCTION ENGINEERING ³	3
ISE 422 or MSC 522	TOPICS IN OPERATIONS	3
RESEARCH ³		
ISE 455 or MSC 555	SYSTEM DYNAMICS I	3
MSC 523	NONLINEAR OPTIMIZATION	3

¹ENM 500 (or ISE 300 or MTH 367) is a corequisite.

²ENM 500 (or ISE 300 or MTH 367) is a prerequisite.

³MSC 521 (or ISE 421) is a prerequisite.





the Bulletin

AUGUST 2009 - UNDERGRADUATE ISSUE

→ Explore a Different Issue

School of Engineering

Engineering Technology (Collapse Description)

The School of Engineering also offers a Bachelor of Science in Engineering Technology. The programs in which the degree is offered are electronic and computer engineering technology, global manufacturing systems engineering technology, industrial engineering technology, and mechanical engineering technology. The engineering technologist is usually involved in the design, performance evaluation, service and sales of products, equipment, and manufacturing systems or the management of these activities. The management of process operations and plant facilities are also important career paths.

The engineering technology programs provide: (1) specialized technical courses that emphasize rational thinking and the application of engineering and scientific principles to the practical solution of technological problems; (2) courses in applied mathematics and science sufficient to support the technical courses and to prepare the student for future growth; and (3) education to prepare students to communicate intelligently and to take places in society as responsible, humane, complete professionals.

The University of Dayton engineering technology programs prepare graduates who:

- are competent and productive in the practice of both the technical and communication aspects of their profession;
- demonstrate ethical and professional standards of conduct
- exhibit leadership qualities as appropriate for the practice of their profession;
- are involved in service activities that benefit their profession and their community; and
- are engaged in continuing professional development.

Faculty

Scott Segalewitz, Chairperson of the Department of Engineering Technology

Sub-Categories / Concentrations / Focus Areas

Electronic and Computer Engineering Technology	Global Manufacturing Systems Engineering Technology
Industrial Engineering Technology	Mechanical Engineering Technology

Majors/Minors

Major/Minor Name

☐ Minor in Engineering Technology (EGT)

This minor is open to all majors in the College of Arts & Sciences, the School of Business Administration, and the School of Education and Allied Professions with the appropriate prerequisite background and approval of the Engineering Technology Department Chair. The program introduces the principles of applied engineering and complements many majors at the University.

	Sem. Hrs.
Engineering Technology¹	15
ECT 110 ELECTRICAL CIRCUITS I	3
IET 323 PROJECT MANAGEMENT	3
MCT 110L TECHNICAL DRAWING AND CAD	2
MFG 204-204L MATERIALS AND PROCESSES (MFG 204)	4
MATERIALS AND PROCESSES LABORATORY (MFG 204L)	
Select one course from:	3
ECT 120 ELECTRICAL CIRCUITS II	3
ECT 224 DIGITAL COMPUTER FUNDAMENTALS	3
ECT 361 PROGRAMMING STRUCTURES	3
IET 317 INDUSTRIAL ECONOMIC AND FINANCIAL ANALYSIS	3
IET 408 LEAN MANAGEMENT METHODS	3
IET 415 MANAGEMENT OF GLOBAL TECHNICAL ORGANIZATIONS	3
IET 435 HUMAN FACTORS	3
MCT 220 STATICS AND DYNAMICS	3



Search Academic Information General Information

Explore by Department / Program:

Economics and Finance
Electrical and Computer Engineering
Engineering Management
Engineering Technology

Explore

Explore by Major / Minor:

Energy Systems Concentration - Mech... (MES)
Engineering Management (ENM)
Engineering Mechanics (EME)
Engineering Technology (EGT)

Explore

Explore by Courses:

Engineering (EGR)
Engineering Interdisciplinary (ENI)
Engineering Mechanics (EGM)
Engineering Technology (SET)

Explore

MCT 231	FLUID MECHANICS	3
MFG 427	CIM AND GLOBAL MANUFACTURING	3
MFG 432	PLASTICS, COMPOSITES, AND NANO MATERIALS AND PROCESSES	3
MFG 434	ROBOTICS AND COMPUTER NUMERICAL CONTROL	3

¹Prerequisites: SET-153L or equivalent competency and MTH-137 or equivalent competency.

Courses (Collapse All Courses)

Code	Title	Sem. Hrs.
ECT 110	ELECTRICAL CIRCUITS I Practical concepts of DC and AC circuits: current, voltage, resistance, power, series and parallel circuits, capacitance, magnetic circuits, and inductance. Corequisite(s): ECT 110L.	3
ECT 110L	ELECTRICAL CIRCUITS I LABORATORY Experiments in single source DC and AC circuits to accompany ECT 110. Three laboratory hours per week. Corequisite(s): ECT 110.	1
ECT 120	ELECTRICAL CIRCUITS II Practical concepts of DC and AC circuits: reactance, impedance, phase, circuit analysis, power factor, resonance, filters, and transformers. Circuit calculations using vectors and complex algebra. Prerequisite(s): ECT 110.	3
ECT 206	ELECTRON DEVICES I Fundamentals of semiconductor diodes, transistors (bipolar and field effect), amplifiers, biasing and small signal analysis. Prerequisite(s): ECT 120.	3
ECT 206L	ELECTRON DEVICES I LABORATORY To accompany ECT 206. Three hours of laboratory a week.	1
ECT 224	DIGITAL COMPUTER FUNDAMENTALS Fundamental theory and techniques of electronic data processing to include binary arithmetic, switching theory (Boolean algebra), and basic circuitry (gates, adders, registers, and memory). Prerequisite(s): ECT 110.	3
ECT 224L	DIGITAL COMPUTER FUNDAMENTALS LABORATORY To accompany ECT 224. Three hours of laboratory a week.	1
ECT 306	ELECTRON DEVICES II Fundamentals of integrated circuits, operational amplifiers, transistors, photoelectric devices, silicon-controlled rectifiers, and their associated circuits. Prerequisite(s): ECT 206.	3
ECT 306L	ELECTRON DEVICES II LABORATORY To accompany ECT 306. Three hours of laboratory a week.	1
ECT 328	ELECTRONIC COMMUNICATIONS Study of communication circuits including amplifiers, oscillators, modulators, demodulators, antennas, waveguides, and microwave devices. Prerequisite(s): ECT 306.	3
ECT 328L	ELECTRONIC COMMUNICATIONS LABORATORY To accompany ECT 328. Three hours of laboratory a week.	1
ECT 357	MICROPROCESSORS I Study of microprocessor architecture, hardware, software, applications, and development tools. Prerequisite(s): ECT 224.	3
ECT 358	MICROPROCESSORS II Advanced microprocessors study including development tools and software with regards to interfacing equipment in applications. Prerequisite(s): ECT 357, 361. Corequisite(s): ECT 358L.	3

ECT 358L	MICROPROCESSORS II LABORATORY	1
To accompany ECT 358. Emphasis on microcomputer programming. Three hours of laboratory a week.		
Prerequisite(s): ECT 357.		
ECT 361	PROGRAMMING STRUCTURES	3
The study of programming language concepts. Emphasis on the C language and its application to microcomputer hardware and software development.		
Prerequisite(s): SET 153L.		
ECT 362	CONCEPTS AND APPLICATIONS OF COMPUTER OPERATING SYSTEMS	3
Introduction to the fundamentals and applications of computer operating systems and the interaction of hardware and software. Operating systems for large-scale, mini-, and microcomputers introduced through case studies.		
Prerequisite(s): ECT 357, 361.		
ECT 400	SELECTED TOPICS	1 - 4
Investigation and discussion of current technical topics in electronic and computer engineering technology. May be taken more than once.		
Prerequisite(s): Permission of department chairperson.		
ECT 408	DATA ACQUISITION AND MEASUREMENTS	2
Measurement and evaluation of the characteristics of engineering materials, structural mechanics, electromechanical systems, and physical systems. Emphasis on data acquisition, signal conditioning and manipulation, and virtual instrumentation.		
Prerequisite(s): ECT 110L; (ECT 361 or MCT 221); ENG 102.		
ECT 451	ADVANCED INSTRUMENTATION	3
Advanced study of microcomputer controlled sensors and actuators in a variety of applications.		
Prerequisite(s): ECT 408.		
ECT 452	FEEDBACK CONTROLS	3
Study of principles of control including Nyquist criteria, Bode plots, PID loops, motor control virtual instrumentation, and advanced concepts. Laplace transform analysis is utilized.		
Prerequisite(s): ECT 306, 408.		
ECT 459	MICROPROCESSOR SYSTEMS DESIGN	3
Study of complete mechatronic designs with an emphasis on development systems, operating system integration, interfacing, and control strategies.		
Prerequisite(s): ECT 357, 358.		
ECT 460	ADVANCED MICROPROCESSOR SYSTEMS	3
Study of advanced micro-processor families and their applications to systems, including single and multi-processor design.		
Prerequisite(s): ECT 357.		
ECT 461	POWER DISTRIBUTION AND CONTROL	3
Study of power distribution systems including components, basic operation, polyphase circuits, characteristics, and application. Emphasis on the generation of electric power, its transmission, and its application to high power systems.		
Prerequisite(s): ECT 110.		
ECT 465	DATA COMMUNICATIONS	3
Study of communication methods and protocols. Applications to networks, satellite communication, phone systems, fiber optics, modems, and other data transmission. A special emphasis is placed on digital networks.		
Prerequisite(s): ECT 358 or equivalent.		
ECT 466	MICROCOMPUTER ARCHITECTURE	3
To develop an understanding of the basic hardware architecture of industry standard microcomputers including CPUs, standard busses, memory, mass storage devices, Systems-on-a-Chip and their implementation, I/O devices, and network interfaces. Study of architecture of recent microprocessors.		
Prerequisite(s): ECT 357 or equivalent.		
ECT 490	SENIOR PROJECT	3
The design, construction and presentation of an original project. The project may be individual or part of an interdisciplinary engineering technology team project. Written and oral reports.		
Prerequisite(s): CMM 110, (CMM 111 or 112); ECT 408; IET 323; MTH 138; senior status.		

IET 230	WORK MEASUREMENT	3
Fundamentals of work simplification, motion economy, and productivity improvement using the techniques of time-and-motion study. Setting of labor standards using the techniques of stop watch, pre-determined time, standard data, and work sampling. Prerequisite(s): MTH 137. Corequisite(s): SET 153L.		
IET 230L	WORK MEASUREMENT LABORATORY	1
The application of real-world time-and-motion-study techniques such as operation process, worker-machine, and assembly charts. Calculations for time standards, production efficiency, line balance, cost reduction, labor, and equipment. A written and oral report on a team project. Three hours of laboratory each week. Prerequisite(s): MTH 137. Corequisite(s): IET 230; SET 153L.		
IET 316	QUANTITATIVE ANALYSIS	3
Introduction of the mathematical techniques used to support decision making and managerial analysis. Probability theory, decision theory, linear programming, queuing theory, differential and integral calculus, and differential equations. Prerequisite(s): MTH 138 or 168; MTH 207; SET 153L.		
IET 317	INDUSTRIAL ECONOMIC AND FINANCIAL ANALYSIS	3
Comparison of manufacturing or service industry projects and investments based on their economic value. Quantification of costs and benefits; analysis using present worth, annual worth, and rate of return methods. Study of simple and compound interest. Basic financial accounting concepts, including balance sheets, income statements, change of financial condition, etc. Prerequisite(s): MTH 137; SET 153L.		
IET 318	STATISTICAL PROCESS CONTROL	3
Statistics and probability theory applied to produce control charts (\bar{x} -bar, R, s, p, u, and c) to monitor processes. Interpretation and application of these charts. Problem solving techniques, Pareto analysis, and modern quality management techniques. Prerequisite(s): MTH 207; SET 153L.		
IET 319	QUALITY IMPROVEMENT METHODS	3
Study of problem-solving methodologies and techniques. Team development. Students will learn to use Pareto diagrams, force field analysis, cause and effect diagrams, process mapping, and other problem-solving tools. Quality costs, product liability, and ethics are also covered. Prerequisite(s): IET 318; SET 153L.		
IET 320	QUALITY ASSURANCE TECHNIQUES	3
Students will be exposed to a variety of current quality assurance topics that companies use to improve quality, increase productivity, and reduce costs. Topics include: total preventive maintenance, quality function deployment, reliability engineering, design of experiments, and sample size selection. Prerequisite(s): IET 318; MTH 207; SET 153L.		
IET 321	QUALITY MANAGEMENT	3
Provides students with an understanding of managing a total quality environment to improve quality, increase productivity and reduce costs. An introduction to Deming, Juran, and others. Total Quality Management implementation strategies, requirements of ISO 9000, QS 9000, and the Malcolm Baldrige award will be covered. Prerequisite(s): IET 318; MTH 207; SET 153L.		
IET 323	PROJECT MANAGEMENT	3
Study of the structure, techniques, and application of project management including project proposals, project plans, decision making, styles of management, and communications. Semester team project with written and oral presentations. Prerequisite(s): SET 153L.		
IET 332	FACILITIES LAYOUT DESIGN	3
Design of manufacturing and service facilities for the most efficient flow of raw materials, work-in-process, and completed stock through a work place. Facilities layout, material handling, and warehousing in relation to trends toward reduced inventory, smaller lot sizes, and just-in-time. Prerequisite(s): MCT 110L. Corequisite(s): MCT 111.		
IET 400	SELECTED TOPICS	1 - 4

A self-paced research course. Preparation of a documented written research project on an engineering technology subject. May not be taken more than once. Prerequisites: Junior or senior status; permission of program director.

Prerequisite(s): Junior or senior status; permission of department chairperson.

IET 408 LEAN MANAGEMENT METHODS 3

Study of the principles and current practices of optimizing production using Lean Management concepts. Just-in-time, Kaizen, set-up reduction, pull systems, focused factories, standard operations, total productive maintenance, and defect-free processing methods are studied and applied.

Prerequisite(s): Junior or senior status.

IET 415 MANAGEMENT OF GLOBAL TECHNICAL ORGANIZATIONS 3

Study of the structure of industrial and service organizations; study of the duties and responsibilities of a manager or supervisor in a global technical organization in developing an effective project or production team. Study of labor administration; labor legislation, current labor practices and international management.

IET 418 COST ESTIMATING AND CONTROL 3

Study of the fundamentals of cost estimating of labor, material, and overhead for products, projects, operations, and systems. The concepts of internal and external cost estimating, types of costs, ethics, budgets, and profit. Semester team and individual projects, written and oral. Study of job order and process cost accounting, activity based costing, and cost-volume-profit relationships.

Prerequisite(s): MTH 137; SET 153L.

IET 420 INDUSTRIAL AND ENVIRONMENTAL SAFETY 3

Application of safety techniques and principles to identify and correct unsafe situations and practices. Study of system safety, failure modes and effects analysis, fault tree analysis, preliminary hazard analysis, hazardous materials and practices, OSHA, health and personal protection.

IET 423 THE IET IN SERVICE ORGANIZATIONS 3

Case studies, articles, guest speakers, and projects to provide insight into how industrial engineering technology skills and training can be applied to service industries including hospitals, banks, and eating and retailing establishments.

Prerequisite(s): IET major; junior status.

IET 425 ELEMENTS OF COST CONTROL 3

Survey of the methods of breakdown and cost analysis of labor, material, and overhead used in manufacturing and service organizations. Basic financial and cost accounting including balance sheets, income statements, change of financial condition, ratio analysis, and Activity-Based Costing.

Prerequisite(s): MTH 137; SET 153L.

IET 435 HUMAN FACTORS 3

Methods to improve the interface between humans and their environment. Human characteristics are studied to determine the best way to design the task, product, work station, or other environmental features to accommodate the human. Written and oral projects.

Prerequisite(s): (Junior or senior status) or permission of instructor.

IET 490 SENIOR PROJECT 3

Applications of IET principles to a real world project using student teams for analysis and productivity improvement. Students will manage a project, applying planning, scheduling, monitoring, and control techniques. Oral and written project proposals, status updates, and final reports presented by teams of students to the management of the sponsoring organizations.

Prerequisite(s): CMM 110, (CMM 111 or 112); IET 317, 323, 332, 408; MTH 138; senior status.

MCT 110L TECHNICAL DRAWING AND CAD 2

Technical sketching and shape description, orthographic projection theory, multi-view drawings, necessary views, sectional views, working and shop drawings, dimensioning practices, tolerancing, thread and fastener representation and nomenclature, assembly and detail drawings. Six hours of laboratory a week using instruments and commercial computer-aided design (CAD) software.

MCT 111L INTRODUCTION TO DESIGN 2

Advanced topics of Computer Aided Design using three-dimensional, parametric, solid modeling software. Laboratory assignments involving the CAD software are completed through a series of individual and team design projects. Introduction to design requirements, conceptualization, and design decisions. Computer drafting topics such as

ANSI Y 14.5M-1994 geometric dimensioning and tolerancing standards, weld symbols, machining and surface finish symbols. Blueprint reading.

Prerequisite(s): MCT 110L.

MCT 220 STATICS AND DYNAMICS

3

Study of forces on bodies at rest and in motion using Newton's three laws of motion. Vectors, force systems, components, reactions, resultants, free body diagrams, equilibrium, centroids, moment of inertia, kinetics, and kinematics.

Prerequisite(s): SET 153L.

Corequisite(s): MTH 137.

MCT 221 STRENGTH OF MATERIALS

3

Analysis and design of load-carrying members, considering stress, strain, and deflection. Study of direct tension, compression, and shear; torsion; shear and moment diagrams; bending; combined stress; analysis of columns; pressure vessels.

Prerequisite(s): MCT 220; MFG 204, 204L; MTH 137; SET 153L.

MCT 231 FLUID MECHANICS

3

Fluid properties, fluid statics including manometry, submerged surfaces, buoyancy and stability of floating bodies. The principles of fluid flow including Bernoulli's and energy equations, energy losses, and pump power. Analysis and design of pipe line systems and open channels; pump selection.

Prerequisite(s): MTH 137; SET 153L.

