MUS 132. Woodwind Techniques. A methods course designed to develop understanding of woodwind instrument techniques and pedagogy. Course includes development of performance skills and understanding of terminology related to woodwind instruments. Various methodologies will be employed and discussed. The flute, clarinet, and saxophone will be emphasized. 1 hr.

MUS 133. String Techniques. A methods course designed to develop understanding of string instrument techniques and pedagogy. Course includes development of performance skills and understanding of terminology related to string instruments. Various methodologies, including Suzuki Method, will be discussed. The violin will be emphasized. 1 hr.

MUS 134. Percussion Techniques/Instrument Repair. A methods course designed to develop understanding of percussion instrument techniques and pedagogy. Course includes development of performance skills and understanding of terminology related to percussion instruments. Various methodologies will be discussed. The snare drum, timpani, and xylophone will be emphasized. Basic repair for all instruments is addressed. 1 hr.

MUS 152. Music Theory II. Continuation of MUS 102 including the study of major/minor principles of voice leading, harmonic progressions in root position and inversions, cadences, phrases, periods, and non-chord tones. Keyboard harmony, sight-singing, and dictation skills will be emphasized both in class and in coordination with an individualized Guido Ear Training Computer Program. Prerequisite: MUS 102 or equivalent. 3 hrs.

MUS 222. Music Theory IV. Continuation of MUS 221 including study of major/minor chord functions, chromaticism, secondary chords, modulations, binary and ternary forms and set theory. Composition, keyboard harmony, sight-singing, and harmonic dictation will be emphasized both in class and in coordination with an individualized Guido Ear Training Computer Program. Prerequisites: MUS 102, 152, 221, or equivalents. 3 hrs.

MUS 228. Church Music. This course offers the study of music, history, and liturgy of the Christian Church; the biblical relationships between music and Christian theology; the roles of the organ, choir, and congregation in worship music; the planning and selection of liturgy and music for worship; and performance practices appropriate for worship. 3 hrs.

MUS 238. Hymnology. This course is for musicians and prospective church leaders, and will study hymns from a historical perspective in the worship context. It includes study of hymnwriters and hymn texts as found in chorales, psalms, traditional hymns, gospel songs, and contemporary hymns. Also, the use of hymns as a teaching medium and as a basis for other compositions is addressed. 3 hrs.

MUS 245. Teaching Elementary School Music. This course examines sequential materials and methods appropriate for teaching music in a multicultural environment grades K-8, including developmentally-challenged students. Through the study of Dalcroze, Orff, Kodaly, and Suzuki methodologies, emphasis will be on movement, rhythm, creative improvisation, and ear training. 2 - 3 hrs.

MUS 304 Music History I. This course emphasizes the development of music in western cultures from Medieval to Baroque eras. Listening skills will be reinforced by historical and analytical inquiry into the lives and contributions of major composers. 3 hrs.

MUS 305 Music History II. Continuation of MUS 304 emphasizing the development of music in western cultures from Classical to Contemporary eras. Listening skills will be reinforced by historical and analytical inquiry into the lives and contributions of major composers. Prerequisite: MUS 304. 3 hrs.

MUS 321. Instrumental Conducting, Methods, and Literature. This course emphasizes conducting, analyzing, and interpreting scores; integrating concepts from instrument method courses with ensemble settings; and selecting sequential literature from various eras for instrumental ensembles. Opportunities for conducting ensembles will be provided. 3 hrs.

MUS 322. Choral Conducting, Methods, and Literature. This course emphasizes conducting, analyzing, and interpreting scores; integrating concepts from technique courses with ensembles; and selecting sequential literature from various eras for vocal ensembles. Opportunities for conducting ensembles will be provided. 3 hrs.

MUS 330. Form and Analysis. This course is designed to further the understanding of musical structures utilized in the traditional repertoire. Music listening, theory, performance, composition, and writing skills will be emphasized both in class and in coordination with Finale music processing software. 3 hrs.

MUS 347. Instrumental and Vocal Methods and Materials at the Middle and Secondary Level. This course emphasizes the general music class; instrumental ensembles; vocal ensembles; student development, motivation, and classroom control; and overall administration of the middle/secondary school music program. Current educational policies at the national and state levels, e.g., National Goals for America and Kansas Q. P. A., are studied for their impact on music educators. 3 hrs.

MUS 352. Arranging and Orchestration. This course emphasizes basic orchestration techniques for various instrumental groups, and the adaptation of music scores for specific school ensembles. Finale music processing software will be used to realize original compositions and arrangements. Opportunities for students to hear and adjust assignments is provided. 3 hrs.

MUS 452. Research and Performance. This course culminates applied music studies at Ottawa University. An independent research course leading to final competency projects that include presentation of senior recital and preparation of program notes, it is a major component of the comprehensive. Prerequisite: MUS 305. 3 hrs.

APPLIED MUSIC:
MUS 160 - 460 Class Piano
MUS 161 - 461 Applied Piano
MUS 162 - 462 Applied Voice
MUS 165 - 463 Applied Organ
MUS 164 - 464 Applied Brass
MUS 165 - 465 Applied Percussion
MUS 166 - 466 Applied Strings
MUS 167 - 467 Applied Woodwinds

Ensembles
MUS 171 - 471 University Choir.
A 40 to 60 member choir that performs for official University events throughout the school year.