MCT 313 INDUSTRIAL MECHANISMS

3

Design and analysis of linkages and cams. Graphical solutions to kinematics problems including the concepts of instantaneous motion and relative motion. Development and analysis of motion diagrams. Study of geometric features of gears and gear transmission systems.

Prerequisite(s): MCT 110L, 220; MTH 137; SET 153L.

MCT 317 MACHINE DYNAMICS

3

Principles of applied engineering mechanics as they relate to machines; static force analysis in both 2 and 3 dimensional systems, kinetics of machine components by the methods of force-mass-acceleration, work-energy, and impulse-momentum; machine balancing; introduction to mechanical vibrations.

Prerequisite(s): MCT 313; MTH 138.

MCT 330 DESIGN OF MACHINE ELEMENTS

3

Analytical design techniques used to evaluate machine elements; stress analysis, working stress, failure theories, fatigue failure; design methods for spur gears, shafts, keys and couplings, roller and journal bearings, and springs. Original design project.

Prerequisite(s): MCT 110L, 221; SET 153L.

MCT 336 FLUID POWER

3

Study of hydraulic and pneumatic fluid power components and systems used in industrial, mobile, and aerospace applications; standard symbols in circuit design; circuit analysis; specification for pumps, valves, cylinders, and circuits; hydraulic fluids; filtration; electric motors; system efficiencies; proportional control and electrohydraulic servo control systems; seals; fluid conductors; pneumatic components and systems. Library research project.

Prerequisite(s): MCT 221.

Corequisite(s): MCT 336L.

MCT 336L FLUID POWER LABORATORY

1

To accompany MCT 336. Evaluation of fluid power components: pressure, flow, RPM, sound level, current, voltage, power, torque, and time. Graphical design, computational analysis, assembly, and testing of typical circuits and systems. Testing of hydraulic fluids for viscosity, pour point, flash and fire point, specific gravity. Three hours of laboratory a week.

MCT 342 THERMODYNAMICS

3

Energy analysis of engineering systems using the concepts and laws of thermodynamics. The principle of the mechanical equivalent of heat, behavior of pure substances, use of thermodynamic property tables, and study of gas mixtures. Application of the Carnot cycle to both heat engines and reversed heat engines.

Prerequisite(s): MCT 231; MTH 138; SET 153L.

MCT 400 SELECTED MECHANICAL TOPICS

1 - 4

Investigations and discussion of current technical topics in mechanical engineering technology. Research report. May be taken more than once.

Prerequisite(s): Permission of department chairperson.

MCT 423	PRODUCT DEVELOPMENT	3
<p>Synthesis of mechanical devices and systems. Emphasis on the integration of various machine elements into a single unit. Activities include design, scheduling, budgeting, purchasing, fabrication, assembly and performance testing of an original team project.</p> <p>Prerequisite(s): MCT 330.</p>		
MCT 430	DESIGN OF FLUID POWER SYSTEMS	3
<p>Energy efficiency; pressure drop determinations, variable volume pressure-compensated pumps, accumulators, proportional and electrohydraulic valves, cylinder design, hydraulic motor selection; circuit design, open and closed loop systems, power unit design; sizing of electric motors; use of industrial data and National Fluid Power Assn.-JIC design standards. Individual design project.</p> <p>Prerequisite(s): MCT 336.</p>		
MCT 432	HEAT POWER	3
<p>Applications of the principles of thermodynamic cycles. Analysis of energy transfer systems such as internal combustion and gas turbine engines. Power generation through steam cycles including reheat and regenerative cycles. Reversed heat engine cycles and vapor compression cycles used in heating and cooling.</p> <p>Prerequisite(s): MCT 342; SET 153L.</p>		
MCT 438	HEAT TRANSFER	3
<p>The principles of conduction, convection, and thermal radiation energy transfer. Conduction through series and parallel walls, pipes, and containers. Forced and free convection through films, thermal radiation of energy between surfaces, and the overall transfer of heat.</p> <p>Prerequisite(s): MCT 231; SET 153L.</p>		
MCT 440	APPLIED VIBRATIONS	3
<p>Free and forced vibration of single degree of freedom systems with and without damping. Industrial applications including reciprocating and rotating machinery, balancing, isolation, and noise reduction. Demonstrations of vibration sensors and instrumentation.</p> <p>Prerequisite(s): MCT 317; SET 153L.</p>		
MCT 445	EXPERIMENTAL MECHANICS	2
<p>The selection, application, and use of strain gages and strain gage rosettes. Transformation of stress and strain. Advanced mechanics of materials topics with empirical verification of theoretical predictions.</p> <p>Prerequisite(s): MCT 221.</p>		
MCT 445L	EXPERIMENTAL MECHANICS LABORATORY	1
<p>Installation of strain gauge rosettes. Experiments to determine the state of strain and stress in structures using strain gauges, photoelasticity, and brittle coatings. Vibration measurement using strain gauges, accelerometers, and motion transducers. Written and oral reports.</p>		
MCT 446	APPLIED FINITE ELEMENT MODELING	3
<p>Introduction to the fundamentals of structural finite element modeling. Geometry creation, element types, material specification, problem solution and results postprocessing. A focus is placed on modeling techniques using commercially available software.</p> <p>Prerequisite(s): MCT 221; SET 153L.</p>		
MCT 490	MECHANICAL ENGINEERING TECHNOLOGY SENIOR PROJECT	3
<p>Bringing together analytical and graphical techniques from previous courses to accomplish the design of a complete mechanism, machine, or mechanical system. Conceptual, preliminary, and final design. Prototyping and evaluation of an original team project. Written and oral reports.</p> <p>Prerequisite(s): CMM 110, (CMM 111 or 112); IET 323; MCT 317, 330; MTH 138; senior status.</p>		
MFG 108L	MANUFACTURING PROCESSES LABORATORY	1
<p>Application of metal-cutting theory using single- and multiple-point cutting tools, basic metal removal process of toolroom and production machines. Experience on conventional milling machines, shapers, lathes, surface grinders, and drill presses. Three hours of laboratory a week.</p>		
MFG 204	MATERIALS AND PROCESSES	3
<p>Chemical and physical properties of metals, ceramics, and polymers; casting processes; powdered metallurgy; metal forming; plastics processes. Oral and written presentation of a team case study.</p> <p>Prerequisite(s): SET 153L.</p> <p>Corequisite(s): MFG 204L.</p>		

MFG 204L MATERIALS AND PROCESSES LABORATORY

1

Testing of materials for tensile strength, impact and hardness properties, cooling curves and equilibrium diagram development, heat treating and hardenability curve determination, cold forming, plastics materials processing, micro polishing and metallography; visits to local industries. Three hours of laboratory a week.

Prerequisite(s): SET 153L.

Corequisite(s): MFG 204.

MFG 206L DIMENSIONAL METROLOGY

1

Theory and practice of precision measurement including the surface plate, angle and sine plates; surface texture and roundness; optical microscope and profile projector; mechanical and electronic gages; co-ordinate measuring machine; length standards and height gages; fixed and functional gages; sources of measurement error. Three hours of laboratory a week.

Prerequisite(s): MCT 110L; MTH 137.

MFG 208L GEOMETRIC DIMENSIONING AND TOLERANCING

1

Study of the use of ANSI Y14.5M-1994, the engineering standard for geometric dimensioning and tolerancing. Includes the proper use of GD&T symbols, reading and interpretation of engineering drawings, techniques for determining part adherence to design requirements and workmanship standards.

Prerequisite(s): MCT 110L.

MFG 240 MANUFACTURING AND PRODUCT DESIGN

3

Manufacturing planning; process planning; advanced cutting tools; workholders; power presses-blanking, forming, draw dies, fine blanking; group technology, gage, jig, and fixture design.

Prerequisite(s): MCT 110L; MFG 108L, 204.

MFG 400 SELECTED MANUFACTURING TOPICS

1 - 4

Investigation and discussion of current topics in manufacturing engineering technology. May be taken more than once.

Prerequisite(s): Permission of department chairperson.

MFG 424 ROBOTICS

3

Study of robotics including history, robot geometry, cost justification, end-effector (types, use, and design), sensors, and programming. Application of robots in industries. Robot programming and operation projects and end-effector design projects.

Prerequisite(s): MCT 220, 313; SET 153L.

MFG 427 CIM AND GLOBAL MANUFACTURING

3

Computer Integrated Manufacturing (CIM) systems and interrelationships; group technology, computer-aided process planning, expert systems, local area networks, automated flow lines, data collection, and material handling. Also covered are global manufacturing issues and specific country concerns.

Prerequisite(s): ECT 110; MFG 108L, 204; SET 153L.

MFG 431 CONTROLS FOR INDUSTRIAL AUTOMATION

3

Topics include: fundamentals of digital logic, pneumatic power, electromechanical sensors and actuators, pneumatic and electrical control circuit analysis and design, industry safety and design standards, concepts of mechatronics, programmable logic controllers, and networking communications.

Prerequisite(s): ECT 110; SET 153L.

MFG 432 PLASTICS, COMPOSITES, AND NANO MATERIALS AND PROCESSES

3

Introduction to the more common plastics, composites, and nano engineering materials and their properties. Study of processes including extrusion, injection molding, blow molding, compression and transfer molding, and forming. Topics on part and tooling design.

Prerequisite(s): CHM 123; MFG 204.

MFG 434 ROBOTICS AND COMPUTER NUMERICAL CONTROL

3

Programming of CNC turning and machining centers and industrial robots; application of CAM software to design and edit CNC and robot programs, edit programs, and display tool and motion paths. Parametric part programming concepts to produce complex surfaces. Programming of robotic devices.

Prerequisite(s): MCT 110L; MFG 108L; MTH 138; SET 153L.

MFG 435 ADVANCED NUMERICAL CONTROL

3

Instruction in the programming of complex, multi-axis CNC machines. Extended parametric programming. Programming language techniques.

Prerequisite(s): MFG 434.

MFG 438	SUSTAINABLE MANUFACTURING AND PRODUCT DESIGN	3
Design for the environment, sustainable manufacturing processes and business practices to support these topics are developed.		
Prerequisite(s): (MFG 108L, 204, 204L) or permission of instructor.		
MFG 490	SENIOR PROJECT	3
Study and research in a specific area that integrates major elements from previous design and manufacturing process courses, culminating in individual and/or group projects, technical reports, and presentations.		
Prerequisite(s): CMM 110, (CMM 111 or 112); IET 323; MFG 108L, 240, 431; MTH 138; senior status.		
SET 100	ENGINEERING TECHNOLOGY FIRST YEAR SEMINAR	1
A seminar for all engineering technology majors. Introduction to the University of Dayton, the School of Engineering, the Department of Engineering Technology, engineering technology programs and careers. Emphasizes professional ethics, critical thinking and communications, and team dynamics. Academic policies, academic planning, registration procedures, counseling and career placement services.		
SET 101	ENRICHMENT WORKSHOP	0
A workshop structured to provide collaborative learning for first-year Engineering Technology students. Work will focus on math, chemistry and other first year courses. Required of all first-year engineering technology students both semesters.		
SET 153L	TECHNICAL COMPUTATION LABORATORY	1
Introduction to applications and use of computers for engineers with concentration on spreadsheets, electronic communications, and object oriented programming using Visual Basic.		
SET 198	RESEARCH AND INNOVATION LABORATORY	1 - 6
Students participate in 1) selection and design, 2) investigation and data collection, 3) analysis and 4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.		
Prerequisite(s): Permission of department chairperson.		
SET 298	RESEARCH AND INNOVATION LABORATORY	1 - 6
Students participate in 1) selection and design, 2) investigation and data collection, 3) analysis and 4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.		
Prerequisite(s): Permission of department chairperson.		
SET 300	ENGINEERING TECHNOLOGY TRANSFER SEMINAR	1
A seminar for full-time engineering technology majors who transferred from another academic institution. Introduction to the University of Dayton, the School of Engineering, the Department of Engineering Technology, engineering technology programs, and careers. Emphasizes professional ethics, critical thinking and communication, and team dynamics. Academic policies, academic planning, registration procedures, counseling, and career placement services.		
SET 398	RESEARCH AND INNOVATION LABORATORY	1 - 6
Students participate in 1) selection and design, 2) investigation and data collection, 3) analysis and 4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.		
Prerequisite(s): Permission of department chairperson.		
SET 400	SPECIAL TOPICS IN ENGINEERING TECHNOLOGY	1 - 4
Investigation and discussion of current topics in engineering technology. May be taken more than once.		
Prerequisite(s): Permission of department chairperson.		
SET 498	RESEARCH AND INNOVATION LABORATORY	1 - 6
Students participate in 1) selection and design, 2) investigation and data collection, 3) analysis and 4) presentation of a research project. Research can include, but is not limited to, developing an experiment, collecting and analyzing data, surveying and		

evaluating literature, developing new tools and techniques including software, and surveying, brainstorming and evaluating engineering solutions and engineering designs. Proposals from teams of students will be considered.

Prerequisite(s): Permission of department chairperson.

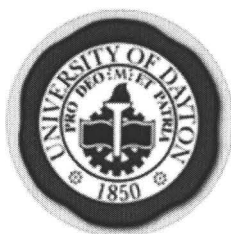
SET 499 SEMINAR

1

Career planning for engineering technology majors. The job search process, résumé preparation, the job interview, professional development. Required of all engineering technology majors in the junior or senior year.

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College of Arts and Sciences

(ENG) English (Collapse Description)

The University requirement in English composition is satisfied by the completion of ENG 101-102, ENG 114, or ENG 198. Completing this requirement is a prerequisite for 200- and 300- level English courses. For placement information, see Reading and Writing General Competencies requirements in Section V. For additional details, consult the department chairperson or the director of writing programs.

Students majoring in English must complete at least thirty-six semester hours of English courses, including first-year composition, and at least twenty-four semester hours at the 300-400 level.

A minor in English consists of twelve semester hours. Students in B.A. programs can acquire teacher licensure in Integrated Language Arts through the E11A program. For details, consult the department chairperson.

The English department awards a writing certificate to students who achieve a 3.0 grade-point average in eighteen semester hours of approved writing and writing-related courses, including at least twelve semester hours of upper-divisional (300-400) courses, and who pass a final examination including an impromptu essay. For details, consult the department chairperson.

Faculty

Sheila Hassell Hughes, Chairperson
 Margaret M. Strain, Director of Graduate Studies
 Thomas A. Wendorf, Director of Undergraduate Studies
 Susan Trollinger, Director of Writing Programs
 Professors Emeriti: August, Henninger, Labadie, H. Martin, Means, Murphy, Palumbo, Patrouch, Stockum
 Professors: J. Farrelly, Kimbrough, K. Marre, Pici, Wilhoit
 Associate Professors: Bardine, Boehnlein, Carrillo, Hughes, Krummel, L. Marre, McCombe, Potter, Strain, Trollinger, Wendorf, Youngkin
 Assistant Professors: Morgan, Ramnarayan, Slade, Szeghi, Vorachek, Walker
 Lecturers: Adams, Biswas, Burnside, Casola, DeAloia, MacLeod, E. Martin, Sexton

Majors/Minors (Collapse All)

Major/Minor Name

Bachelor of Arts with a major in English (ENG)

	Sem. Hrs.
English	36
ENG (101-102 or 114 or 198), 300, 301, 302, 305, 362, (476 or 488 or 489) ¹ , 490	24-27
Select one writing course (300- or 400-level)	3
ENG electives	6-12

Liberal Studies Curriculum

Humanities and Fine Arts

Philosophy and Religious Studies	12
History	6
Creative and Performing Arts	3
Foreign Language and/or Additional Arts and/or Humanities (excludes ENG courses)	3-9

the Bulletin

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 Engineering Management
 Engineering Technology
 English

Explore

Explore by Major / Minor:

Engineering Management (ENM)
 Engineering Mechanics (EME)
 Engineering Technology (EGT)
 English (ENG)

Explore

Explore by Courses:

Engineering Interdisciplinary (ENI)
 Engineering Mechanics (EGM)
 Engineering Technology (SET)
 English (ENG)

Explore

Social Sciences	12
Mathematics (excludes MTH 102, 204, 205)	3
Natural Sciences	11
Communication Competencies	3
Introduction to the University: ASI 150	0-1
General Education courses/academic electives to total at least	124

¹ENG 476 is recommended for students who plan to teach English and writing; ENG 488 is recommended for students who plan to pursue graduate studies in literature; ENG 489 is appropriate as a primary theory course for students who do not plan to teach and/or who plan to pursue graduate study in rhetoric-related fields.

Minor in English (ENG)

	Sem. Hrs.
English¹	12
Select twelve additional semester hours (300- or 400-level)	12

¹In addition to the composition requirement.

Courses (Collapse All Courses)

Code	Title	Sem. Hrs.
ENG 101	COLLEGE COMPOSITION I	3
Analysis of the processes of reading and writing aimed at the development and refinement of critical thinking skills, critical reading skills, and critical writing skills. Students must pass course with a grade of "C-" or higher to satisfy the University requirement in general reading and writing competencies.		
ENG 102	COLLEGE COMPOSITION II	3
Study of appropriate rhetorical structures and styles for analytic, synthetic, and argumentative essays. Practice in developing critical reading and writing skills with an emphasis on writing from sources. Students must pass the course with a grade of "C-" or higher to satisfy the University requirement in general reading and writing competencies. Prerequisite(s): ENG 101.		
ENG 114	FRESHMAN WRITING SEMINAR	3
A one-semester composition course for first-year students who show high proficiency. First term only. Open by permission only. Students must pass the course with a grade of "C-" or higher to satisfy the University requirement in general reading and writing competencies.		
ENG 151	INTRODUCTION TO LITERATURE	3
A critical study of literary forms - fiction, drama, and poetry - representative of various eras and cultures. May be taken concurrently with ENG 102. Prerequisite(s): ENG 101 or equivalent.		
ENG 198	ENGLISH SCHOLARS' SEMINAR	3
Study and seminar discussion of selected literary masterworks and appropriate criticism thereof, with equal emphasis on composition. Open by permission only to first-year students in the Berry Scholars Program. Students must pass the course with a grade of "C-" or higher to satisfy the University requirement in general reading and writing competencies.		
ENG 203	MAJOR BRITISH WRITERS	3
Study of four or five writers representative of the principal periods in English literature. Prerequisite(s): ENG 102 or equivalent.		
ENG 204	MAJOR AMERICAN WRITERS	3

Study of four or five writers representative of the principal periods in American literature.

Prerequisite(s): ENG 102 or equivalent.

ENG 205 MAJOR WORLD WRITERS 3

Study (in translation) of four or five writers representative of the principal periods in (chiefly Western world) literature, exclusive of English and American literature.

Prerequisite(s): ENG 102 or equivalent.

ENG 210 POETRY 3

Study of representative examples of a major literary genre.

Prerequisite(s): ENG 102 or equivalent.

ENG 230 TOPICS IN LITERATURE 1 - 6

Exploration of varying approaches to the study of literature. Can be repeated under special circumstances.

Prerequisite(s): ENG 102 or equivalent.

ENG 242 SOPHOMORE HONORS 3 - 6

Seminar in which selected works from the literature of Western civilization are studied.

ENG 272 WRITING AND RESEARCH 3

Study and practice of research methods commonly required to complete writing assignments across the curriculum. Formulation of research questions, use of appropriate methods to gather data, analysis of information, and creation of effective written documents.

Prerequisite(s): ENG 102 or equivalent.

ENG 282 INTRODUCTION TO WRITING POETRY 3

A beginning course in analyzing and writing poetry.

Prerequisite(s): ENG 102 or equivalent.

ENG 284 INTRODUCTION TO WRITING FICTION 3

A beginning course in analyzing and writing short fiction.

Prerequisite(s): ENG 102 or equivalent.

ENG 286 INTRODUCTION TO WRITING DRAMA 3

A beginning course in analyzing and writing short plays.

Prerequisite(s): ENG 102 or equivalent.

ENG 300 LITERARY ANALYSIS AND RESEARCH - POETRY 3

Detailed analysis of selected poems, with attention to their use of traditional forms and conventions, combined with training in standard methods of interpretation and research.

Prerequisite(s): ENG 102 or equivalent.

ENG 301 SURVEY OF EARLY ENGLISH LITERATURE 3

Survey of English literature from the Medieval period to the end of the eighteenth century.

Prerequisite(s): ENG 102 or equivalent.

ENG 302 SURVEY OF LATER ENGLISH LITERATURE 3

Survey of English literature from the beginning of the Romantic period to the present.

Prerequisite(s): ENG 102 or equivalent.

ENG 305 SURVEY OF AMERICAN LITERATURE 3

Survey of American literature from the Colonial period to the present.

Prerequisite(s): ENG 102 or equivalent.

ENG 306 SURVEY OF CONTINENTAL LITERATURE 3

Survey of continental European literature from Homer to the present.

Prerequisite(s): ENG 102 or equivalent.

ENG 308	INTERMEDIATE POETRY WORKSHOP	3
Intensive practice in the writing of poems.		
Prerequisite(s): ENG 282 or permission of department chairperson.		
ENG 310	INTERMEDIATE FICTION WORKSHOP	3
Intensive practice in the writing of fiction.		
Prerequisite(s): ENG 284 or permission of department chairperson.		
ENG 312	ADVANCED WRITING OF DRAMA	3
Intensive practice in the writing of plays.		
Prerequisite(s): ENG 286 or permission of department chairperson.		
ENG 315	INTRODUCTION TO WRITING CREATIVE NONFICTION	3
Study, analysis, and writing of a number of creative nonfiction forms, including memoir, personal essay, biography, opinion essay, and weblogs. Focus on writing process, rhetorical awareness, style, and voice in expressive writing.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 316	ELEMENTS OF STYLE	3
Study of stylistic options available to all writers. Examination of and practice in adapting writing style for various audiences and purposes, altering style to achieve desired effects, and developing a distinctive written voice.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 317	CONTEMPORARY POETRY	3
Study of selected poems by recent writers.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 319	CONTEMPORARY FICTION	3
Study of selected novels and short fiction by recent writers.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 320	CONTEMPORARY DRAMA	3
Study of selected plays to illustrate major tendencies of modern drama.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 322	MASTERPIECES OF WORLD LITERATURE	3
Intensive study of major literary works representative of various cultures. Works are studied in translation, although an English language work or two may be included for appropriate comparison.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 323	LITERATURE OF THE CHRISTIAN TRADITION	3
A study of literary works that form part of the Christian religious tradition.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 324	THE NOVEL	3
A consideration of selected novels to illustrate various fictional modes.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 325	SCIENCE FICTION	3
Survey of science fiction with detailed analysis of selected novels and short fiction.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 326	SPORT AND LITERATURE	3
An historical approach to analyzing the function of sport in society and literature, from Greek times to contemporary times.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 327	STUDIES IN POPULAR FICTION	3
Analysis of selected artifacts of popular culture with reference to serious literature. May be repeated as topics change.		
Prerequisite(s): ENG 102 or equivalent.		

ENG 328	AMERICAN NOBEL AUTHORS	3
Analysis and discussion of the works of several American Nobel Prize winners in the field of literature.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 329	SHORT STORY	3
Study of the techniques employed in the writing of the short story. Analysis of various models of the short story.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 330	DEVELOPMENT OF DRAMA	3
Study of the historical development of the drama from its beginnings to the nineteenth century. Analysis of plays from each significant period.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 331	STUDIES IN FILM	3
Analysis of selected films to show developments in film technique or criticism.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 332	STUDIES IN LITERATURE AND FILM	3
Studies in literary texts and the film treatments of those texts. May be repeated as topics change.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 333	IMAGES OF WOMEN IN LITERATURE	3
Examination of significant literary works that portray traditional images of women.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 334	MODERN MEN--IMAGES	3
Critical examination of significant literary works that portray males in traditional and non-traditional roles.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 335	AFRICAN AMERICAN LITERATURE	3
Study of African American writers and their oral and literary traditions. Emphasis on issues such as race, gender, and religion.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 336	GENDER IN FICTION	3
Study of major works of American and British male and female authors from different periods, analyzing the authors, their principal characters, themes, and narrative technique as they reflect different aspects of the issue of gender in literature.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 337	STUDIES IN FOLKLORE	3
Selected studies in American and/or world folklore. May be repeated as topics change.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 338	IMAGES OF BUSINESS	3
Examination of the modern world of work, the image of the business "professional," and the influence of organization on global society and values as these themes are revealed primarily in modern literature.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 339	AMERICAN INDIAN LITERATURE	3
Study of American Indian writers and their oral and literary traditions. Emphasis on such issues as race, gender, and religion.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 340	THE PRISON IN LITERATURE	3

Survey of prison literature from the rise of the modern prison in the late eighteenth century through the contemporary period.

Prerequisite(s): ENG 102 or equivalent.

ENG 341 ASIAN AMERICAN LITERATURE 3

Study of Asian American writers and their literary traditions. Emphasis on issues of race, gender, and class.

Prerequisite(s): ENG 102 or equivalent.

ENG 342 LITERATURE AND THE ENVIRONMENT 3

Examination of nature and environment in literature, focusing on literary representations of nature; nature writing; fiction and ecocriticism; the environment and the literary imagination.

Prerequisite(s): ENG 102 or equivalent.

ENG 343 LITERATURE OF THE FIFTIES 3

A study of three identifiable cultures of the 1950s in America that were concerned with disillusionment, conformity, alienation, and artistic standards in literature: African-American, Beat, and Jewish writers.

Prerequisite(s): ENG 102 or equivalent.

ENG 344 LITERATURE OF THE SIXTIES 3

Examination of the Sixties from the perspectives of cultural and literary studies. To this end, it focuses on major works of fiction, essays, New Journalism, and film.

Prerequisite(s): ENG 102 or equivalent.

ENG 345 COLONIAL AND POSTCOLONIAL LITERATURE 3

Examination of significant literary works that reveal the diversity of human cultures shaped by colonial and postcolonial contexts.

Prerequisite(s): ENG 102 or equivalent.

ENG 348 MODERN IRISH LITERATURE 3

A consideration principally of the Irish literary revival of the late nineteenth and early twentieth centuries with appropriate background material.

Prerequisite(s): ENG 102 or equivalent.

ENG 350 EUROPEAN LITERATURE OF ANTIQUITY 3

Study of significant works from the Old Testament and Greek, Roman, English, Irish, and/or Scandinavian writers.

Prerequisite(s): ENG 102 or equivalent.

ENG 351 EUROPEAN LITERATURE OF THE MIDDLE AGES 3

Study of selected literary masterpieces of western civilization in the Middle Ages.

Prerequisite(s): ENG 102 or equivalent.

ENG 353 LITERATURE OF THE RENAISSANCE 3

Study of selected literary masterpieces from England and the Continent that illustrate the culture and ideas of the Renaissance.

Prerequisite(s): ENG 102 or equivalent.

ENG 354 LITERATURE OF THE ENLIGHTENMENT 3

Study of selected English and European literature from the Age of Reason.

Prerequisite(s): ENG 102 or equivalent.

ENG 355 LITERATURE OF THE ROMANTIC AGE 3

Study of the Romantic Revolution as illustrated in representative writings of English and European authors.

Prerequisite(s): ENG 102 or equivalent.

ENG 356 EUROPEAN LITERATURE OF THE NINETEENTH CENTURY 3

Study of representative masterpieces from the literature of England and the Continent during the nineteenth century.

Prerequisite(s): ENG 102 or equivalent.

ENG 357 EUROPEAN LITERATURE OF THE EARLY TWENTIETH CENTURY 3

Study of significant English and European literature that illustrates the ideas and culture of the early modern period.

Prerequisite(s): ENG 102 or equivalent.

ENG 358 CONTEMPORARY LITERATURE OF EUROPE 3

Study of selected western European literature that illustrates the ideas and culture of the present age.

Prerequisite(s): ENG 102 or equivalent.

ENG 362 SHAKESPEARE 3

Study of selected plays and poems of Shakespeare.

Prerequisite(s): ENG 102 or equivalent.

ENG 362L SHAKESPEARE PERFORMANCE LABORATORY 1

Study of Shakespearean performances through films, video tapes, and recordings. Three hours a week. Students in 362L must have already taken or be registered for ENG 362 or an equivalent Shakespeare course.

Corequisite(s): ENG 362 or equivalent Shakespeare course.

ENG 363 SHAKESPEARE'S WORLDS 3

A concentrated analysis of the various worlds created in Shakespeare's plays and their interconnection with and depiction of the major elements of the historical world of early modern England. In the process of this integrated analysis, the Historical Study and Arts Study domains will be respected and taught as separate disciplines. This course is cross-listed with HST 308.

ENG 370 REPORT AND PROPOSAL WRITING 3

Analysis and practice in effective report and proposal writing. Emphasis on employing appropriate rhetorical and technological tools to analyze, produce, and edit proposals and reports for both business and non-profit audiences.

Prerequisite(s): ENG 102 or equivalent; junior or senior standing.

ENG 371 TECHNICAL COMMUNICATION 3

Study and practice of effective written communication in technical professions. Emphasis on rhetorical and technological tools and editing skills needed to analyze and create technical documents with written and visual elements.

Prerequisite(s): ENG 102 or equivalent; junior or senior standing.

ENG 372 BUSINESS COMMUNICATION 3

Study and practice in the principles and processes of effective written communication typically encountered in business and other professions. Focus on use of appropriate rhetorical and technological tools to analyze, write, and edit a range of texts including letters, memos, policies, procedures, job descriptions, resumes, performance reviews, reports, and proposals.

Prerequisite(s): ENG 102 or equivalent; junior or senior standing.

ENG 373 MEDICAL WRITING 3

Intensive practice in reading and writing for the healthcare professions. Designed for pre-medicine, pre-dentistry, pre-veterinary, and pre-physical therapy students. Practice in research and workplace writing, uses of narrative in medicine, the personal essay, and MCAT essay.

Prerequisite(s): ENG 102 or equivalent; junior or senior standing.

ENG 375 RHETORIC OF THE WORLD WIDE WEB 3

Analysis and production of textual and visual elements common to the World Wide Web. Emphasis on rhetoric of electronic communication, usability, audience analysis, and integrating text and graphics. Basic web development techniques will be covered, but previous experience is helpful. Knowledge of HTML, XML, and style sheets is helpful but not required.

Prerequisite(s): ENG 102 or equivalent.

ENG 376 TOPICS IN WRITING 1 - 6

Analysis of and practice in specific forms of writing. May be repeated as forms change.

Prerequisite(s): ENG 102 or equivalent.

ENG 379	RHETORIC OF SCIENCE	3
Introduction to the role rhetoric and language play in science writing. Focus on the rhetorical analysis of public policy controversies involving science and technology and the role rhetoric plays in the public's understanding of these issues.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 380	STUDIES IN LITERATURE	1 - 6
Study of special topics or themes in literature. May be repeated as topics change.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 382	MOZART'S OPERAS	3
An interdisciplinary survey of Mozart's operas - German and Italian, serious and comic. Class discussions will be supplemented by extensive listening and/or viewing of recorded performances and, when possible, attendance at live performances.		
ENG 383	THE TRAGIC DILEMMA	3
Examination of tragedy from ancient times to modern times, with emphasis on both the form(s) of tragedy and the tragic vision of life.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 384	CHRISTIANITY AND MODERN POETRY	3
A study of selected poets from the modern period whose work draws from the major literary, intellectual, cultural, and theological traditions of Christianity.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 385	RELIGION AND LITERATURE	3
Interdisciplinary study of literature and religion, seeking the sacred in the secular, discussing the doctrines of humans and of God in major writings, especially those of current collegiate interest.		
Prerequisite(s): ENG 102 or equivalent.		
ENG 395	JUNIOR HONORS TUTORIAL	3
Independent directed study on special topics for selected students. May be repeated as topic or instructor changes.		
Prerequisite(s): Permission of department chairperson.		
ENG 405	CHAUCEER	3
Study of Chaucer's life, world, language, and literary achievement, concentrating on <i>The Canterbury Tales</i> (in Middle English).		
Prerequisite(s): A 200- or 300-level English course.		
ENG 407	MEDIEVAL ENGLISH LITERATURE	3
Study of the dominant types in the literature of England from the beginning to 1500.		
Prerequisite(s): A 200- or 300-level English course.		
ENG 410	EARLY RENAISSANCE LITERATURE	3
Survey of the literature of the sixteenth century from Thomas More to Sidney and Spenser.		
Prerequisite(s): A 200- or 300-level English course.		
ENG 414	LATER RENAISSANCE LITERATURE	3
Survey of the literature of the early seventeenth century from Bacon, Jonson, and Donne to Marvell, exclusive of Milton.		
Prerequisite(s): A 200- or 300-level English course.		
ENG 431	MILTON	3
Study of the major and minor poems and selected prose of Milton.		
Prerequisite(s): A 200- or 300-level English course.		
ENG 433	STUDIES IN NEO-CLASSICAL LITERATURE	3

Study of English literature from Dryden to Johnson. May be repeated as topics change.

Prerequisite(s): A 200- or 300-level English course.

ENG 438 ENGLISH ROMANTICISM

3

Study of the major poets and critics of the Romantic Age.

Prerequisite(s): A 200- or 300-level English course.

ENG 444 STUDIES IN NINETEENTH-CENTURY ENGLISH LITERATURE

3

Study of English literature in the nineteenth century. May be repeated as topics change.

Prerequisite(s): A 200- or 300-level English course.

ENG 448 TWENTIETH-CENTURY BRITISH LITERATURE

3

Study of significant developments in modern British literature.

Prerequisite(s): A 200- or 300-level English course.

ENG 451 AMERICAN ROMANTICISM

3

Study of significant developments in American literature of the mid-19th century.

Prerequisite(s): A 200- or 300-level English course.

ENG 453 AMERICAN REALISM AND NATURALISM

3

Study of representative writers from the post-Civil War period in American literature.

Prerequisite(s): A 200- or 300-level English course.

ENG 455 TWENTIETH-CENTURY AMERICAN LITERATURE

3

Study of significant developments in American literature of the twentieth century.

Prerequisite(s): A 200- or 300-level English course.

ENG 460 ADVANCED POETRY WORKSHOP

3

Intensive practice in writing of poetry and production of a chapbook.

Prerequisite(s): ENG 308.

ENG 462 ADVANCED FICTION WORKSHOP

3

Intensive practice in writing of fiction and production of a novella or short story cycle.

Prerequisite(s): ENG 310.

ENG 468 INTRODUCTION TO LINGUISTICS

3

Introduction to the basic concepts and procedures of general linguistics, including language description, history, variation, theory, and acquisition.

Prerequisite(s): A 200- or 300-level English course.

ENG 470 HISTORY OF ENGLISH

3

Study of stages in the development of the English language and of influences shaping its development from the beginning to the present.

Prerequisite(s): A 200- or 300-level English course.

ENG 472 THE STRUCTURE OF ENGLISH

3

Study of the grammatical structure of modern English from traditional and modern linguistic points of view.

Prerequisite(s): A 200- or 300-level English course.

ENG 474 ARGUMENTATION

3

Intensive study of argumentative writing. Theories and principles of argument and persuasion. Emphasis on formal arguments.

Prerequisite(s): ENG 102 or equivalent; junior or senior standing or permission of department chairperson.

ENG 476 COMPOSITION THEORY

3

Study of the principal current theories of composition, with application to the teaching and evaluating of writing.

Prerequisite(s): ENG 316 or permission of instructor.