MUS 173 - 473 University Ringers.
A five-octave English handbell ensemble that performs frequently on and off campus.

MUS 176 - 476 Symphonette.
A 40 piece orchestra comprised of student and community musicians that performs one concert per semester and at Vespers.

MUS 177 - 477 Jazz Ensemble.
A 20 piece big band emphasizing jazz education and improvisation that performs several times throughout the school year.

MUS 192 - 492 Chorale (Adelante Singers).
A select group of 16 to 20 students that perform a diversified choral repertoire. Must be a member of University Choir to be in Chorale.

MUS 196 - 496 Wind Ensemble/Pep Band.
A 15 or more member band comprised of students and community musicians that generally functions with Symphonette. Pep Band performs at several basketball and football games, and in general, only students participate.
Philosophy

The Philosophy program at Ottawa University consists of a balanced and basic curriculum in philosophy. The program is designed to expose students to the central areas of philosophical reflection and represents an opportunity for students to become acquainted with the rich intellectual heritage of western culture at its best. In addition, philosophy courses provide strong and rigorous training in the skills of critical thinking, problem solving, and analysis — skills that are of both personal and professional benefit to the student.

Students may study philosophy in anticipation of graduate work in the area, or as preparation for other professional study (e.g., theological study or law school). More generally, philosophy’s concern for clarity, analytic skills, and a critical engagement with ideas make it an appropriate component of almost any area of concentration.

Although it is possible to major in philosophy at Ottawa University, this is not encouraged because of the small size of the department and the limited number of course offerings available. However, philosophy courses are frequently required as support for other major programs, and individualized majors are often designed to include significant attention to philosophical issues and areas.

Required Major Courses: PHIL 210, 217, 301, 302, 303, and independent studies of a major philosopher, a major school of philosophy and a philosophical issue.

Required Supporting Courses: FRE 101, 102, or equivalent foreign language study; REL 237.

Recommended Courses: ART 106, ENG 102, HIS 253, 254, MAT 101, SOC 401, SCT 202.

Courses Offered:

PHIL 110. Basic Issues in Philosophy. Introduction to the nature and purpose of philosophical reflection. Emphasis will be on questions concerning metaphysics, epistemology, religion, ethics, and social/political philosophy. Students will be encouraged to develop their own ideas in dialogue with selected readings and other class members. 3 hrs.

PHIL 210. Ethics and Society. Analysis of the place and function of ethical principles in personal and social contexts. Emphasis will be on understanding moral problems and the means for their solution. Particular attention will be given to ethical problems in the area of contemporary society. Prerequisite: PHIL 110 or consent of instructor. 3 hrs. (Alternate Years)

PHIL 217. Introduction to Logic. Examination of the nature and structure of reason as it bears upon communication, inquiry, and argument. Emphasis will be on normative and critical functions of reason, basic rules of clear thinking and speaking, and the evaluation of arguments. 3 hrs.

PHIL 301. History of Philosophy I: Ancient and Medieval (Directed Study). An examination and evaluation of the thought of representative philosophers from the presocratic era through the early modern period, including such thinkers as Plato, Aristotle, Augustine, and Aquinas. Attention will focus on the ways that these thinkers dealt with selected philosophical problems. An effort will be made to understand these thinkers in the context of their historical period. Prerequisite: One other course in philosophy or the permission of the instructor. 3 hrs.

PHIL 302. History of Philosophy II: Modern and Contemporary (Directed Study).

An examination and evaluation of the thoughts of representative philosophers from the early modern period to the contemporary era, including such thinkers as Hume, Kant, Hegel, Heidegger, Whitehead, and Wittgenstein. Attention will focus on the ways that these thinkers dealt with selected philosophical problems. An effort will be made to understand these thinkers in the context of their historical period. Prerequisite: One other course in philosophy or the permission of the instructor. 3 hrs.

PHIL 303. Seminar in Philosophy. Course content will vary from year to year. Concentration upon important issues, themes, or thinkers not included in depth in other course offerings. Prerequisite: consent of instructor. 3 hrs.

Religion

Although the religious dimension of life and faith is part of the total University mission and is manifested in various ways, the formal study of religion enables students to deepen and clarify the understanding of their faith. Formal religious study is provided for the Biblical, historical, and comparative dimensions of faith. Some students may study religion to prepare for church vocations but other students take courses and programs in religion because of their value for individual development and the growth of human and personal understanding. In addition to the departmental major, religion courses may also be combined advantageously with the study of philosophy and other areas of the liberal arts. These programs can be developed through the use of the option of the individualized major.


Recommended Courses: REL 113.

Courses Offered:


REL 113. Contemporary American Religious Groups. An analysis of current American religious bodies. Consideration of both the more traditional bodies and the more recent arrivals. 3 hrs.


REL 237. Dimensions of Faith. An introduction to some of the major themes of Christian theology including an investigation of the personal, social, and rational dimensions of religious faith. 3 hrs. (Alternate Years)

REL 329. Contemporary Issues in Biblical and Theological Studies. Examination of key issues that relate to the Biblical literature, including historical uniqueness of the Biblical faith, reliability of the Biblical record, the historical Jesus, and interpretation and authority of the Bible. 3 hrs. (Alternate Years)

REL 338. World Religions. Religions of the world set in historical perspective. Basic teachings. 3 hrs. (Alternate Years)

REL 347. The Life and Meaning of Jesus. Examination of Gospel literature as it relates to Jesus. Consideration of various historical approaches to the life and ministry of Jesus. The significance of Jesus. Prerequisite: REL 112, or approval of the instructor. 3 hrs.