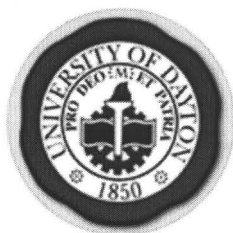
ENG 477	HONORS THESIS PROJECT	3
First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approval of University Honors Program.		
ENG 478	HONORS THESIS PROJECT	3
Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons. Prerequisite(s): Approved 477; approval of University Honors Program.		
ENG 480	INDEPENDENT STUDY	1 - 6
Individual investigations of special topics under faculty direction. May be repeated under special circumstances. Prerequisite(s): At least fifteen semester hours of English; permission of department chairperson.		
ENG 481	TOPICS IN ENGLISH STUDIES	1 - 6
Systematic study of a specialized topic in English Studies. Prerequisite(s): A 200- or 300-level English course or permission of instructor.		
ENG 482	MODERN POETRY	3
Concentrated, advanced study in the development of modern poetry, both English and American. Prerequisite(s): A 200-or 300-level English course.		
ENG 485	INTERNSHIP IN WRITING	1 - 6
Application of writing skills to specific projects of an approved organization. Practical and professional experience offered to juniors and seniors (particularly English majors and minors) as a supplement to the writing curriculum. Option 2 grading only. Prerequisite(s): ENG 370, 371, 372; junior or senior standing; 2.5 cumulative GPA and at least 3.0 GPA in English courses; permission of Internship Coordinator.		
ENG 488	LITERARY THEORY	3
Comparative critical reading of classical and modern theoretical texts and analysis of critical methodology. Prerequisite(s): A 200- or 300- level English course.		
ENG 489	RHETORICAL CRITICISM	3
Study and practice of classical and contemporary rhetorical theories and techniques. Focus on writing rhetorical analyses of non-literary texts, including political discourse, advertising, scholarly essays, and visual images. Prerequisite(s): (ENG 272 or 316) or permission of instructor; junior or senior standing.		
ENG 490	SEMINAR	3
Concentrated study of a topic designed to integrate selected aspects of literary history, critical approaches, and research skills developed by English majors in previous required courses. May be repeated as topics change. Prerequisite(s): ENG 300, 301, 302, 305; (ENG 476 or 488).		
ENG 495	SENIOR HONORS TUTORIAL	3

Independent directed study on special topics for selected students. May be repeated as topic or instructor changes.

Prerequisite(s): Permission of department chairperson.

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College of Arts and Sciences

(GEN) General Studies (Collapse Description)

The Bachelor of General Studies program is designed for those students who desire to pursue a non-traditional degree program at the University outside of any departmental major. This degree program permits great latitude in utilizing the academic resources of the University for planning and acquiring an education to meet individual needs. Students may plan their programs to the best advantage of their particular educational objectives. Students build their programs on the foundation of University General Competencies and General Education requirements.

Majors/Minors

Major/Minor Name

☐ Bachelor of General Studies (GEN)

Admission requirements for the Bachelor of General Studies are the same as those for any other degree offered in the College of Arts and Sciences.

Candidacy for the Bachelor of General Studies may be declared in the first year but not later than the commencement of a student's last thirty semester hours of study. An application for acceptance into the degree program must be completed and approved by an Assistant Dean in the College of Arts and Sciences. Any students in good academic standing may request transfer into this program.

The General Studies student is required to plan an academic program to satisfy the requirements for graduation in consultation with an Assistant Dean. The General Studies student must complete a minimum of the last thirty semester hours of study under the supervision of an Assistant Dean who will serve as the student's advisor. The usual policy of prerequisites remains in effect in this program.

1. University General Competencies and the General Education requirements (see Chapter V),
2. Three semester hours of mathematics selected from courses offered by the Mathematics department (excluding MTH 102, 204, 205),
3. Study of the natural sciences by completing seven semester hours in approved natural science courses (biology, chemistry, geology, physics), including one course with accompanying laboratory,
4. A minimum of fifty-four semester hours of courses at the 300-400 level with a grade point average of 2.0 or better,
5. Not more than thirty semester hours of work from any one academic discipline.
6. Credits earned in completion of the Bachelor of General Studies may not be applied at a later time to the credits for a second degree from the College of Arts and Sciences.

General Studies

Sem. Hrs.

120

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Engineering Technology
English
General Studies

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Foreign Language Education (ELA)
French (FRN)
General Studies (GEN)

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American Studies (AMS)
Anthropology (ANT)

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College of Arts and Sciences

(GEO) Geology (Collapse Description)

Geology is the study of the Earth. It incorporates many aspects of our complex planet including its composition, structure, environment, dynamic and hazardous processes, and the development of life, continents and oceans through time. Geology plays a critical role in interpreting the Earth's long history of global change, and in predicting future environmental change.

The geology department offers two programs leading to Bachelor of Science degrees in geology and environmental geology. The geology (GEO) major provides basic courses in the geological sciences and a range of advanced level courses that allow students to develop courses of study that complement particular interests within the field. The environmental geology (EVG) program is broad in scope, providing a firm grounding in the fundamentals of earth science as well as an interdisciplinary curriculum including geology, biology, chemistry, and other allied science courses, reflecting the interdisciplinary nature of environmental concerns.

The geology department aims to prepare students for careers in the geological sciences. Graduates of the department are competitive for entry to graduate programs. Geology majors pursue careers in a wide range of settings including: state and federal geological agencies; geological consulting companies; natural resource exploration, development and management; museums; research laboratories; and education. Environmental geologists address critical needs of our society ranging from groundwater protection and water-supply development to the identification and assessment of natural hazards.

A minor in geology consists of twelve semester hours.

Faculty

Allen McGrew, Chairperson
Professor Emeritus: Ritter
Professors: Pair, Sandy
Associate Professors: Goldman, Koziol, A. McGrew
Assistant Professor: S. Wu
Visiting Assistant Professor: Haritashya

Majors/Minors (Collapse All)

Major/Minor Name

Bachelor of Science with a major in Environmental Geology (EVG)

The following program, leading to the Bachelor of Science with a major in environmental geology, is designed to present students with the basic courses in the geological sciences as well as provide specific environmental geology courses. The program also requires additional related science courses.

	Sem. Hrs.
Geology	45
Year 1	8
GEO 115-115L, 116-116L	
Year 2	7
GEO 201-201L, 208	
Year 3	12
GEO 301-301L, 307-307L, 310-310L	
Year 4	10
GEO 308, 309-309L, 479L	
GEO electives (select courses from:)	8

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French (FRN)
General Studies (GEN)
Geology (GEO)

Explore

Explore by Courses:

Finance (FIN)
Fine Arts (VAF)
French (FRN)
Geology (GEO)

Explore

GEO 302-302L, 303, 401-401L, 403-403L, 404, 411-411L, 412-412L, 450, 477, 478, 498	
Science electives (select courses from:)	17
BIO 310-310L, 350-350L, 452-452L, 459-459L	
CEE 312-312L, 390, 434-434L	
CHM 201-201L, 302, 313-313L, 341-341L	
CPS 132, 144	
MTH 218, 219, 367, 368	
Breadth Requirement	
Natural Sciences	20
BIO 151 & 152	
CHM 123-123L, 124-124L	
PHY 206 ¹ , 207 ¹	
Mathematics, Computer Science	8
MTH 168 ² , 169 ²	
Social and Behavioral Sciences	6
Humanities	9
Philosophy and Religious Studies	12
Communication Competencies	0-9
Introduction to the University: ASI 150	0-1
General Education courses/academic electives to total at least	120

¹May substitute PHY 201-202 with permission.

²May substitute MTH 148-149 or MTH 137, 138 & 149 with permission.

Bachelor of Science with a major in Geology (GEO)

	Sem. Hrs.
Geology	46
Year 1	8
GEO 115-115L, 116-116L	
Year 2	4
GEO 201-201L	
Year 3	8
GEO 301-301L, 307-307L	
Year 4	18
GEO 303, 310-310L, 401-401L, 403-403L	
GEO electives (select courses from:)	8
GEO 302-302L, 308-308L, 309-309L, 404, 411-411L, 412-412L, 450, 477, 478, 479L, 498	
Science electives, with accompanying laboratories where applicable (select courses from:)	8
BIO, CHM, CPS, GEO, MTH, PHY, Engineering ¹	
Breadth Requirement	
Natural Sciences	14
CHM 123-123L, 124-124L	
PHY 206 ² , 207 ^{2,3,3}	
Mathematics, Computer Science	8
MTH 168 ³ , 169 ³	
Social and Behavioral Sciences	6
Humanities	9
Philosophy and Religious Studies	12

Communication Competencies	0-9
Introduction to the University: ASI 150	0-1
General Education courses/academic electives to total at least	120

¹With permission.

²May substitute PHY 201-202 with permission.

³May substitute MTH 148-149, or MTH 137, 138 & 149 with permission.

Minor in Geology (GEO)

Geology	Sem. Hrs. 12
Select twelve semester hours (300- or 400-level) ¹	12

¹Appropriate prerequisites must be completed.

Courses (Collapse All Courses)

Code	Title	Sem. Hrs.
GEO 103	PRINCIPLES OF PHYSICAL GEOGRAPHY	3
	Analysis of the physical factors of the earth's environment: weather, climate, land forms, oceans.	
GEO 104	INTRODUCTORY GEOLOGY FIELD COURSE	3
	Fundamental earth science topics with emphasis on direct field experience. One week on campus, three weeks in the Rocky Mountains near Denver, Colorado, and one week of travel. For all non-geology and non-biology majors.	
	Corequisite(s): BIO 104; (BIO 104L or GEO 104L).	
GEO 104L	INTRODUCTORY GEOLOGY FIELD LABORATORY	1
	Course to accompany GEO 104.	
GEO 109	GENERAL GEOLOGY	3
	Introduction to the earth as a planet, its composition, structure, and evolutionary development; a brief consideration of the life of the past. For the nonscience major. May be taken without laboratory.	
GEO 109L	GENERAL GEOLOGY LABORATORY	1
	Course to accompany GEO 109. Two hours each week.	
GEO 115	PHYSICAL GEOLOGY	3
	Introductory course in geologic principles; the composition and structure of the earth, its land forms, and the agencies active in their production. Laboratory optional for nonmajors.	
GEO 115L	PHYSICAL GEOLOGY LABORATORY	1
	Course to accompany GEO 115. Two hours each week.	
	Prerequisite(s): (GEO 109 or 115); permission of instructor.	
GEO 116	GEOLOGICAL HISTORY OF THE EARTH	3
	A comprehensive study of earth history from its origins to the present.	
	Prerequisite(s): (GEO 109 or 115); permission of instructor.	
GEO 116L	GEOLOGICAL HISTORY OF THE EARTH LABORATORY	1
	Course to accompany GEO 116. Two hours each week.	
GEO 198	GEO, LANDSCAPE, AND ENVIRONMENT OF THE MIAMI VALLEY	3
	Field-based course examining the geologic history of the Miami Valley and Dayton area; processes leading to the modern landscape; the impact of human activity will be assessed.	
	Prerequisite(s): (GEO 109 or 115) or permission of instructor.	
GEO 201	MINERALOGY	3

Introduction to crystallography, crystal chemistry and crystal structure. Study of the major groups of rock-forming minerals, their association and occurrence with emphasis on identification by physical properties and optical techniques.

Prerequisite(s): (GEO 109 or 115) or permission of instructor.

GEO 201L MINERALOGY LABORATORY

1

Course to accompany GEO 201. Three hours per week.

GEO 204 GEOLOGY FOR TEACHERS

4

Introduction for preservice teachers to the Earth system and the processes that operate in the atmosphere, hydrosphere, biosphere, and solid Earth. Emphasis is on understanding how interactions among these fundamental Earth systems maintain our livable planet. Students will explore the Earth system through best practices in teaching and inquiry, and through field trips. For ECE, EMS, and EMM majors only. Students completing this course may not take SCI 210.

Prerequisite(s): EDT 110; SCI 190.

GEO 208 ENVIRONMENTAL GEOLOGY

3

Study of the relationship of geologic factors to the problems of water supply, pollution, erosion, land use, and earth resources. Laboratory optional.

Prerequisite(s): (GEO 109 or 115) or permission of instructor.

GEO 208L ENVIRONMENTAL GEOLOGY LABORATORY

1

Course to accompany GEO 208. Two hours each week.

GEO 218 ENGINEERING GEOLOGY

3

A comprehensive study of geologic principles applicable to civil engineering practices.

GEO 301 STRUCTURAL GEOLOGY

3

The origin and development of structural features of the earth's crust; folding, faulting, volcanism, mountain building, and metamorphism.

Prerequisite(s): GEO 115, 116, 201.

GEO 301L STRUCTURAL GEOLOGY LABORATORY

1

Course to accompany GEO 301. Two hours each week.

GEO 302 GLACIAL GEOLOGY

3

The origin of mountain and continental glaciers; their depositional features and erosive activity; history of glaciation in geologic past with special emphasis on North American Quaternary ice advances.

Prerequisite(s): GEO 115, 116.

GEO 302L GLACIAL GEOLOGY LABORATORY

1

Course to accompany GEO 302. Two hours each week.

GEO 303 FIELD GEOLOGY

6

Study of field relationships in an area containing abundant igneous, metamorphic, and sedimentary rocks.

Prerequisite(s): GEO 115, 116.

GEO 307 GEOMORPHOLOGY

3

Detailed study of landforms and the erosional processes that develop them.

Prerequisite(s): GEO 115, 116.

GEO 307L GEOMORPHOLOGY LABORATORY

1

Course to accompany GEO 307. Two hours each week.

GEO 308 PROBLEMS AND DECISIONS IN ENVIRONMENTAL GEOLOGY

3

An in-depth examination of selected environmental problems and the way in which scientific information guides practice and policy. Topics will range from investigations of natural hazards to considerations of land use and water resources.

Prerequisite(s): (GEO 109 or 115) or permission of instructor.

GEO 308L	PROBLEMS AND DECISIONS IN ENVIRONMENTAL GEO LAB	1
Course to accompany GEO 308. Two hours each week and periodic field work.		
GEO 309	SURFACE AND GROUNDWATER HYDROLOGY	3
This course is designed to provide a science or engineering student with the fundamental concepts and principles central to the study of water as a resource. This will include an examination of all components of the hydrologic cycle including surface-water hydrology and management, groundwater hydrogeology, and water resource management. Prerequisite(s): (GEO 109 or 218) or permission of instructor.		
GEO 309L	SURFACE AND GROUNDWATER HYDROLOGY LABORATORY	1
Laboratory exercises to accompany GEO 309. Three hours per week.		
GEO 310	STRATIGRAPHY	3
The interpretation of specific lithotypes and the synthesis of the stratigraphic record. Prerequisite(s): GEO 116.		
GEO 310L	STRATIGRAPHY LABORATORY	1
Course to accompany GEO 310. Two hours each week.		
GEO 401	PALEONTOLOGY	3
The study of ancient life. The morphology, ecology, evolution, and stratigraphic distributions of selected invertebrates, vertebrates, and plants.		
GEO 401L	PALEONTOLOGY LABORATORY	1
Course to accompany GEO 401. Two hours each week.		
GEO 403	SEDIMENTOLOGY	3
Detailed study of sediments: their sources, environments of deposition, and methods of consolidation. Emphasis on the interpretation of ancient sediments. Prerequisite(s): GEO 201.		
GEO 403L	SEDIMENTOLOGY LABORATORY	1
Course to accompany GEO 403. Two hours each week.		
GEO 404	PROBLEMS IN GEOLOGY	1 - 4
A consideration of special problems involving advanced work in the laboratory and library; arranged to meet the needs of individual students.		
GEO 411	PETROLOGY	3
Study of the formation of sedimentary, igneous, and metamorphic rocks. Prerequisite(s): GEO 201.		
GEO 411L	PETROLOGY LABORATORY	1
Course to accompany GEO 411. Two hours each week. Prerequisite(s): GEO 201.		
GEO 412	INTRODUCTORY GEOCHEMISTRY	3
Study of elementary thermodynamics, aqueous geochemistry, and principles governing the distribution of trace elements, radioisotopes and stable isotopes in igneous, metamorphic and sedimentary rocks. Emphasis on applications and solution of geological problems. Prerequisite(s): GEO 201 or permission of instructor.		
GEO 412L	INTRODUCTORY GEOCHEMISTRY LABORATORY	1
Course to accompany GEO 412. Three hours each week.		
GEO 450	APPLIED GIS	4

Concepts and implementation of project design and analysis in geographic information systems (GIS). Students will learn the practice of GIS as a tool for spatial analysis, and as it applies in professional disciplines. The course will stress database design and present skills for data input, query analysis, and data output using GIS.

GEO 455 ENVIRONMENTAL REMOTE SENSING 4

Introduction to principles and concepts of remote sensing, a sophisticated technology of earth observation that provides fundamental data for global environmental investigation.

Prerequisite(s): GEO 208 or permission of instructor.

GEO 477 HONORS THESIS PROJECT 3

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons.

Prerequisite(s): Approval of University Honors Program.

GEO 478 HONORS THESIS PROJECT 3

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons.

Prerequisite(s): Approved 477; approval of University Honors Program.

GEO 479L ENVIRONMENTAL INSTRUMENTATION LABORATORY 2

The understanding and use of field and laboratory based equipment to study current environmental issues. Emphasis on team-centered approaches to investigating environmental problems.

Prerequisite(s): (BIO 151, 152) or (GEO 115, 116) or permission of instructor.

GEO 495 GEOLOGY SEMINAR 1

Introduction to professional practices in the geosciences. Students will attend seminar talks by guest speakers, research career options and graduate programs in the earth sciences, develop a professional resume, and participate in other profession-building activities. May be repeated.

Prerequisite(s): Permission of instructor.

GEO 498 GEOLOGICAL RESEARCH AND THESIS 4

Research project within an area of the geological sciences, including, but not limited to, environmental geology, geochemistry, geomorphology, or paleontology. The results are to be presented in a written thesis.

Prerequisite(s): Permission of instructor.





the Bulletin

AUGUST 2009 - UNDERGRADUATE ISSUE

→ Explore a Different Issue

School of Education and Allied Professions

(HSS) Health and Sport Science (Collapse Description)

The mission of the Department of Health and Sport Science is to prepare students to be proficient and professional in the disciplines of dietetics / nutrition, exercise science, physical education, pre-physical therapy, and sport management.

The department also believes its mission is to provide educational programs and instruction for the health fitness needs of all members of the University community.

The department prepares physical educators to meet the needs of public and private schools. The Exercise Science and Fitness Management Program is designed to prepare students for professional opportunities in areas of corporate health, "wellness" programs and health maintenance in a variety of settings. The Sport Management Program is designed to prepare students for professional opportunities in private sports clubs, health clubs, sports organizations/federations, newspapers, television, sporting goods, and the multitudinous areas of recreation. The Pre-Physical Therapy Program will prepare students for graduate school in physical therapy. The Nutrition and Dietetics Programs prepare students for post-baccalaureate dietetic internships or preprofessional practice programs. Along with minimum ACT/SAT scores, minimum cumulative GPAs are required for students wishing to transfer into the department.

In all the department's activities there is a constant search for excellence. The long-range goals and strategies relate to this search in teaching, research, inquiry, programs, recruitment of quality students, and service. Commitment to the use of technology in teaching and research is highly valued in the Department of Health and Sport Science.

Faculty

Paul M. Vanderburgh, Chairperson
 Professors Emeriti: Drees, LaVanche, Leonard, Morefield, Roberts, Schleppi, Siciliano
 Associate Professors: Baer, Brahler, Daprano, DeMarco, Laubach, Linderman, Titlebaum
 Assistant Professors: Dolan
 Lecturer: Gallo

Majors/Minors (Collapse All)

Major/Minor Name

Bachelor of Science with a major in Dietetics (EHA)



Search Academic Information General Information

Explore by Department / Program:

English
 General Studies
 Geology
 Health and Sport Science

Explore

Explore by Major / Minor:

Social Work (SWK)
 Sociology (SOC)
 Spanish (SPN)
 Sport Management (ESM)

Explore

Explore by Courses:

German (GER)
 Global Manufacturing Systems Engine... (MFG)
 Health and Sport Science (EDI)
 Health and Sport Science (HSS)

Explore

This program, which leads to a Bachelor of Science degree, prepares students who wish to become registered dietitians. It has a strong science component.

During the last semester of their senior year students make application to a dietetic internship program. These post-baccalaureate programs are usually eight to eleven months in length and will qualify the student to sit for examination to become registered dietitians. Acceptance into the internship program is highly competitive and is based on the student's grades, work experience, recommendation letters, and extra curricular activities. Selection is made through computer matching.

Costs of the didactic program in dietetics may also include laboratory fees, the purchase of a lab coat, and membership fees for the Student Dietetic Association and the American Dietetic Association. No liability insurance is needed since the students in this program do not participate in a practice setting.

The didactic program in dietetics is currently granted initial accreditation by the Commission on Accreditation for Dietetics Education (CADE), Suite 2000, 120 South Riverside Plaza, Chicago, Illinois 60606, Phone: (900) 877-1600.

			Sem. Hrs.
First-Year			
First-Term			17
BIO 151	CONCEPTS OF BIOLOGY I: CELL AND MOLECULAR BIOLOGY		3
ENG 101	COLLEGE COMPOSITION I		3
HSS 101	INTRODUCTION TO THE UNIVERSITY		1
HSS 210-210L	INTRODUCTORY FOODS (HSS 210) INTRODUCTORY FOODS LABORATORY (HSS 210L)		4
HSS 295	NUTRITION AND HEALTH		3
--- PHL 103 or REL 103	INTRODUCTION TO PHILOSOPHY (PHL 103) INTRODUCTION TO RELIGION (REL 103)		3
Second-Term			16
BIO 152	CONCEPTS OF BIOLOGY II: EVOLUTION AND ECOLOGY		3
CMM 110	GROUP DECISION MAKING		1
CMM 111 or 112	INFORMATIVE PUBLIC SPEAKING (CMM 111) PERSUASIVE PUBLIC SPEAKING (CMM 112)		1
ENG 102	COLLEGE COMPOSITION II		3
HSS 113	INTRO TO DIETETICS AND NUTRITION		2
HSS 226	COMPUTER APPLICATIONS IN SPORT SCIENCE		3
--- PHL 103 or REL 103	INTRODUCTION TO PHILOSOPHY (PHL 103) INTRODUCTION TO RELIGION (REL 103)		3
Sophomore-Year			
First-Term			16
CHM 123-123L	GENERAL CHEMISTRY (CHM 123) GENERAL CHEMISTRY LABORATORY (CHM 123L)		4
ECO 203	PRINCIPLES OF MICROECONOMICS		3
HST 103	THE WEST AND THE WORLD		3
PSY 101	INTRODUCTORY PSYCHOLOGY		3
Art Studies elective			3
Second-Term			15
ANT 150	CULTURAL ANTHROPOLOGY		3
CHM 124-124L	GENERAL CHEMISTRY (CHM 124) GENERAL CHEMISTRY LABORATORY (CHM 124L)		4
HSS 304	INSTITUTIONAL QUANTITY FOOD BUYING		2
MTH 207	INTRODUCTION TO STATISTICS		3
English writing elective			3

Junior-Year

First-Term			13
BIO 411-411L	GENERAL MICROBIOLOGY (BIO 411) GENERAL MICROBIOLOGY LABORATORY (BIO 411L)		4
CHM 313	ORGANIC CHEMISTRY		3
HSS 307	HUMAN PHYSIOLOGY		3
HSS 356	HR MANAGEMENT IN HEALTH AND SPORT		3
Second-Term			15
ACC 200	INTRODUCTION TO ACCOUNTING		3
HSS 303	FOOD SERVICE SYSTEMS MANAGEMENT		2
HSS 402	NUTRITION FOR THE AGING ADULT		2
HSS 406	NUTRITION FOR MOTHER AND CHILD		2
MGT 301	ORGANIZATIONAL BEHAVIOR		3
PSY 431	INTERVIEWING AND COUNSELING		3

Senior-Year

First-Term			16
CMM 113	INTERVIEWING		1
HSS 302	GLOBAL AND CULTURAL NUTRITION		3
HSS 401	NUTRITIONAL BIOCHEMISTRY I		3
HSS 428	HEALTH RESEARCH AND EVALUATION		3
HST 340 or 341 or 344	HISTORY OF SCIENCE (HST 340) HISTORICAL PERSPECTIVES ON SCIENCE, TECHNOLOGY, AND SOCIETY (HST 341) HISTORY OF SCIENCE, TECHNOLOGY, AND THE MODERN CORPORATION (HST 344)		3
PHL/REL elective			3
Second-Term			14
HSS 408-408L	PHYSIOLOGY OF EXERCISE (HSS 408) PHYSIOLOGY OF EXERCISE LABORATORY (HSS 408L)		4
HSS 456	NUTRITIONAL BIOCHEMISTRY II		3
HSS 495	MEDICAL NUTRITION THERAPY		4
PHL/REL elective			3

Bachelor of Science with a major in Exercise Physiology (EEP)

With its increased emphasis on the sciences, this is more appropriate for students interested in pursuing research careers in exercise science, medicine, or health (M.S., Ph.D. degrees).

			Sem. Hrs.
First-Year			
First-Term			18
BIO 151-151L	CONCEPTS OF BIOLOGY I: CELL AND MOLECULAR BIOLOGY (BIO 151) CONCEPTS OF BIOLOGY LABORATORY I: CELL AND MOLECULAR BIOLOGY (BIO 151L)		4
CHM 123-123L	GENERAL CHEMISTRY (CHM 123) GENERAL CHEMISTRY LABORATORY (CHM 123L)		4
ENG 101	COLLEGE COMPOSITION I		3
HSS 101	INTRODUCTION TO THE UNIVERSITY		1
HSS 112	INTRODUCTION TO EXERCISE SCIENCE AND FITNESS MANAGEMENT		2
HSS 184	CONDITIONING		1
--- PHL 103 or REL 103	INTRODUCTION TO PHILOSOPHY (PHL 103) INTRODUCTION TO RELIGION (REL 103)		3
Second-Term			17

BIO 152-152L	CONCEPTS OF BIOLOGY II: EVOLUTION AND ECOLOGY (BIO 152) CONCEPTS OF BIOLOGY LABORATORY II: EVOLUTION AND ECOLOGY (BIO 152L)	4
CHM 124-124L	GENERAL CHEMISTRY (CHM 124) GENERAL CHEMISTRY LABORATORY (CHM 124L)	4
ENG 102	COLLEGE COMPOSITION II	3
MTH 148	INTRODUCTORY CALCULUS I	3
--- PHL 103 or REL 103	INTRODUCTION TO PHILOSOPHY (PHL 103) INTRODUCTION TO RELIGION (REL 103)	3
Sophomore-Year		
First-Term		17
HSS 226	COMPUTER APPLICATIONS IN SPORT SCIENCE	3
HSS 305-305L	HUMAN ANATOMY (HSS 305) HUMAN ANATOMY LABORATORY (HSS 305L)	4
HST 103	THE WEST AND THE WORLD	3
PHY 201-201L	GENERAL PHYSICS (PHY 201) GENERAL PHYSICS LABORATORY (PHY 201L)	4
PSY 101	INTRODUCTORY PSYCHOLOGY	3
Second-Term		17
CMM 110	GROUP DECISION MAKING	1
HSS 230	BASIC ATHLETIC TRAINING	3
HSS 295	NUTRITION AND HEALTH	3
HSS 307	HUMAN PHYSIOLOGY	3
PHY 202-202L	GENERAL PHYSICS (PHY 202) GENERAL PHYSICS LABORATORY (PHY 202L)	4
PSY 251	HUMAN GROWTH AND DEVELOPMENT	3
Junior-Year		
First-Term		18
CHM 313-313L	ORGANIC CHEMISTRY (CHM 313) ORGANIC CHEMISTRY LABORATORY (CHM 313L)	4
CMM 111 or 112	INFORMATIVE PUBLIC SPEAKING (CMM 111) PERSUASIVE PUBLIC SPEAKING (CMM 112)	1
CMM 113	INTERVIEWING	1
HSS 275	HISTORY OF PHYSICAL EDUCATION AND SPORT	3
MTH 207	INTRODUCTION TO STATISTICS	3
Art Studies elective		3
PHL/REL elective		3
Second-Term		17
CHM 314-314L	ORGANIC CHEMISTRY (CHM 314) ORGANIC CHEMISTRY LABORATORY (CHM 314L)	4
HSS 401	NUTRITIONAL BIOCHEMISTRY I	3
HSS 408-408L	PHYSIOLOGY OF EXERCISE (HSS 408) PHYSIOLOGY OF EXERCISE LABORATORY (HSS 408L)	4
PSY 366	HEALTH PSYCHOLOGY	3
PHL/REL elective		3
Senior-Year		
First-Term		14
BIO 403-403L	PHYSIOLOGY I (BIO 403) PHYSIOLOGY LABORATORY I (BIO 403L)	4

HSS 405	TESTS AND MEASUREMENTS IN SPORT SCIENCE	3
HSS 409-409L	KINESIOLOGY (HSS 409) KINESIOLOGY LABORATORY (HSS 409L)	4
HSS 422	EXERCISE FOR SPECIAL POPULATIONS	3
Second-Term		12
HSS 428	HEALTH RESEARCH AND EVALUATION	3
HSS 435	CLINICAL ASSESSMENT	3
HSS 455	SELECTED STUDIES IN PHYSICAL EDUCATION	1 - 4
- - - CHM 420 or HSS 456	BIOCHEMISTRY (CHM 420) NUTRITIONAL BIOCHEMISTRY II (HSS 456)	3

Bachelor of Science with a major in Exercise Science and Fitness Management (EES)

Wellness is no longer a health trend or fad, it has become a lifestyle. Career opportunities available to graduates include exercise program directors in business, industry, hospitals, and communities; cardiac rehabilitators; and health and fitness club managers. Specific functions include testing, research, evaluating, and prescribing exercise-related activities, and promoting wellness programs.

		Sem. Hrs.
First-Year		
First-Term		18
BIO 151-151L	CONCEPTS OF BIOLOGY I: CELL AND MOLECULAR BIOLOGY (BIO 151) CONCEPTS OF BIOLOGY LABORATORY I: CELL AND MOLECULAR BIOLOGY (BIO 151L)	4
ENG 101	COLLEGE COMPOSITION I	3
HSS 101	INTRODUCTION TO THE UNIVERSITY	1
HSS 112	INTRODUCTION TO EXERCISE SCIENCE AND FITNESS MANAGEMENT	2
HSS 117	PERSONAL AND COMMUNITY HEALTH	3
HSS 182	AEROBIC CONDITIONING	2
- - - PHL 103 or REL 103	INTRODUCTION TO PHILOSOPHY (PHL 103) INTRODUCTION TO RELIGION (REL 103)	3
Second-Term		17
CMM 110	GROUP DECISION MAKING	1
CMM 111 or 112	INFORMATIVE PUBLIC SPEAKING (CMM 111) PERSUASIVE PUBLIC SPEAKING (CMM 112)	1
ENG 102	COLLEGE COMPOSITION II	3
HSS 226	COMPUTER APPLICATIONS IN SPORT SCIENCE	3
HST 103	THE WEST AND THE WORLD	3
PSY 101	INTRODUCTORY PSYCHOLOGY	3
- - - PHL 103 or REL 103	INTRODUCTION TO PHILOSOPHY (PHL 103) INTRODUCTION TO RELIGION (REL 103)	3
Sophomore-Year		
First-Term		16
CHM 123-123L	GENERAL CHEMISTRY (CHM 123) GENERAL CHEMISTRY LABORATORY (CHM 123L)	4
HSS 220	ADAPTED PHYSICAL EDUCATION	3
HSS 275	HISTORY OF PHYSICAL EDUCATION AND SPORT	3
HSS 305	HUMAN ANATOMY	3
Art Studies Requirement		3
Second-Term		17

CHM 124-124L	GENERAL CHEMISTRY (CHM 124) GENERAL CHEMISTRY LABORATORY (CHM 124L)	4
HSS 295	NUTRITION AND HEALTH	3
HSS 307	HUMAN PHYSIOLOGY	3
HSS 335	MASSAGE THERAPY	1
MTH 207	INTRODUCTION TO STATISTICS	3
PHL/REL elective		3
Junior-Year		
First-Term		16
ECO 203	PRINCIPLES OF MICROECONOMICS	3
HSS 320	ESSENTIALS OF STRENGTH CONDITIONING	3
HSS 405	TESTS AND MEASUREMENTS IN SPORT SCIENCE	3
HSS 409-409L	KINESIOLOGY (HSS 409) KINESIOLOGY LABORATORY (HSS 409L)	4
HSS 448	SAFETY AND THE LAW IN PHYSICAL EDUCATION AND SPORTS	3
Second-Term		15
CMM 113	INTERVIEWING	1
HSS 184	CONDITIONING	1
HSS 401	NUTRITIONAL BIOCHEMISTRY I	3
HSS 408-408L	PHYSIOLOGY OF EXERCISE (HSS 408) PHYSIOLOGY OF EXERCISE LABORATORY (HSS 408L)	4
HSS 435	CLINICAL ASSESSMENT	3
PSY 251	HUMAN GROWTH AND DEVELOPMENT	3
Senior-Year		
First-Term		14
HSS 230	BASIC ATHLETIC TRAINING	3
HSS 422	EXERCISE FOR SPECIAL POPULATIONS	3
HSS 428	HEALTH RESEARCH AND EVALUATION	3
HSS 490	EXERCISE SCIENCE INTERNSHIP-ON CAMPUS	2
PHL/REL elective		3
Second-Term		14
ACC 200	INTRODUCTION TO ACCOUNTING	3
CMM 332	PUBLICATION DESIGN	3
HSS 361	HEALTH CONSUMERISM	2
HSS 491 ¹	EXERCISE SCIENCE INTERNSHIP-OFF CAMPUS	1 - 3
English writing elective		3

¹Course should be taken for three semester hours.

Bachelor of Science with a major in Nutrition and Fitness (EHN)

This program offers classes from both the nutrition and exercise curriculum. Those who select the EHN major may take additional classes to qualify them to apply for a dietetic internship following graduation. Students may also fulfill medical or dental schools' requirements with this program.