REL 348. The Life and Thought of Paul. An examination of the life of Paul in relation to his career and his epistles. Theological thought of Paul. Prerequisite: REL 112, or approval of the instructor. 3 hrs.
Speech, Communication, and Theatre

Historically, an appreciation of speech, communication, and theatre as a part of our lives, and a vision of the need for oral and theatrical expression has been at the heart of higher education.

The speech, communication, and theatre program at Ottawa University is designed to meet the needs of both the general liberal arts education and the majors within the department. The department provides the opportunity to improve oral communication skills through classroom and extra-curricular learning experiences. It gives a basic knowledge of the theatre, the work and joy that are part of its creation, and the importance of the arts in our lives as it allows us to better understand ourselves, others, and the world we share. The theatre emphasis major will not only receive a solid academic foundation, but also be exposed to significant practical experience with departmental main stage productions. The program also focuses on the impact, development, and participation in media. It gives the student the opportunity to improve his/her understanding of operations and management in the field of electronic media. Finally, the speech communication emphasis provides a study of human discourse and seeks to develop the verbal skills necessary for purposeful human expression and interaction. For the major in speech, communication, and theatre, the department provides an academic program and co- and extra-curricular activities which may prepare the student for further studies in graduate or professional schools and for careers in professional theatre and broadcasting.

Theatre/Theatre Performances Emphasis

Required Major Courses: SCT 108, 141, 146, 200, 205, 315, 316, 400, 402, 406; one workshop course (SCT 114 - 414) must be taken each semester.

Required Supporting Courses: PSY 120; MUS 162, ENG 318.

Broadcasting Communication Emphasis

Required Major Courses: SCT 100, 211, 222, 310, 314, 403, 450; and at least four semesters of SCT 113.

Required Supporting Courses: At least 12 semester hours of work from other disciplines which reflect and reinforce the student's academic and career interests and goals. Courses are selected by the student with the guidance and approval of the advisor. Select from the following: BUS 300, 318, 405; ENG 227; HIS 201, 250; PSC 133, 322; PSY 120; SCT 111, 410.

Speech Communication Emphasis

Required Major Courses: SCT 100, 108, 109, 110, 113, 114, 202, 205, 300, 315 or 316.

Required Supporting Courses: ENG 201, 325, 401; PHL 217; PHL 110 or HIS 253; PSY 221, 222.

Teacher Certification Emphasis (Check Teacher Education Handbook for current requirements)

Certification Requirements — Speech Communication: SCT 100, 108, 110, 141, 146, 200, 201, 202, 205, 211, 355, 406, 410. (one of each workshop course, SCT 109, and 114, must be taken each semester).

Certification Requirements — Theatre: SCT 100, 108, 110, 141, 146, 200, 205, 315, 316, 335, 400, 406, 420. (One workshop course, SCT 114 - 414, must be taken each semester).

Courses Offered:

SCT 100. Survey of Mass Communication. A study of the development, organization, and relationships of the print and electronic mass media, and of their impact on the individual and society. 3 hrs.

SCT 108. Voice and Diction. Study of the speech organs and their functions, building awareness of the individual speaking voice. Study of the International Phonetic Alphabet with the goal of achieving Standard American speech. Training and development of articulation, projection, rhythm and melody. 3 hrs. (Alternate Years)

SCT 109, 209, 309, 409. Intercollegiate Forensics. This course is designed to give students active training in speech communications, and will include traveling on the competitive speech and debate teams. May be taken up to eight semesters. Prerequisite: Instructor permission. 1 hr.

SCT 110. Speech Preparation and Delivery. The course is designed to give students instruction and practice in speaking before a group. Practical study of processes of development of a speech and its delivery with oral practice in various forms of public address. Development of criteria for judging and evaluating effective speaking. 3 hrs.

SCT 113. Radio Workshop. This course is designed to give students the opportunity to work with the campus radio station. Students will have an air shift and learn radio operations. May be taken up to eight semesters. Prerequisite: Instructor permission. 2 hrs.

SCT 114, 214, 314, 414. Theatre Workshop. This course is designed for students actively participating in the theatre productions of the University. The student must be involved in acting or backstage work that results in a public performance by the University theatre. Course work arrangements will be made individually with the theatre director. 1 hr.

SCT 121. Introduction to Print Journalism I. Instruction in basic print news gathering, reporting, and writing techniques. Introduction to desk-top publishing. Work on the campus student newspaper and/or yearbook. will provide a laboratory component. 3 hrs.

SCT 141. Stagecraft. Theory of and practice of technical phases of play production, including stagecraft, lighting, costuming, makeup, design, and theatre management. Understanding of coordination and management of all phases of production. Includes practical work on productions. 3 hrs. (Alternate Years)

SCT 146. Theatre Appreciation. The purpose of the course is to give students a basic knowledge of the theatre, its origins and development, and of the work and joy that are involved in the creative work of the theatre. Introduces some of the world's great dramas with emphasis on modern plays. Looks at all the jobs of the theatre worker, from playwright, director and actor, to designer, technician and critic. 3 hrs.