First-Year		Sem. Hrs.
First-Term		17
BIO 151	CONCEPTS OF BIOLOGY I: CELL AND MOLECULAR BIOLOGY	3
ENG 101	COLLEGE COMPOSITION I	3
HSS 101	INTRODUCTION TO THE UNIVERSITY	1

HSS 210-210L	INTRODUCTORY FOODS (HSS 210) INTRODUCTORY FOODS LABORATORY (HSS 210L)	4
HSS 295	NUTRITION AND HEALTH	3
- - - PHL 103 or REL 103	INTRODUCTION TO PHILOSOPHY (PHL 103) INTRODUCTION TO RELIGION (REL 103)	3
Second-Term		17
CHM 123-123L	GENERAL CHEMISTRY (CHM 123) GENERAL CHEMISTRY LABORATORY (CHM 123L)	4
CMM 110	GROUP DECISION MAKING	1
CMM 111 or 112	INFORMATIVE PUBLIC SPEAKING (CMM 111) PERSUASIVE PUBLIC SPEAKING (CMM 112)	1
ENG 102	COLLEGE COMPOSITION II	3
HSS 113	INTRO TO DIETETICS AND NUTRITION	2
HSS 226	COMPUTER APPLICATIONS IN SPORT SCIENCE	3
- - - PHL 103 or REL 103	INTRODUCTION TO PHILOSOPHY (PHL 103) INTRODUCTION TO RELIGION (REL 103)	3
Sophomore-Year		
First-Term		17
CHM 124-124L	GENERAL CHEMISTRY (CHM 124) GENERAL CHEMISTRY LABORATORY (CHM 124L)	4
HSS 112	INTRODUCTION TO EXERCISE SCIENCE AND FITNESS MANAGEMENT	2
HSS 182	AEROBIC CONDITIONING	2
HSS 305	HUMAN ANATOMY	3
HST 103	THE WEST AND THE WORLD	3
MTH 207	INTRODUCTION TO STATISTICS	3
Second-Term		16
BIO 152	CONCEPTS OF BIOLOGY II: EVOLUTION AND ECOLOGY	3
HSS 184	CONDITIONING	1
HSS 307	HUMAN PHYSIOLOGY	3
HSS 320	ESSENTIALS OF STRENGTH CONDITIONING	3
PSY 101	INTRODUCTORY PSYCHOLOGY	3
Art Studies elective		3
Junior-Year		
First-Term		17
ANT 150	CULTURAL ANTHROPOLOGY	3
CHM 313	ORGANIC CHEMISTRY	3
CMM 113	INTERVIEWING	1
HSS 405	TESTS AND MEASUREMENTS IN SPORT SCIENCE	3
HSS 409-409L	KINESIOLOGY (HSS 409) KINESIOLOGY LABORATORY (HSS 409L)	4
HST 340 or 341 or 344	HISTORY OF SCIENCE (HST 340) HISTORICAL PERSPECTIVES ON SCIENCE, TECHNOLOGY, AND SOCIETY (HST 341) HISTORY OF SCIENCE, TECHNOLOGY, AND THE MODERN CORPORATION (HST 344)	3
Second-Term		13
HSS 408-408L	PHYSIOLOGY OF EXERCISE (HSS 408) PHYSIOLOGY OF EXERCISE LABORATORY (HSS 408L)	4
HSS 435	CLINICAL ASSESSMENT	3
English writing elective		3

PHL/REL elective	3
Senior-Year	
First-Term	15
HSS 401 NUTRITIONAL BIOCHEMISTRY I	3
HSS 422 EXERCISE FOR SPECIAL POPULATIONS	3
HSS 428 HEALTH RESEARCH AND EVALUATION	3
PSY 366 or 431 HEALTH PSYCHOLOGY (PSY 366) INTERVIEWING AND COUNSELING (PSY 431)	3
PHL/REL elective	3
Second-Term	15
HSS 402 NUTRITION FOR THE AGING ADULT	2
HSS 406 NUTRITION FOR MOTHER AND CHILD	2
HSS 456 NUTRITIONAL BIOCHEMISTRY II	3
HSS 491 ¹ EXERCISE SCIENCE INTERNSHIP-OFF CAMPUS	1 - 3
HSS 495 MEDICAL NUTRITION THERAPY	4
PHL/REL elective	3

¹Course should be taken for one semester hour.

Bachelor of Science with a major in Physical Education Pre K-12 (EDP)

This program is no longer offered.

Bachelor of Science with a major in Pre-Physical Therapy (EPT)

The Exercise Science and Pre-Physical Therapy program is focused on preparing students for entrance to graduate programs in physical therapy. It is designed to optimize graduates' chances of being accepted into some of the top physical therapy schools in the country. These graduate programs are highly selective, and both the undergraduate curriculum and the student's performance are considered in this competitive screening. Employment opportunities for physical therapists are growing faster than any other segment of the healthcare industry. Because of the depth and breadth of the curriculum, a graduate will also have preparation for careers in fitness management and sports rehabilitation.

	Sem. Hrs.
First-Year	
First-Term	18
BIO 151-151L CONCEPTS OF BIOLOGY I: CELL AND MOLECULAR BIOLOGY (BIO 151) CONCEPTS OF BIOLOGY LABORATORY I: CELL AND MOLECULAR BIOLOGY (BIO 151L)	4
CHM 123-123L GENERAL CHEMISTRY (CHM 123) GENERAL CHEMISTRY LABORATORY (CHM 123L)	4
ENG 101 COLLEGE COMPOSITION I	3
HSS 101 INTRODUCTION TO THE UNIVERSITY	1
HSS 114 INTRODUCTION TO PHYSICAL THERAPY	2
HSS 184 CONDITIONING	1
- - - PHL 103 INTRODUCTION TO PHILOSOPHY or REL (PHL 103) 103 INTRODUCTION TO RELIGION (REL 103)	3
Second-Term	16
CHM 124-124L GENERAL CHEMISTRY (CHM 124) GENERAL CHEMISTRY LABORATORY (CHM 124L)	4
ENG 102 COLLEGE COMPOSITION II	3
HSS 226 COMPUTER APPLICATIONS IN SPORT SCIENCE	3
MTH 148 INTRODUCTORY CALCULUS I	3

---	PHL 103 or REL 103	INTRODUCTION TO PHILOSOPHY (PHL 103) INTRODUCTION TO RELIGION (REL 103)	3
Sophomore-Year			
First-Term			17
HSS	305-305L	HUMAN ANATOMY (HSS 305) HUMAN ANATOMY LABORATORY (HSS 305L)	4
HST	103	THE WEST AND THE WORLD	3
MTH	207	INTRODUCTION TO STATISTICS	3
PHY	201-201L	GENERAL PHYSICS (PHY 201) GENERAL PHYSICS LABORATORY (PHY 201L)	4
PSY	101	INTRODUCTORY PSYCHOLOGY	3
Second-Term			17
CMM	110	GROUP DECISION MAKING	1
HSS	230	BASIC ATHLETIC TRAINING	3
HSS	307	HUMAN PHYSIOLOGY	3
PHY	202-202L	GENERAL PHYSICS (PHY 202) GENERAL PHYSICS LABORATORY (PHY 202L)	4
PSY	251	HUMAN GROWTH AND DEVELOPMENT	3
SOC	101	PRINCIPLES OF SOCIOLOGY	3
Junior-Year			
First-Term			18
BIO	309-309L	COMPARATIVE ANATOMY OF THE VERTEBRATES (BIO 309) COMPARATIVE ANATOMY LABORATORY (BIO 309L)	4
CHM	313-313L	ORGANIC CHEMISTRY (CHM 313) ORGANIC CHEMISTRY LABORATORY (CHM 313L)	4
HSS	275	HISTORY OF PHYSICAL EDUCATION AND SPORT	3
HSS	408-408L	PHYSIOLOGY OF EXERCISE (HSS 408) PHYSIOLOGY OF EXERCISE LABORATORY (HSS 408L)	4
PHL/REL elective			3
Second-Term			17
CMM	111 or 112	INFORMATIVE PUBLIC SPEAKING (CMM 111) PERSUASIVE PUBLIC SPEAKING (CMM 112)	1
HSS	320	ESSENTIALS OF STRENGTH CONDITIONING	3
HSS	409-409L	KINESIOLOGY (HSS 409) KINESIOLOGY LABORATORY (HSS 409L)	4
HSS	428	HEALTH RESEARCH AND EVALUATION	3
HSS	435	CLINICAL ASSESSMENT	3
PSY	363	ABNORMAL PSYCHOLOGY	3
Senior-Year			
First-Term			13
CMM	113	INTERVIEWING	1
HSS	220	ADAPTED PHYSICAL EDUCATION	3
HSS	405	TESTS AND MEASUREMENTS IN SPORT SCIENCE	3
HSS	422	EXERCISE FOR SPECIAL POPULATIONS	3
HSS	465	PHYSICAL THERAPY SEMINAR	3
Second-Term			13
BIO	152-152L	CONCEPTS OF BIOLOGY II: EVOLUTION AND ECOLOGY (BIO 152) CONCEPTS OF BIOLOGY LABORATORY II: EVOLUTION AND ECOLOGY (BIO 152L)	4

HSS 295	NUTRITION AND HEALTH	3
Art Studies elective		3
PHL/REL elective		3

Bachelor of Science with a major in Sport Management (ESM)

The Sport Management program prepares students for opportunities in sport, event, and facility management. In particular, Sport Management professionals gain positions in collegiate and professional organizations, sport clubs, and athletic federations, as well as public and private recreation. Opportunities are also available in arenas and convention centers, event management, and all forms of media.

	Sem. Hrs.
First-Year	
First-Term	16
ENG 101 COLLEGE COMPOSITION I	3
HSS 101 INTRODUCTION TO THE UNIVERSITY	1
HSS 111 INTRODUCTION TO SPORT MANAGEMENT	3
HST 103 THE WEST AND THE WORLD	3
--- ANT 150 CULTURAL ANTHROPOLOGY (ANT 150)	3
or ECO 203 PRINCIPLES OF MICROECONOMICS (ECO 203)	
POL 101 GLOBAL POLITICS (POL 101)	
or PSY 101 INTRODUCTORY PSYCHOLOGY (PSY 101)	
101 or SOC 204 MODERN SOCIAL PROBLEMS (SOC 204)	
--- PHL 103 INTRODUCTION TO PHILOSOPHY (PHL 103)	3
or REL 103 INTRODUCTION TO RELIGION (REL 103)	
Second-Term	17
CMM 110 GROUP DECISION MAKING	1
ENG 102 COLLEGE COMPOSITION II	3
HSS 130 PHYSICAL EDUCATION ACTIVITIES	1
HSS 226 COMPUTER APPLICATIONS IN SPORT SCIENCE	3
HSS 275 HISTORY OF PHYSICAL EDUCATION AND SPORT	3
MTH 207 INTRODUCTION TO STATISTICS	3
--- PHL 103 INTRODUCTION TO PHILOSOPHY (PHL 103)	3
or REL 103 INTRODUCTION TO RELIGION (REL 103)	
Sophomore-Year	
First-Term	14
CMM 111 or 112 INFORMATIVE PUBLIC SPEAKING (CMM 111)	1
PERSUASIVE PUBLIC SPEAKING (CMM 112)	
HSS 130 PHYSICAL EDUCATION ACTIVITIES	1
HSS 255 SPORT MANAGEMENT PRACTICUM	3
Course in Minor	3
Art Studies elective	3
English writing elective	3
Second-Term	15
HSS 250 PRINCIPLES OF SPORT MANAGEMENT	3
HSS 253 SPORT FACILITY OPERATIONS	3
Course in Minor	3
Course in Professional Competency	3
Physical & Life Science elective	3
Junior-Year	
First-Term	16
CMM 113 INTERVIEWING	1

HSS 285	SPORT MANAGEMENT FIELD EXPERIENCE	3
HSS 349	FINANCING SPORT OPERATIONS	3
Course in Minor		3
Course in Professional Competency		3
English writing elective		3
Second-Term		15
HSS 353	SPORTS MEDIA	3
HSS 354	SPORT IN THE GLOBAL COMMUNITY	3
HSS 357	SPORTS MARKETING	3
Course in Minor		3
Course in Professional Competency		3
Senior-Year		
First-Term		16
HSS 130	PHYSICAL EDUCATION ACTIVITIES	1
HSS 356	HR MANAGEMENT IN HEALTH AND SPORT	3
Course in Minor		3
Course in Professional Competency		3
PHL/REL elective		3
Physical & Life Science elective		3
Second-Term		16
HSS 130	PHYSICAL EDUCATION ACTIVITIES	1
HSS 448	SAFETY AND THE LAW IN PHYSICAL EDUCATION AND SPORTS	3
HSS 485	SPORT MANAGEMENT INTERNSHIP	3
Course in Minor		3
Course in Professional Competency		3
PHL/REL elective		3

Courses (Collapse All Courses)

Code	Title	Sem. Hrs.
EDI 498	HONORS THESIS	3
Selection, design, investigation, and completion of an independent, original research thesis under the guidance of a faculty research director. Restricted to students in the Berry Scholars Program with permission of the program director.		
EDI 499	HONORS THESIS	3
Selection, design, investigation, and completion of an independent, original research thesis under the guidance of a faculty research director. Restricted to students in the Berry Scholars Program with permission of the program director.		
HSS 101	INTRODUCTION TO THE UNIVERSITY	1
Examination of the values that foster academic progress in the College, discussion of strategies for taking full advantage of academic opportunities, and integrating formal and experiential learning.		
HSS 109	PERSONAL AND PROFESSIONAL DEVELOPMENT OF THE TEACHER	2
A course to help the student define professional goals and assess personal strengths and weaknesses in the light of competencies deemed essential for a physical education teacher.		
HSS 111	INTRODUCTION TO SPORT MANAGEMENT	3
A course to help the student define professional goals and assess personal strengths and weaknesses in the light of competencies deemed essential for a sport management career.		

HSS 112	INTRODUCTION TO EXERCISE SCIENCE AND FITNESS MANAGEMENT	2
	A course to help the student define professional goals and assess personal strengths and weaknesses in the light of competencies deemed essential for an exercise science and fitness management career.	
HSS 113	INTRO TO DIETETICS AND NUTRITION	2
	To acquaint the students interested in a career in dietetics or nutrition with the professions, roles, responsibilities, and opportunities afforded them. Examples of practice for each area will be explored. Required by all entering first-year students and open to students interested in food and nutrition careers.	
HSS 114	INTRODUCTION TO PHYSICAL THERAPY	2
	An introductory seminar discussing the history, present and future, of physical therapy. A successful undergraduate preparation for entrance into this highly selective graduate program will be this field's secondary focus.	
HSS 117	PERSONAL AND COMMUNITY HEALTH	3
	Survey of health science and principles of preventive medicine as introduction to other courses in health and sport science.	
HSS 130	PHYSICAL EDUCATION ACTIVITIES	1
	Selected courses offered to all University students.	
HSS 182	AEROBIC CONDITIONING	2
	Aerobic conditioning techniques developed primarily through running programs. Required for EES and EDP majors.	
HSS 184	CONDITIONING	1
	A course designed for Exercise Science and Pre-Physical Therapy majors to introduce them to concepts and techniques of aerobic conditioning using exercise devices such as treadmills, bicycle ergometers, stairmasters, rowing machines, etc.	
HSS 185	RHYTHM, DANCE, GAMES & GYMNASTICS	2
	Theory and practice of Educational Games, Educational Dance, and Educational Gymnastics.	
HSS 187	TEAM SPORTS	2
	Content and pedagogical content knowledge of selected team sports will be presented. Overview of history, rules, officiating, strategy, and skill practice shall be provided. Students will also gain competence in the instruction, adaptation, modification, and administration of the selected team sports.	
HSS 200	MOTOR LEARNING DEVELOPMENT	2
	Investigation of fundamental principles of human movement. Physical and psychological variables essential to motor learning are considered.	
HSS 210	INTRODUCTORY FOODS	2
	Study of scientific principles applied to the processing and preparation of food to maintain nutritional quality and aesthetic value. Corequisite(s): HSS 210L.	
HSS 210L	INTRODUCTORY FOODS LABORATORY	2
	Course to accompany HSS 210 lecture. Corequisite(s): HSS 210.	
HSS 220	ADAPTED PHYSICAL EDUCATION	3
	A course to prepare prospective teachers to adapt a physical education program so all children and youth can successfully participate in activity programs. Study of the atypical child in order to organize and administer a program which will meet individual needs.	
HSS 223	BASIC MOVEMENT EDUCATION	3

The child-centered approach to learning in physical education designed to help children develop greater understanding of themselves as movers, the space in which to move and the factors affecting efficient movement. Developmentally appropriate motor skills, movement concepts and activities (games, dance and gymnastics) are presented as the curriculum model K-12.

HSS 226 COMPUTER APPLICATIONS IN SPORT SCIENCE 3

The course focuses on understanding the practical uses of computers as a tool in exercise science and sport management activities. Emphasis is placed on demonstrated proficiency in word processing, spreadsheets, graphics, Power Point, and databases and the evaluation and use of specific exercise science and sport management packages. Emphasis will be on use of IBM compatible computers.

HSS 230 BASIC ATHLETIC TRAINING 3

Application of principles and methods involved in prevention, care, and treatment of athletic injuries.

Prerequisite(s): HSS 305.

HSS 250 PRINCIPLES OF SPORT MANAGEMENT 3

Examination of the nature of management from theoretical and practical perspectives in a variety of sport settings. Focus on managerial functions and skills.

Prerequisite(s): HSS 111.

HSS 253 SPORT FACILITY OPERATIONS 3

The processes of planning, constructing, equipping, maintaining, and operating sport facilities are investigated in this course.

HSS 255 SPORT MANAGEMENT PRACTICUM 3

The sport management practicum and seminar is designed for students to gain insight into a wide array of field experiences within this discipline. Students are given choices of field work within a variety of sport and recreation settings. In addition, a weekly seminar is required as part of the practicum experience.

HSS 275 HISTORY OF PHYSICAL EDUCATION AND SPORT 3

Study of the historical development of physical education and sport as it relates to significant events in the history of Western civilization.

HSS 285 SPORT MANAGEMENT FIELD EXPERIENCE 3

This experience is done after completion of HSS 255. 150 clock hours need to be completed for the 3 semester hour experience.

HSS 295 NUTRITION AND HEALTH 3

Study of the nutrient needs of humans and of their choices as modified by socioeconomic, cultural, and life cycle factors.

HSS 300 METHODS OF TEACHING SECONDARY PHYSICAL EDUCATION 3

Study of the methods and skills essential for effective teaching in physical education.

Prerequisite(s): HSS 200.

HSS 302 GLOBAL AND CULTURAL NUTRITION 3

Study of the relationship among consumers, the food; the historical evolution of food; socioeconomic influences on food.

HSS 303 FOOD SERVICE SYSTEMS MANAGEMENT 2

Study of food service organizations and management. Demonstrate the importance of menu as the primary control of the food service system - factors affecting menu planning, customer satisfaction, and management decisions.

HSS 304 INSTITUTIONAL QUANTITY FOOD BUYING 2

To study quantity food production in foodservice system through application of principles for determining needs and procuring, producing and storing foods in quantity, along with institutional equipment selection, maintenance, and layout.

Prerequisite(s): HSS 210, 210L; a Multipurpose Computer Account (AKA Dial-in/PPP/Flyernet account); basic IBM compatible computer skills.

HSS 305	HUMAN ANATOMY	3
Study of the human body with emphasis on the interdependent relationships of structure and function.		
HSS 305L	HUMAN ANATOMY LABORATORY	1
Hands-on study of the human body with emphasis on the interdependent relationships of structure and function through the use of interactive anatomy.		
HSS 306	HUMAN PHYSIOLOGY	3
Study of the functions of body systems. Cell physiology, structural contributions or limitations, concepts of biochemistry, control of functions, physiological limits of function, and examples of pathologic developments.		
HSS 307	HUMAN PHYSIOLOGY	3
A survey of the functions of body systems with respect to general cell physiology and specialization into tissues, structural contributions to tissue/organ physiology, pertinent concepts of biochemical physiology, tissue metabolism and energy/food requirements during stress and exercise, recent research into control and regulation of functions of major systems, physiologic limitations outside environmental ranges, and selected examples of pathophysiology.		
Prerequisite(s): CHM 123, 124; HSS 305.		
HSS 308	SCIENCE OF HUMAN MOVEMENT	3
Provides students with information and skills that will enhance their understanding of the scientific principles of human movement. Topics surveyed include: anatomy, physiology, mechanics, physics, nutrition, and biochemistry, as well as their relationship to health, fitness, and athletic performance.		
HSS 310	COACHING BASKETBALL	2
The theory, skills, strategies, and methods of coaching basketball. First term, each year. Elective.		
HSS 312	COACHING FOOTBALL	2
The theory, skills, strategies, and methods of coaching football. Second term, each year. Elective.		
HSS 314	COACHING BASEBALL	2
The theory, skills, strategies, and methods of coaching baseball. Elective.		
HSS 316	COACHING SOCCER	1
The theory, skills, strategies, and methods of coaching soccer. Elective.		
HSS 317	COACHING TRACK AND FIELD	1
The theory, skills, strategies, and methods of coaching track and field. Elective.		
HSS 318	TEACHING AND COACHING GOLF	1
The theory, skills, strategies, and methods of teaching and/or coaching golf.		
HSS 320	ESSENTIALS OF STRENGTH CONDITIONING	3
A course designed to prepare students for the certified strength and conditioning specialist (NSCA) exam. Topics included will pertain to muscular strength and endurance conditioning, physiology of strength conditioning, muscular strength testing and evaluation, and organization/administration of strength training programs.		
HSS 324	METHODS OF TEACHING ELEMENTARY PHYSICAL EDUCATION	3

Basic theory, techniques, and methods for conducting a program for elementary students.

Prerequisite(s): HSS 223; junior standing.

HSS 325	WOMEN IN SPORT	3
This course studies concepts about women, sport, and society from both a contemporary and historical perspective in an effort to understand the role of women in sport. Additionally, this course will help students understand the evolution and future of women in sport in both the U.S. and internationally.		
HSS 334	CPR FOR CHILDREN	0
Students register for this course in conjunction with HSS 333		
HSS 335	MASSAGE THERAPY	1
Introduction to bodywork and issues of health and wellness. Laboratory sessions will provide an opportunity to integrate and apply massage knowledge and skill drawn from a variety of healing systems; Swedish Massage, Acupressure, Reflexology and Hydrotherapy. Designed for students in Exercise Science, and Pre-Physical Therapy. Required that students have had Human Anatomy, Human Physiology.		
HSS 344	OUTDOOR EDUCATION	2
Action seminar to familiarize teachers and recreation leaders with the curricula, teaching techniques, and skills for good outdoor education programs.		
HSS 349	FINANCING SPORT OPERATIONS	3
The financial concepts and theories and their application in the professional intercollegiate, recreational and commercial sport industries. Topics include revenues and expenses of professional, intercollegiate, and private sport industries; issues affecting these revenues and expenses; fundraising at the intercollegiate level; ownership in sport; and public and private funding for non-profit sports programs.		
HSS 353	SPORTS MEDIA	3
This is the study and the appraisal of the media and the role that it plays in contemporary sports. Attention is also given to preparation and evaluation of media sports presentations.		
HSS 354	SPORT IN THE GLOBAL COMMUNITY	3
Analyze the growth and development of sport throughout the global community with an emphasis on the structure and organization of sport. Additionally, the production of major sport events, such as the Olympics and World Cup Soccer Tournament, will be examined.		
Prerequisite(s): HSS 250.		
HSS 356	HR MANAGEMENT IN HEALTH AND SPORT	3
This course is an overview of leadership and human resource management. The course examines the techniques, policies, processes, strategies, and practices used by health-related and sport companies and managers to effectively and efficiently utilize human resources.		
Prerequisite(s): HSS 255.		
HSS 357	SPORTS MARKETING	3
Course content is designed to give students an understanding of marketing principles applied to sport, sport events, and sport products. Marketing strategies including the sales, promotions, and advertising of sport will be emphasized.		
HSS 361	HEALTH CONSUMERISM	2
Sorting fad from fact in using health products and services from the present market-includes fad diets, nutrition nonsense, survey of medical hoaxes, misleading advertising and protection that is available to all health consumers. Research into current fads and frauds and exposure of health myths and misconceptions is included.		
HSS 401	NUTRITIONAL BIOCHEMISTRY I	3

Extension of the student's knowledge of the science of nutrition, stressing the metabolism of food constituents and recent advances in the field of nutrition.

Prerequisite(s): (BIO 403 or HSS 307); CHM 314; HSS 295.

HSS 402 NUTRITION FOR THE AGING ADULT 2

The study of the process of aging through adulthood. This will focus on the changes in nutritional needs during the aging process. Attention will be paid to the community resources available to help provide optimum nutrition to healthy people as they age.

HSS 404 COACHING INTERNSHIP 1 - 3

Practical coaching experience working in local schools with interscholastic teams. Elective.

HSS 405 TESTS AND MEASUREMENTS IN SPORT SCIENCE 3

A direct relationship of tests and measurements to the field of sport science.

HSS 406 NUTRITION FOR MOTHER AND CHILD 2

Physiologic and biochemical principles and results of current research are used to build a foundation for exploration of nutrition from the stages of growth and development, to maturation, and aging. These serve as the basis for consideration of the social, economic, physiologic, and lifestyle factors that influence nutrition status, food choices, and specific life state concerns. Particular attention is paid to using the principles of nutrition in planning and implementing recommendations for dietary change.

Prerequisite(s): HSS 295, 307.

HSS 408 PHYSIOLOGY OF EXERCISE 3

Detailed study of the effects of exercise on human functions, as a basis for the study of physical fitness, motor skills, and athletic training.

Prerequisite(s): HSS 305; (HSS 306 or 307).

HSS 408L PHYSIOLOGY OF EXERCISE LABORATORY 1

Course to accompany HSS 408. Weekly two-hour laboratory stressing practical applications of exercise physiology.

Prerequisite(s): HSS 305; (HSS 306 or 307).

HSS 409 KINESIOLOGY 3

Investigation and analysis of human motion based on anatomical, physiological, and mechanical principles.

Prerequisite(s): HSS 305; (HSS 306 or 307).

HSS 409L KINESIOLOGY LABORATORY 1

Course to accompany HSS 409. Weekly two-hour laboratory stressing the practical application of kinesiology.

HSS 417 STUDENT TEACHING 12

Teaching under close supervision in the specialized subject area in both elementary and high school grades for a minimum of twelve weeks. A seminar is held once a week.

Prerequisite(s): Formal admission a full semester in advance.

HSS 422 EXERCISE FOR SPECIAL POPULATIONS 3

A course designed to prepare prospective exercise specialists to adapt physical education and exercise so that all individuals can successfully participate in activity programs. A study of various disabilities and conditions in order to organize and administer a program which will meet individual needs.

HSS 428 HEALTH RESEARCH AND EVALUATION 3

An introduction to statistical analysis and research methodology. Emphasis will be on the use of these in determining health statistics, designing and evaluating health studies, accessing data banks; collection, analysis and interpretation of health statistics.

HSS 435 CLINICAL ASSESSMENT 3

Evaluation of exercise electrocardiograms from healthy persons.

Prerequisite(s): HSS 307, 408, 408L.

HSS 448 SAFETY AND THE LAW IN PHYSICAL EDUCATION AND SPORTS 3
Study of the legal aspects of physical education and athletics. Analysis of specific court cases. Formulation of safety policies.

HSS 455 SELECTED STUDIES IN PHYSICAL EDUCATION 1 - 4
Investigating, analyzing, and reporting on a problem in physical education.
Prerequisite(s): Permission of department chairperson.

HSS 456 NUTRITIONAL BIOCHEMISTRY II 3
Integration and application of principles of physiology, nutrition and biochemistry to the processes of metabolic function.

HSS 465 PHYSICAL THERAPY SEMINAR 3
Addresses current issues facing prospective and present physical therapists in a reforming healthcare industry.

HSS 470 CURRICULUM DEVELOPMENT IN PHYSICAL EDUCATION 3
Principles and procedures for curriculum construction and revision. Study of philosophies (institutional, professional, and personal) and their relationship to curriculum development.

HSS 485 SPORT MANAGEMENT INTERNSHIP 3
Work experience carried out under the auspices and supervision of the sports management staff. Application and permission of director of Sports Management program required.

HSS 490 EXERCISE SCIENCE INTERNSHIP-ON CAMPUS 2
Work experience carried out under the auspices and supervision of the University of Dayton Wellness Program staff. Application and permission of director of Exercise Science and Fitness Management program required.

HSS 491 EXERCISE SCIENCE INTERNSHIP-OFF CAMPUS 1 - 3
Work experience carried out under the auspices of an industrial, commercial, educational, government or health agency-related wellness program. Application and permission of director of Exercise Science and Fitness Management program required.

HSS 495 MEDICAL NUTRITION THERAPY 4
Includes the study of professional development assessment, nutrition care planning and the appropriate medical nutrition physiology in humans. Designed for those planning to become a registered dietician.
Prerequisite(s): (BIO 403 or HSS 307); CHM 314; HSS 401.





College of Arts and Sciences

(HST) History (Collapse Description)

History critically studies the past and those key values which have shaped society. History also provides students with a sense of perspective and with the ability to make critical judgments. Those with a sharply honed historical consciousness know that often what appears to be a simple solution to a simple problem will not work because unexpressed historical forces and traditions lie just beneath the surface. Therefore, historical consciousness helps to make the world comprehensible. To be ignorant of history is to be, in a very fundamental way, intellectually defenseless, unable to understand the workings of this or other societies. Thus all totalitarian societies have stringently controlled the study and writing of history. They recognize that a free mind needs to know its past, to debate and discuss how the world came to be as it is, in order to know what to defend and what to change and how to resist imposed ideologies.

Students majoring in history are offered a flexible curriculum that allows them to have a double major or one or more minors. Students are also strongly encouraged to develop interdisciplinary areas of concentration to meet their interests and vocational goals. Examples of areas of concentration are pre-law, business, international affairs, and historical administration, preservation, and archival management. History majors should consult the department chairperson for a departmental advising brochure and further details. History majors pursue professions in numerous fields including education, law and government, international affairs, archives and museums, communications, and business.

Students in B.A. programs can acquire teacher licensure through the E11A program (See EDT). For details, consult the department chairperson.

A history minor consists of eighteen semester hours.

Faculty

Julius A. Amin, Chairperson
 Professors Emeriti: Alexander, Eid, Mathias, Taylor, Vines
 Professors: Amin, Bednarek, Heitmann, Morman, Palermo, Schweikart
 Associate Professors: Cadegan, Carlson, Darrow, Fleischmann, Flockerzie, Hume, Merithew, Santamarina, Trollinger
 Assistant Professors: Agnew, Borbonus, Carter, Reid
 Adjunct Professor: Gannon
 Lecturers: Bartley, Uhlman

Majors/Minors (Collapse All)

Major/Minor Name

Bachelor of Arts with a major in History (HST)

	Sem. Hrs.
History	36
HST (103 or 198), 251, 252, 301	12
HST electives (300-level) ¹	18
Select two HST seminars (400-level) ²	6

Liberal Studies Curriculum

Humanities and Fine Arts

Philosophy and Religious Studies	12
Literature: English or Foreign Language	3
Creative and Performing Arts	3
Foreign Language and/or Additional Arts and/or Humanities	3-9

the Bulletin

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Social Sciences	12
Mathematics (excludes MTH 102, 204, 205)	3
Natural Sciences	11
Communication Competencies	0-9
Introduction to the University: ASI 150	0-1
General Education courses/academic electives to total at least³	124

¹These electives should be distributed so that the student will have taken history (HST) electives in three geographical areas: United States, Europe, and at least one of the following: Africa, Asia, Latin America, Middle East.

²Three semester hours of the seminar requirement may be achieved through the fulfillment of an experiential component earned through completion of three semester hours of HST 495 Internship.

³For History majors, this total should include either six to eight semester hours in a foreign language or six semester hours in quantitative skills courses (e.g., computer science, statistics, or mathematics). Where appropriate, this credit may apply to other requirements as well.

Minor in History (HST)

	Sem. Hrs.
History	18
HST 103, (251 or 252)	6
Select two courses in American history (300- or 400-level)	6
Select two courses in non-American history (300- or 400-level)	6

Courses (Collapse All Courses)

Code	Title	Sem. Hrs.
HST 103	THE WEST AND THE WORLD	3
	Survey of key themes in world history including the social, economic, cultural, political, and environmental forces that shaped the human past throughout the globe.	
HST 198	HISTORY SCHOLARS' SEMINAR	3
	Study and seminar discussion of selected historical documents dealing with major events and trends in Western civilization since 1715. Open by permission only to first-year students in the Berry Scholars Program.	
HST 251	AMERICAN HISTORY TO 1865	3
	Survey of the development of the American nation from colonial times to 1865; political trends, economic and social foundations of American institutions.	
	Prerequisite(s): HST 103 or equivalent.	
HST 252	AMERICAN HISTORY SINCE 1865	3
	Survey of the development of the nation after the Civil War, stressing social, economic, and political problems.	
	Prerequisite(s): HST 103 or equivalent.	
HST 300	CAREER DEVELOPMENT IN HISTORY	1
	Exploration of career opportunities open to History majors, with special emphasis on strategic planning for a career, creating a job portfolio, and mastering the practical mechanics of job searching.	
	Prerequisite(s): (HST 103 or equivalent); HST 301 (may be taken as a corequisite).	
HST 301	RESEARCH METHODS SEMINAR	3
	Historical methods, philosophy, and introductory historiography, the last based on the professor's field of specialization. Required for all history majors.	
	Prerequisite(s): HST 103 or equivalent.	

- HST 302 HISTORY OF ANCIENT GREECE 3
Survey of Greek history and culture from the Bronze Age to Alexander the Great.
Prerequisite(s): HST 103 or equivalent.
- HST 303 HISTORY OF THE ROMAN REPUBLIC AND EMPIRE 3
Survey of Roman history with emphasis on the political, social, and institutional evolution of the Roman state and the organization and structure of the Roman Empire.
Prerequisite(s): HST 103 or equivalent.
- HST 305 MEDIEVAL EUROPE 3
European history from the fourth to the fifteenth century, including birth of Middle Ages; development of Christianity; Byzantine, Islamic, and Carolingian Empires; feudalism; Crusades; rise of universities; birth of national cultures.
Prerequisite(s): HST 103 or equivalent.
- HST 307 RENAISSANCE AND REFORMATION 3
The development of European history from the fourteenth to the middle of the seventeenth century. Emphasis on the economic, political, social, and religious aspects of the Renaissance, Protestant Revolution, and Catholic Reformation.
Prerequisite(s): HST 103 or equivalent.
- HST 308 SHAKESPEARE'S WORLDS 3
A concentrated analysis of the various worlds created in Shakespeare's plays and their interconnection with and depiction of the major elements of the historical world of early modern England. In the process of this integrated analysis, the Historical Study and Arts Study domains will be respected and taught as separate disciplines. This course is cross-listed with ENG 363.
Prerequisite(s): HST 103 or equivalent.
- HST 311 OLD REGIME EUROPE 3
From the later Reformation to the era of the French Revolution: intellectual and cultural development; political, economic, and social trends of the Old Regime.
Prerequisite(s): HST 103 or equivalent.
- HST 312 AGE OF DEMOCRATIC REVOLUTIONS 3
Historical analysis of the ideological, political, social and economic changes of the late eighteenth and early nineteenth centuries, emphasizing developments in France and Europe.
Prerequisite(s): HST 103 or equivalent.
- HST 313 THE DUAL REVOLUTION AND ITS CONSEQUENCES - EUROPE 3
1815-1914
Historical analysis of nineteenth century Europe emphasizing the ideological, political, economic and social consequences of the Industrial and French revolutions, commonly known as the Dual Revolution.
Prerequisite(s): HST 103 or equivalent.
- HST 314 MODERN EUROPE IN DECLINE - 1890-1945 3
Historical study of the decline and fall of European civilization from the eve of World War I to the end of World War II, including an examination of political, economic, social, and cultural conditions.
Prerequisite(s): HST 103 or equivalent.
- HST 315 EUROPE IN THE POSTWAR ERA - 1945 TO THE PRESENT 3
Historical survey of domestic and foreign politics, economics, society, and culture in postwar Europe (East and West) from 1945 to the present.
Prerequisite(s): HST 103 or equivalent.
- HST 316 BEETHOVEN AND HIS ERA 3

Survey of the music of Ludwig van Beethoven, including orchestral works and chamber music, opera, keyboard and sacred music; and a survey of the historical context in which Beethoven lived and worked - Europe and the Habsburg Empire of the late eighteenth and early nineteenth centuries, and especially Vienna, the Habsburg capital. Beethoven is the culmination of the High Classic style and also the first of a new generation of Romantic composers.

Prerequisite(s): HST 103 or equivalent.

HST 319 HISTORY OF LONDON 3

Study of the evolution of London from a small Roman town to the world's first industrial metropolis. Particular attention to social and environmental conditions and the life of the people.

Prerequisite(s): HST 103 or equivalent.

HST 320 EUROPEAN MILITARY HISTORY 3

Survey of warfare on the European continent from classical Greece through World War II emphasizing military institutions, organization, weapons, and campaigns and the role of the military in society.

Prerequisite(s): HST 103 or equivalent.

HST 321 MODERN FRANCE 3

French history from the Bourbon Restoration to the present. Emphasis on political, socio-economic, and cultural factors.

Prerequisite(s): HST 103 or equivalent.

HST 322 HISTORY OF ENGLAND 3

Major forces and trends in the history of England from the early medieval period to the present, including their influence on social history and literature.

Prerequisite(s): HST 103 or equivalent.