SCT 200 and 400. Acting I and II. Theory and practice of acting. An exploration of "inner" and "outer" techniques that may be used to create a role. Follows working steps from analysis of the script to the creation in performance of a fully realized characterization. Includes classroom and lab work. May be repeated for second credit. Will work with beginners but will go further in the study of styles of acting. 3 hrs.

SCT 201. Interpersonal and Small Group Communication. A composition course examining the task and social dimensions of
interpersonal and small group communication. Topics include self, attitudes, beliefs, needs and values, verbal and non-verbal communication, gender and cultural communication, establishing and maintaining relationships, group building, decision making, conflict management, leadership, power, and ethics. Students will practice initiating and maintaining interpersonal relationships and small group endeavors. 3 hrs.

SCT 202. Argumentation and Debate. The study of the principles of argumentation and practice in debate techniques with special emphasis on reasoning and research, case construction, refutation and rebuttal. Use of the collegiate debate question to give practical experience in various forms of debate. Prerequisite: SCT 110 or PHIL 117. 3 hrs. (Alternate Years)

SCT 203. Newspaper Production. Participation in news gathering, production, editing, and publication of the campus newspaper. Prerequisite: Completion of co-registration in SCT 121, Introduction to Print Journalism I, or permission of the instructor. Maybe repeated for a total of 8 semester hours of credit. 1 hr.

SCT 204. Yearbook Production. Participation in production, editing, and publication of the campus yearbook. Prerequisite: Completion of co-registration in SCT 121, Introduction to Print Journalism I, or permission of the instructor. May be repeated for a total of 8 semester hours of credit. 1 hr.

SCT 205. Oral Interpretation. Oral interpretation of prose, poetry and dramatic literature from selection through analysis to performance. Development of understanding of literature, or imagination and personal responsiveness both individually and in groups. 3 hrs. (Alternate Years)

SCT 211. Broadcast News Writing and Reporting. Survey of the techniques for effectively gathering, writing, and reporting news for the electronic media. Includes writing and delivery styles, sources, interview techniques, spot news, features, investigative reporting and legal and ethical considerations. Students participate in writing and producing a weekly news magazine program for the campus radio station. 3 hrs.

SCT 221. Introduction to Print Journalism II. Continuation of SCT 121, Introduction to Print Journalism I. Instruction in intermediate and advanced news gathering, reporting, and writing techniques, intermediate desk-top publishing methods, elements of newspaper design and layout, communication law and ethics. Work on the campus student newspaper and/or yearbook will provide laboratory component. 3 hrs.

SCT 222. Broadcast Performance. Study of the theory and techniques of effective broadcast announcing including basic on-air news and commercial deliveries. Introduction to control room equipment. Survey of the job market, resumes, cover letters and audition tapes. 3 hrs.

SCT 300. Topics in Speech Communication. An advanced study in rhetorical and social theories of communication. Applications of traditional and contemporary methods of studying human discourse may include one of the following topic areas: intercultural communication, organizational communication, communication and the arts, or advanced public speaking. Prerequisite: Permission of instructor. 3 hrs. (Alternate Years)

SCT 310. Broadcast Writing. Theory and practice of the mechanics and style of writing for the electronic media. Emphasis on methods and strategies of writing commercials, public service announcements, professional material and all other scripted broadcast material except news. 3 hrs.

SCT 312/412. Radio Practicum. In-depth experience as a member of the student executive staff of the campus radio station, or as a staff assistant, or on a directed study basis in a specific area of broadcasting. Prerequisites: SCT 100, 403, and permission of the instructor. 3 - 6 hrs.

SCT 314. Radio Production. Introduction to the theory, techniques and equipment in radio production and control and production room operation. 3 hrs.

SCT 315. History of Theatre I. Study of the origins and development of the theatre from the Greeks to the seventeenth century. Examination and analysis of major playwrights and plays of the world with emphasis on European and American works. Includes overview of history of theatre criticism. 3 hrs. (Alternate Years)

SCT 316. History of Theatre II. Development of the theatre from the late seventeenth century development of Realism through the twentieth century to contemporary movements. Examination and analysis of major playwrights and plays of Europe and America. 3 hrs. (Alternate Years)

SCT 335. Teaching of Speech and Theatre. (Directed Study) Examination of problems of teaching speech and theatre on the high school level. Explores needs of students and solutions, through development of the academic program and the extracurricular activities of debate and forensics. Prerequisite: Permission of instructor. 2 hrs.

SCT 402. Performance Comprehensive. This course presents senior theatre majors with an opportunity to demonstrate their mastery of performance skills and techniques. Prerequisites: senior status and a declared and approved major in theatre. 3 hrs.

SCT 403. Radio Station Operations. Survey of commercial and non-commercial radio operations with emphasis on organization, management's role in sales, programming and news, introduction to federal law and regulation, basic equipment and transmission types. Survey of the job market, resumes, cover letters, interview strategies. 3 hrs.

SCT 406. Directing. Theory and practice of directing: composition, picturization, movement, rhythm and pantomimic dramatization. Examines directing of the last one hundred years, from proscenium to central experimental staging. Requires final project. Prerequisites: SCT 141, 146 and 200. 4 hrs. (Alternate Years)

SCT 410/420. Theatre Practicum. Experience in theatrical production. Requires definition of area of study and major project. Consent of Instructor required. May be taken for credit in Senior Recital. 3 hrs.