HST 323 MODERN GERMANY 3

Analysis of the development of the German state from 1848 through the period of unification, Second Empire, Weimar Republic, Third Reich, the post-World War II Germanies, to the present.

Prerequisite(s): HST 103 or equivalent.

HST 324 COMPARATIVE NATIONALISM 3

Comparative study of the origins and consequences of national movements throughout the world. Attention given to the historiography of nationalism and the fate of the nation-state idea in a number of temporal, geographic, political and cultural settings.

Prerequisite(s): HST 103 or equivalent.

HST 325 HISTORY OF RUSSIA TO 1860 3

History of Kievan Russia and Orthodox Christianity, the Mongol Conquest, the rise of autocracy, reforms and rebellions, revolutionary movements, and the rise of the Empire to the Crimean War.

Prerequisite(s): HST 103 or equivalent.

HST 326 RUSSIA, THE SOVIET UNION AND BEYOND, 1860-PRESENT 3

Social, political, and cultural history of Russia from the great reforms of the late empire, through the wars, revolutions, and reconstructions of the Soviet Period, to the present.

Prerequisite(s): HST 103 or equivalent.

HST 327 NATIONAL CULTURES OF THE SOVIET UNION AND ITS SUCCESSOR STATES 3

The history of the formation of the Soviet Union and of national and cultural relations between the Russians and their Slavic, Baltic, Caucasus, Central Asian, and Siberian neighbors.

Prerequisite(s): HST 103 or equivalent.

HST 328 HISTORY OF EASTERN EUROPE 3

Survey of the history of the nations lying between Germany and the Soviet Union, the Baltic and Aegean Seas, stressing medieval and early modern background as a foundation of contemporary history.

Prerequisite(s): HST 103 or equivalent.

HST 330 HISTORY OF EAST ASIA TO 1800

3

Survey of East Asian history from the formation of ancient states to the establishment of the dynastic hegemonies of the seventeenth and eighteenth centuries. Analysis of social, political, and cultural change in East Asia through the intensive reading of Chinese, Japanese, and Korean primary sources in translation.

Prerequisite(s): HST 103 or equivalent.

HST 331 HISTORY OF INDIA

3

Survey of the development of civilization on the Indian subcontinent from the first extant records (c. 2500 BCE) to post-Independence modern India in connection with the B.A. Program in Philosophy.

Prerequisite(s): HST 103 or equivalent.

HST 332 MODERN CHINA AND JAPAN

3

Study of the economic, political, social, and cultural developments of modern China and Japan from the eighteenth century to the present.

Prerequisite(s): HST 103 or equivalent.

HST 333 MODERN MIDDLE EAST

3

Survey of the Ottoman Empire, Iran, Egypt, and the modern states of the Middle East, emphasizing the development of nationalism and the area's role in international politics.

Prerequisite(s): HST 103 or equivalent.

HST 334 HISTORY OF THE PALESTINIAN-ISRAELI CONFLICT

3

Study of the history of the Palestinian-Israeli conflict from its beginnings in the late nineteenth century up to the present, with emphasis on a variety of historical interpretations of the actions and perspectives of the different parties involved.

Prerequisite(s): HST 103 or equivalent.

HST 335 HISTORY OF SOUTH ASIA

3

Survey of the major political, religious, cultural and economic developments on the Indian subcontinent over the past 500 years.

Prerequisite(s): HST 103 or equivalent.

HST 336 HISTORY OF AFRICA TO NINETEENTH CENTURY

3

Study of African history from the emergence of Africa's ancient kingdoms to the end of the trans-Atlantic slave trade in the nineteenth century.

Prerequisite(s): HST 103 or equivalent.

HST 337 HISTORY OF AFRICA - 19TH CENTURY TO THE PRESENT

3

Emphasis: colonialism and its impact, the growth of nationalism and the problems of contemporary Africa.

Prerequisite(s): HST 103 or equivalent.

HST 338 STATE AND SECESSION IN SOUTH ASIA

3

Survey of the failure of the nation-state and the rise of secessionist movements in South Asia since 1947.

Prerequisite(s): HST 103 or equivalent.

HST 339 HISTORY OF SOUTH AFRICA

3

Study of South African society with emphasis on historical interpretations of the origins of segregation, economic growth, nationalism, Apartheid, Bantustans, and other issues of contemporary significance.

Prerequisite(s): HST 103 or equivalent.

HST 340 HISTORY OF SCIENCE

3

Survey of the development of science from its origins in the ancient world to the present.

Prerequisite(s): HST 103 or equivalent.

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| HST 341 | HISTORICAL PERSPECTIVES ON SCIENCE, TECHNOLOGY, AND SOCIETY | 3 |
| <p>Historical study with an institutional focus of how science and science-based technology have interacted with American society from the Colonial era to the present. Central to this course is the genesis of mass production, its coupling with mass distribution, and the rise of the industrial research laboratory. Primary topics include the Industrial Revolution, the revolution in transport, the introduction of new technologies in the electrical, aviation, automotive, nuclear, petrochemical, and pharmaceutical industries, and the relationship between these science-based technologies and society.</p> <p>Prerequisite(s): HST 103 or equivalent.</p> | | |
| HST 342 | ENVIRONMENTAL HISTORY OF THE AMERICAS | 3 |
| <p>A comparison and contrast of the histories of conservationism and environmentalism in the United States, Canada and Latin America.</p> <p>Prerequisite(s): HST 103 or equivalent.</p> | | |
| HST 343 | HISTORY OF CIVIL ENGINEERING | 3 |
| <p>Historical study of the development of civil engineering from the origins in the ancient world to the present.</p> <p>Prerequisite(s): HST 103 or equivalent.</p> | | |
| HST 344 | HISTORY OF SCIENCE, TECHNOLOGY, AND THE MODERN CORPORATION | 3 |
| <p>Historical study of the emergence of twentieth-century science-based industry.</p> <p>Prerequisite(s): HST 103 or equivalent.</p> | | |
| HST 346 | HISTORY OF AMERICAN AVIATION | 3 |
| <p>This course will examine the influence of aviation on the American culture, economy, and military. It will also highlight the development of aviation/aerospace technology.</p> <p>Prerequisite(s): HST 103 or equivalent.</p> | | |
| HST 347 | SEX, RACE, AND SCIENCE | 3 |
| <p>Examines the development of scientific research on sex, race, and human nature focusing especially on the biological and the human sciences. Topics will include race science, the study of sex and sexuality, evolutionary accounts of human development, and relations between science and society from 1700.</p> <p>Prerequisite(s): HST 103 or equivalent.</p> | | |
| HST 348 | LIFE AND TECHNOLOGY | 3 |
| <p>Study of how conceptions of life and technology have been tied together in key historical periods: from the early modern era, the industrial age, and the information age. Topics include life and mechanical philosophy; energy, work and life; cybernetics; reproductive technologies and genetic engineering; bioinformatics; and automata and robots.</p> <p>Prerequisite(s): HST 103 or equivalent.</p> | | |
| HST 349 | TECHNOLOGY AND THE CULTURE OF WAR | 3 |
| <p>Investigation of the role of invention and engineering as it has been related to defense and war throughout the ages, focusing on the interrelationship of policy, strategy, organization, and technology from a global perspective.</p> <p>Prerequisite(s): HST 103 or equivalent.</p> | | |
| HST 350 | GAY AND LESBIAN U.S. HISTORY | 3 |
| <p>Upper level survey course which traces the history and trajectory of Gay and Lesbian communities in the U.S.</p> <p>Prerequisite(s): HST 103.</p> | | |
| HST 351 | AMERICAN WOMEN'S AND GENDER HISTORY | 3 |
| <p>Historical study of the changing roles of women in American society, including examination of men's and women's gender roles and the ways in which social, cultural, political, economic, legal, and political factors shape and change gender roles.</p> <p>Prerequisite(s): HST 103 or equivalent.</p> | | |

- HST 352 HISTORY OF THE AMERICAN FAMILY 3
Survey of the historical development of American family life from the colonial period to the present.
Prerequisite(s): HST 103 or equivalent.
- HST 353 HISTORY OF WOMEN IN EUROPEAN SOCIETIES 3
Study of the changing roles of women in European societies from the roots of industrialization to the present.
Prerequisite(s): HST 103 or equivalent.
- HST 354 HISTORY OF WOMEN AND GENDER IN THE MIDDLE EAST 3
Study of the history of the evolving roles and status of women in Middle Eastern societies, from the early modern period to present.
Prerequisite(s): HST 103 or equivalent.
- HST 355 AMERICAN URBAN HISTORY 3
Historical analysis of community life in American society: the nature and development of small towns, cities, and suburbs; communal experience, social organizations, and political culture.
Prerequisite(s): HST 103 or equivalent.
- HST 356 COMPARATIVE HISTORY OF WOMEN IN THE THIRD WORLD 3
Study of the comparative histories of women in Third World societies from a global perspective, using specific case studies of women in different societies around the world.
Prerequisite(s): HST 103 or equivalent.
- HST 357 LATIN AMERICA IN THE TWENTIETH CENTURY 3
Intensive examination of revolution and reaction in today's Latin America and the implications for those who formulate U.S. foreign policy.
Prerequisite(s): HST 103 or equivalent.
- HST 358 SOCIAL AND CULTURAL HISTORY OF LATIN AMERICA 3
Survey of social and cultural history of Latin America and the Caribbean from pre-Columbian times to the present. Emphasis on the interaction between the European colonizer and the Amerindian and African peoples of the hemisphere.
Prerequisite(s): HST 103 or equivalent.
- HST 359 HISTORY OF AMERICAN CITY PLANNING 3
Historical analysis of efforts by Americans to shape the urban environment, focusing on the emergence of the discipline and profession of city planning. Includes examination of U.S. planning theories developed within a larger Atlantic community.
Prerequisite(s): HST 103 or equivalent.
- HST 360 U.S. LEGAL AND CONSTITUTIONAL HISTORY I 3
An analysis of the major developments in American legal and constitutional history from colonial beginnings through the Civil War. Emphasis on the relationship between the Constitution, the law, and lawyers, on the one hand, and America's economic, social and political developments, on the other.
Prerequisite(s): HST 103 or equivalent.
- HST 361 U.S. LEGAL AND CONSTITUTIONAL HISTORY II 3
An analysis of the major developments in American legal and constitutional history from the Reconstruction era to the present. Emphasis on the relationship between the Constitution, the law, and lawyers, on the one hand, and America's economic, social, and political developments, on the other.
Prerequisite(s): HST 103 or equivalent.
- HST 365 AMERICAN FILMS AS HISTORY 3
Study of the development of American values, myths, institutions, and perspectives through the use of films as a primary source.
Prerequisite(s): HST 103 or equivalent.

- HST 369 CIVIL WAR AND RECONSTRUCTION 3
Remote and immediate causes of the Civil War; problems of North and South during the war; consequences of the war; efforts to create a new Union, 1865 to 1877; problems caused by those efforts.
Prerequisite(s): HST 103 or equivalent.
- HST 370 ECONOMIC AND BUSINESS HISTORY OF THE UNITED STATES 3
Survey and analysis of American economic history, 1600 to present, primarily through a study of American business institutions and leaders. Includes analysis of major economic theories of history as well as case studies of entrepreneurs.
Prerequisite(s): HST 103 or equivalent.
- HST 371 UNITED STATES WORKING CLASS 3
History of American workers - male and female, paid and unpaid, and free and slave - from the beginning of industrialization through the twentieth century.
Prerequisite(s): HST 103 or equivalent.
- HST 372 HISTORY OF RELIGION IN THE UNITED STATES 3
Survey of religion in the United States from the colonial era to the present. Particular attention to the interaction of religion with other aspects of American society and culture.
Prerequisite(s): HST 103 or equivalent.
- HST 373 AMERICAN MILITARY HISTORY 3
Survey of American military affairs, including military, naval, and air campaigns, from early settlement to the present.
Prerequisite(s): HST 103 or equivalent.
- HST 374 IRELAND AND AMERICA 3
Study of the cultural-historical background of both Scotch-Irish and Celtic Irish immigrants to America and how they influenced the varying reactions of the dominant Anglo-Saxon Protestantism of America.
Prerequisite(s): HST 103 or equivalent.
- HST 375 HISTORY OF U.S. FOREIGN RELATIONS 3
Foundations of foreign relations since 1750; the expansion of foreign relations during the continental expansion of the nineteenth century and the beginning of the extra-continental empire in 1898; special emphasis on the emergence of multifaceted and interconnected global foreign relations after 1898.
Prerequisite(s): HST 103 or equivalent.
- HST 376 SOCIAL AND CULTURAL HISTORY OF THE UNITED STATES 3
Social and cultural development of the American people: growth of national spirit, impact of expansion, conflict over slavery, and problems of industrialization and urbanization.
Prerequisite(s): HST 103 or equivalent.
- HST 377 CONTEMPORARY AMERICAN HISTORY 3
The immediate background of contemporary political, social, and economic problems, beginning with the impact of World War II on the United States.
Prerequisite(s): HST 103 or equivalent.
- HST 378 HISTORY OF GLOBAL IMMIGRANTS TO THE UNITED STATES 3
Survey of the impact immigrants have had on the social, political, cultural, and economic life in the United States from the colonial period to the present.
Prerequisite(s): HST 103 or equivalent.
- HST 380 NATIVE AMERICAN HISTORY 3
Historical and descriptive survey of the native peoples of North America.
Prerequisite(s): HST 103 or equivalent.
- HST 382 HISTORY OF MEXICO 3

A survey of Mexican history from pre-Columbian civilization to the present.

Prerequisite(s): HST 103 or equivalent.

HST 383 HISTORY OF THE CARIBBEAN 3

Study of the cultural, social, economic, and political history of the islands and the northern shore of South America in modern times, stressing areas that have gained independence or autonomy.

Prerequisite(s): HST 103 or equivalent.

HST 384 ECONOMIC HISTORY OF LATIN AMERICA 3

Examination of the integration of Latin America into the world trading system and analysis of the twentieth century's successes and failures of export-led growth and industrialization.

Prerequisite(s): HST 103 or equivalent.

HST 385 THE ATLANTIC WORLD, 1492-1800 3

A comparative look at the people and cultures of Europe, Africa and the Americas who collaborated in the colonization of the Americas. Topics to be covered will include: slavery, missionary work, virgin soil epidemics, frontier wars, gender and the invention of racial categories.

Prerequisite(s): HST 103 or equivalent.

HST 391 AMERICAN ARCHITECTURAL HISTORY AND PRESERVATION 3

A career-oriented course offering a theoretical background in historical preservation and techniques used in identification, research, and recording of historic landmarks worthy of preservation as part of the community heritage.

Prerequisite(s): HST 103 or equivalent.

HST 398 HISTORY OF BLACKS IN THE UNITED STATES, 1526-1900 3

Study of the saga of black people in the U.S. from 1526 until 1900.

Prerequisite(s): HST 103 or equivalent.

HST 399 HISTORY OF BLACKS IN THE UNITED STATES SINCE 1900 3

Study of the saga of black people in the U.S. from 1900 to the present.

Prerequisite(s): HST 103 or equivalent.

HST 477 HONORS THESIS PROJECT 3

First of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons.

Prerequisite(s): Approval of University Honors Program.

HST 478 HONORS THESIS PROJECT 3

Second of two courses leading to the selection, design, investigation, and completion of an independent, original Honors Thesis project under the guidance of a faculty research advisor. Restricted to students in the University Honors Program with permission of the program director and department chairperson. Students pursuing an interdisciplinary thesis topic may register for three semester hours each in two separate disciplines in consultation with the department chairpersons.

Prerequisite(s): Approved 477; approval of University Honors Program.

HST 485 SEMINAR IN AMERICAN HISTORY 3

A reading seminar concentrating on one historical topic in American history for detailed analysis. May be repeated as topics change.

Prerequisite(s): (HST 103 or equivalent); (HST 301 or permission of department chairperson).

HST 486 SEMINAR IN EUROPEAN HISTORY 3

A reading seminar concentrating on one historical topic in European history for detailed analysis. May be repeated as topics change.

Prerequisite(s): (HST 103 or equivalent); (HST 301 or permission of

department chairperson).

HST 487 SEMINAR IN LATIN AMERICAN HISTORY 3

A reading seminar concentrating on one historical topic in Latin American history for detailed analysis. May be repeated as topics change.

Prerequisite(s): (HST 103 or equivalent); (HST 301 or permission of department chairperson).

HST 488 SEMINAR IN AFRICAN HISTORY 3

A reading seminar concentrating on one historical topic in African history for detailed analysis. May be repeated as topics change.

Prerequisite(s): (HST 103 or equivalent); (HST 301 or permission of department chairperson).

HST 490 SEMINAR IN HISTORIOGRAPHY 3

A reading seminar concentrating on the various techniques and philosophies of history by which historians have done historical research. May be repeated as topics change.

Prerequisite(s): (HST 103 or equivalent); (HST 301 or permission of department chairperson).

HST 493 SEMINAR IN MIDDLE EASTERN HISTORY 3

A reading seminar concentrating on one historical topic in Middle Eastern history for detailed analysis. May be repeated as topics change.

Prerequisite(s): (HST 103 or equivalent); (HST 301 or permission of department chairperson).

HST 495 INTERNSHIP 3

Practical and professional experience through work with approved organizations such as historical societies, architectural preservation boards, and business firms.

Prerequisite(s): (HST 103 or equivalent); permission of supervising instructor.

HST 496 INDEPENDENT STUDY 1 - 6

The study of a special topic to be mutually selected by the student and a history professor.

Prerequisite(s): (HST 103 or equivalent); permission of department chairperson.

HST 497 HONORS TUTORIAL 1 - 6

The study of a special topic to be selected by the instructor. Applicants will be admitted on the basis of academic record. May be repeated once.

Prerequisite(s): HST 103 or equivalent.

HST 499 TOPICS IN HISTORY 1 - 6

Specific subtitles and descriptions to be announced in the composite and posted in the History department office.

Prerequisite(s): HST 103 or equivalent.