SCT 450. Senior Seminar in Media Issues. A survey of current issues in the electronic media culminating in a project or paper fulfilling two senior comprehensive examination requirements for the Broadcast Communication emphasis. Prerequisite: Senior classification, completion of a co-registration in SCT 403, and permission of the instructor. 2 hrs.
The Division of the Natural Sciences

- Biology
- Chemistry
- Mathematics
- Physical Education
- Physics

Biology

The major program in biology focuses upon the study of living organisms and their interaction. The curriculum seeks to make the student aware, through lecture and laboratory experiences, of the structure, function, and development of life as manifested on the cellular, organismic, and population levels. This major, with related science courses, provides one with the skills needed for success in science. In addition to ample laboratory space, a natural preserve study area and a greenhouse are also facilities open to biology students.

Students whose career goals include such areas as teaching, basic research, medical research, or the area of conservation, or wildlife will find that an undergraduate major in biology is an ideal preparation. Biology majors should note that a number of preprofessional programs, as well as programs in certification, will include many of the courses noted below. Thus, vocational opportunities and possibilities should be explored thoroughly as a student proceeds through the curriculum.

Required Major Courses: A minimum of 32 hours in Biology which must include BIO 100, 200, 203, 302, 311, and 450.
**Required Supporting Courses:** Courses in other sciences will be required depending upon the academic and career goals of the student.

**Graduate School Emphasis:**

**Required Major Courses:** A minimum of 32 hours in Biology which must include: BIO 100, 200, 203, 302, 311, 450.

**Required Related Courses:** CHE 120, 121, 230, 231; CIS 105, 110, 115; MAT 210; PHY 220/221 or 247/248.

**Teacher Certification:** (Check Teacher Education Handbook for current requirements)

**Required Certification Courses — Secondary Level Biology:** BIO 100, 200, 203, 302, 311, 312, 425, 450; CHE 120; CIS 105, 110, 115, 150; MAT 106; PHY 109.

**Required Certification Courses — Secondary Level General Science:** BIO 100, 200, 302; CHE 120; CIS 105, 110, 115, 150; MAT 106, 110 or 210; PHY 109; plus coursework from one of the following emphases: Biology emphasis: BIO 203, 311, 312, 425; Chemistry emphasis: CHE 121, 230, 231, 330.

**Required Certification Courses — Secondary Level Health:** BIO 100, 203, 206, 214, 302, 312, 420; PED 104, 107, 111; PSY 120, 323; SOC 104.

Courses Offered:

**BIO 100. Principles of Biology.** An introductory course concerned with the major biological processes occurring in animals and plants and the basic concepts underlying the field of biology. Three 1-hour lectures/two 3-hour labs per week. 5 hrs.

**BIO 200. Organismic Biology.** An integrated study of the structure and function of plants and animals with special attention paid to the phylogenetic origins and relationships of taxonomic groups. Prerequisite: BIO 100. Three 1-hour lectures/two 2-hour labs per week. 5 hrs.

**BIO 203. Human Anatomy and Physiology.** Function and anatomy of each system of the human body including immunology is discussed. Laboratory designed to verify and supplement the lecture material. Three 1-hour lectures/two 2-hour labs per week. Prerequisite: BIO 100 or its equivalent. 5 hrs.

**BIO 206. Introduction to Environmental Studies.** The examination of the relationships between the human population and its environment. Topics will include population growth, the use and misuse of essential natural resources, and pollution. The interactions of these environmental aspects of human ecology with social, economic, and political systems will be explored. Prerequisite: at least sophomore standing. 3 hrs.

**BIO 214. Introduction to Nutrition.** A study of the fundamental principles of nutrition. The nutritional requirements of the human are discussed for the major segments of the lifespan. Interrelationships of various nutrients is also discussed. Prerequisite: BIO 100 or CHE 100 or equivalent. 3 hrs.

**BIO 302. Microbiology.** An introduction to microbiology with an emphasis on the bacteria. Topics include prokaryote cell structure, metabolism, and growth; medically-significant bacteria, including epidemiology, pathogenicity, and control; and ecological/industrial roles of bacteria. Laboratory emphasizes skills in collection, culture, and identification of bacteria using common staining methods and culture media. Three 1-hour lectures/two 2-hour labs per week. Prerequisite: BIO 100 and at least sophomore standing. 5 hrs.

**BIO 311. Field Ecology.** An introduction to the relationships between organisms and their environment, including the role of natural selection, population and community ecology, and ecosystem-level processes. Laboratory emphasizes both simulation and experimentation in the testing of ecological hypotheses, and the use of microcomputers as a tool in data collection, analysis, and presentation. Field trips to the O.U. Natural History Reservation and other local sites required. Three 1-hour lectures/4 hours of lab per week. Prerequisite: BIO 200. 5 hrs.

**BIO 312. Genetics and Society.** A non-laboratory course covering both classical and modern genetics and discussion of selected readings on contemporary genetic issues. Prerequisite: BIO 100. 3 hrs.

**BIO 320. Immunology.** A general introduction to the study of immunology with emphasis on the medical aspects. It will highlight adaptive and innate immunity, cells and processes of the immune system, antigen/antibody relationships, complement types of immunity, autoimmunity, transplant rejection, regulation of the immune response, and serology. Prerequisite: BIO 302. 3 hrs.

**BIO 401. Biochemistry.** An introduction to the structure of biomolecules. Protein, carbohydrates, lipid structure, and metabolism are studied. Enzyme kinetics, photosynthesis, and protein synthesis are also emphasized. Prerequisite: BIO 100, CHE 230. 3 hrs.

**BIO 403. Vertebrate Structure and Development.** An integrated course in vertebrate embryology and comparative anatomy. Presentation includes lectures on and discussion of gametogenesis, fertilization, germ layer development, organogenesis, fetal/maternal relationships, and the adult anatomy with emphasis on phylogenetic relationships among the vertebrate groups. Two 1-hour lectures/two 2-hour labs per week. Prerequisite: BIO 200. 4 hrs.

**BIO 425. Animal Behavior.** An introduction to the biological basis of animal behavior with emphasis on the adaptive significance of behavioral phenomena. Specific topics include the genetic basis of behavior, perceptual and effectual systems, ethology, neuropsychology, learning, animal communication, sexual behavior, and the social systems. Prerequisites: BIO 200 and permission of the instructor. 3 hrs.

**BIO 450. Senior Integrative Seminar.** An integrative study and review of the major concepts and principles of biology. Required of all majors. Prerequisites: Senior standing and permission of the department. 1 hr.

**MEDICAL TECHNOLOGY CLINICAL COURSES (Offered through Clinical Program, not campus courses)**

**BIO 406. Clinical Microbiology.** The theory and laboratory study of pathogenic bacteria, viruses, replete, fungi, and parasitites. Includes specimen handling, methods of isolation, cultivation, diagnostic procedures, asepsis, environmental monitoring, medical significance, and quality control. 6-8 semester hours.

**BIO 407. Clinical Chemistry.** Identification and quantitation of specific chemical substances in blood and body fluids by various analytical techniques; clinical correlations with diagnosis and treatment of disease; principles of instrumentation; toxicology; and quality control. 6-10 semester hours.

**BIO 408. Clinical Hematology.** Theory of blood cell formation; morphology of cellular constituents; disease states; hemostasis; coagulation testing. Techniques and instrumentation used to determine major hematological and clotting parameters will be included, along with quality control procedures. 4-7 semester hours.

**BIO 409. Clinical Immunohematology.** A study of the common blood group systems: principles and procedures for antigen/antibody detection; cross-matching; blood collection and preservation; processing; the evaluation of transfusion reaction and quality control procedures. 3-4 semester hours.

**BIO 411. Clinical Immunology.** Characteristics of antigen/antibody function in health and disease states. Includes chemical and microscopic examination of urine, other excreta, and body fluids in relation to disease processes, along with quality control procedures. 1-3 semester hours.

**BIO 412. Topics in Medical Technology.** Subject matter may include the following: hospital orientation, laboratory management, radioisotope techniques, quality control procedures, laboratory safety, special projects, special techniques, and seminars on various subjects deemed necessary by hospital personnel. 1-4 semester hours.
Chemistry

Through cooperation with other departments in the college, OU provides a wide range of career opportunities for students interested in chemistry. For instance, students can combine chemistry and biology electives and proceed on to varied careers in health care and environmental science. Persons interested in continuing into research or graduate school in chemistry will need to begin their studies early and include as many science and related fields as possible as they pursue their goals. Other students can tailor a program to meet their own individual interests through the use of elective courses.

Teacher Certification Emphasis (Check Teacher Education Handbook for current requirements)

Required Certification Courses — Secondary Level: CHE 120, 121, 230, 231, 330.

Required Supporting Courses: PHY 220, 221 or 247, 248; MAT 110; CIS 105, 110, 115; BIO 100.

Industrial Emphasis

Required Major Courses: At least 30 hours in chemistry which must include CHE 120, 121, 230, 231, 330, 400, 422, 423, 430, and 6 hours of independent study in industrial chemistry.

Required Supporting Courses: MAT 210.

Recommended Courses: BIO 100, 200; CIS 105, 110, 115, 210; MAT 211, 213; PHY 220, 221 or 247, 248.

Graduate School Emphasis

Required Major Courses: At least 30 hours in chemistry which must include CHE 120, 121, 230, 231, 330, 400, 422, 423, 430. (If a biological emphasis, substitute BIO 401 for CHE 430.)

Required Supporting Courses: MAT 210, 211; PHY 220, 221 or 247, 248; CIS 105, 110, 115.

Recommended Courses: CIS 200; MAT 231.

Courses Offered:


CHE 120. General Chemistry I. Beginning course for science-related majors. Fundamental laws, electronic structure and bonding. Mole concept and stoichiometry. Periodicity. States of matter. Acid-base chemistry. Thermodynamics. Laboratory: Use of analytical balance, physical and chemical changes, making inferences from observations, development of reasoning from data, titrations, illustration of basic laws, gases, colligative properties, basic laboratory skills, separation techniques, use of pH meter. Prerequisites: high school chemistry and algebra or permission of the instructor. 4 hrs.

CHE 121. General Chemistry II. Continuation of CHE 120. Kinetics, equilibria, electrochemistry, nuclear chemistry, selected non-metals. Laboratory: Development of techniques, equilibria, electrochemistry, descriptive chemistry, nuclear chemistry. Thermodynamics. Laboratory: Use of analytical balance, physical and chemical changes, making inferences from observations, development of reasoning from data, titrations, illustration of basic laws, gases, colligative properties, basic laboratory skills, separation techniques, use of pH meter. Prerequisites: CHE 120 or permission of instructor. Co-requisite: CHE 330L. 3 hrs.


CHE 230L. Organic Chemistry I Laboratory. Laboratory course required for students who are enrolled in CHE 230. One 3-hour laboratory per week. Laboratory: Techniques of organic chemistry-extraction, thin layer chromatography, reflux, melting points, distillation as they apply to isolation and synthesis on organic compounds. Use of vapor phase chromatography, and ultraviolet and infrared spectrophotometry. Co-requisite: CHE 230. 1 hr.


CHE 231L. Organic Chemistry II Laboratory. Laboratory course required for students who are enrolled in CHE 231. One 3-hour laboratory per week. Includes infrared analysis, classical synthesis, kinetics, natural product isolation, repetition of techniques from CHE 230L. Organic qualitative analysis. Co-requisite: CHE 231. 1 hr.


CHE 400. Senior Integrative Seminar. Enables students to integrate knowledge and skills in major chemistry courses. Introduces student to professional aspects of his or her future vocation. Required of all chemistry majors. Prerequisite: Senior standing or permission from department. 1 hr.

CHE 422. Physical Chemistry I. Discussion of gas, crystalline and liquid states, solutions, thermodynamics, electrochemistry and equilibria. No laboratory included. Prerequisites: MAT 231, PHY 248, CHE 330. 3 hrs.

CHE 423. Physical Chemistry II. A continuation of Physical Chemistry I. Includes topics in atomic structure, molecular structure, spectroscopy, quantum theory, photochemistry. No laboratory included. Prerequisites: CHE 422. 3 hrs.


CHE 430L. Instrumental Analysis Laboratory. Use of infrared, ultraviolet, and visible spectrophotometers, polarograph, amperometer, and vapor phase chromatograph. Two laboratories weekly. Co-requisite: CHE 430. 1 hr.

Mathematics

A well-balanced mathematical background can be extremely beneficial in many areas. Recent graduates of Ottawa University hold positions such as: high school principal, high school coach and mathematics teacher, bank officer, actuarial intern for a life insurance company, and university professor.

Although the logical nature of mathematics is of utmost importance, the basic assumption is that students are studying mathematics at the undergradu
ate level as a tool to be applied to problem solving. It is in this spirit that as many practical problems as possible are considered in each course, and available computers are used when appropriate.

**Graduate School Emphasis**

**Required Major Courses:** MAT 200, 210, 211, 220, 231, 260, 320, 350, 360, 450 (for 6 credit hours), and SBS 230.

**Teacher Certification Emphasis** (Check Teacher Certification Handbook for current requirements)

**Required Certification Courses — Secondary Level General Mathematics:** MAT 106, 110, 200, 210, 211, 220, 231, 260, 320; SBS 230; EDU 335.

**Required Certification Courses — Secondary Level Mathematics:** MAT 210, 211, 220, 231, 260, 320, 350, 360; EDU 335; SBS 230.

**Required Supporting Courses:** A mathematical computer programming language.

Courses Offered:

**MAT 101. General Mathematics.** A course for non-science majors that fills the science area certification requirement for elementary school teachers. Designed to acquaint the student with the philosophy, nature, significance, and use of mathematics from early times to the present, with emphasis on the concept of a mathematical system. Topics include: Logic, sets, groups, the real number system, probability and computer algorithms. 3 hrs.

**MAT 104. Intermediate College Algebra.** Emphasis is on algebraic skill development. Linear equations, quadratics, rational exponents, radicals, and systems of equations are some of the topics studied. Prerequisite: A previous course in algebra. 3 hrs.

**MAT 106. College Algebra.** This course is designed to use algebra as a tool. A short review of basic algebra will be included: inequalities, functions and graphs, roots of polynomial equations, and the exponential and logarithmic functions. Major emphasis will be on systems of equations and matrices, complex numbers, and topics in discrete mathematics such as mathematical induction, sequences, series and permutation, and binomial theorem. Prerequisite: two years of high school algebra, or MAT 104, or instructor permission. 3 hrs.

**MAT 110. Elementary Functions.** Algebra of functions with emphasis on functions as ordered pairs and mappings, with particular attention to the properties of each type of function. Includes sequences, series, and the binomial theorem. Elementary background in sets and logic is needed. Prerequisite: MAT 106 or equivalent. 3 hrs.

**MAT 112. Math for Elementary Teachers.** Designed to enhance the mathematical skills of the prospective elementary school teacher from the standpoint of mathematical knowledge as well as the pedagogical approach. Emphasis is on mathematical content and methods of presentation that are appropriate at the elementary school level. The course will help students to communicate mathematical ideas with ease and clarity, organize and analyze information, solve problems readily, and construct logical arguments, possess knowledge and have an understanding of mathematics that is considerably deeper than that required for the school mathematics they will teach. Enjoy mathematics and appreciate its power and beauty, understand how mathematics permeates our lives and how the various threads within mathematics are interwoven, and naturally and routinely use technology in the learning, teaching, and doing of mathematics. 3 hrs.

**MAT 200. Discrete Mathematics.** Emphasis is on combinatorial problem-solving and graph theory. This course seeks to present the modern point of view that not all applications arise in the analysis context. This course is concerned with problem-solving in the discrete case. Some of the topics will include: graphs with models and applications, basic properties of graphs and digraphs, trees, combinatorial problems, elementary counting principles, and permutations and combinations. Prerequisite: MAT 106 or equivalent. 3 hrs.

**MAT 210. Calculus I.** Basic notions of a derivative and an integral with basic techniques and applications to elementary functions. Emphasis on intuitive understanding and theorem application. Prerequisite: MAT 110 or equivalent. 4 hrs.

**MAT 211. Calculus II.** Integration techniques and applications of derivatives and integrals to a wide variety of geometric, physical, and behavioral problems. Prerequisite: MAT 210 or equivalent. 4 hrs.

**MAT 220. Linear Algebra.** This course is an introduction to the algebra and geometry of vectors, matrices, and linear transformations. It is designed to be presented to students of business and economics and others using simultaneous equations and matrices. This course is a prerequisite for the first course in Abstract Algebra, MAT 320. 3 hrs.

**MAT 231. Multivariable Calculus.** Differential and integral calculus of functions of several variables with applications. Taylor's series, transformations, extreme problems, line and surface integrals, including Stokes' and divergence theorems. Prerequisites: MAT 210 and recommended MAT 220. 4 hrs.

**MAT 260. College Geometry.** This course reviews and further explores the axiomatic foundations of high school Euclidean geometry. The development of Euclidean geometry from early Greek civilization to the present is explored with particular attention to the development of non-Euclidean geometries. Topics will be chosen in such a way as to highlight the relevance of geometry to everyday life. Prerequisite: high school geometry. 3 hrs.

**MAT 320. Abstract Algebra I.** Study of groups, rings and fields, vector spaces, and linear transformation culminating in elements of Galois theory. Prerequisite: MAT 220. 3 hrs.

**MAT 330. Differential Equations.** Various techniques for finding solutions of differential equations in one variable: general characteristics of solutions of first and second-order equations; boundary value problems; series solution techniques; Bessel's and Legendre's Equations; and systems of linear equations. Also the historical development of the subject and applications to problems in the sciences will be studied. Prerequisite: MAT 201. 3 hrs. (Alternate Years)

**MAT 350. Foundations of Calculus.** Study of the real number system and its application to the limit concept. Proofs of basic theorems on derivatives, integrals, and continuity. Emphasis on rigor. Prerequisite: MAT 231.

**MAT 360. Non-Euclidean Geometry.** Non-Euclidean geometry is designed to help the student discover how Euclidean plane geometry is related to mathematics in general. Emphasis is placed on geometry as a logical system based on postulates and undefined terms. The fifth postulate of Euclid receives appropriate attention from a historical perspective and from attempts to prove the fifth postulate follows the modern Non-Euclidean geometries. Prerequisite: An introductory course in high school plane geometry along with a strong desire to understand the logical nature of geometry. Prerequisite: MAT 260. 3 hrs.

**MAT 432. Abstract Algebra II.** continuation of Abstract Algebra I. Emphasis is more on field theory and applications. Prerequisite: MAT 320. 3 hrs.

**MAT 434. Numerical Methods.** An introduction to numerical techniques and algorithms fundamental to scientific computer work, including discussion of error, roots of equations, interpolation, systems of equations, numerical integration, and methods of solution of ordinary differential equations. Prerequisites: MAT 210, 211, and 220. 3 hrs.

**MAT 450. Topics in Mathematics.** This course is designed for mathematics majors. The content will depend on the needs of the students. Possible content could be number theory, mathematical modeling, or complex analysis. Material from such courses as Abstract Algebra II or Differential Equations could also be covered in this course. Prerequisites: permission of the instructor. 3 hrs.
Physical Education

The recent renewed interest in America in the need for physical fitness, preventive health care, the value of a sound body to meet the stress of a busy life, and the development of a healthy mental attitude have only enhanced the role of the physical education major. Physical Education is a rapidly expanding field involving many specialized areas. The physical educator is involved not only in the teaching and coaching of games and sports, but also in recreational leadership, counseling, administration, research, and work with disabled persons. Ottawa University's physical education program provides a departmental major with a variety of different emphases. The teacher certification emphasis is designed to prepare students for teaching in traditional educational settings. The health/fitness emphasis is designed to prepare students for implementing physical fitness or for graduate study in fitness or exercise physiology. The recreation emphasis is designed to prepare students for teaching and leadership roles in private or public recreational programs. Each student majoring in physical education must complete one of these emphases as listed below.

Teacher Certification Emphasis (Check Teacher Education Handbook for current requirements)

Required Courses for Major: PED 107, 111, 205, 237, 247, 300, 302, 308, 335, 345, 417; PAC 100A, 100N, 1000, 1001, J, K, or M, and two additional PAC.

Required Supporting Courses: BIO 100, 203.

Health/Fitness Emphasis

Required Major Courses: PED 104, 107, 111, 205, 302, 325, 335, 345, 417, and 5 additional hours of PED elective courses; PAC 100A, 100N.

Required Supporting Courses: BIO 100, 203, 214; CHE 100 or 120; ENG 237 or 310; SCT 201; PSY 110 or 120; SCT 201.

Recommended Courses: ACC 203; BUS 305; CIS 105, 110, 115; EDU 325; PAC 1001, J, K, or M; PED 318.

Recreation Emphasis


Required Supporting Courses: ACC 203; ART 202; BIO 100, 203, 214, 302; BUS 305; CHE 100 or 120; EDU 325; ENG 237 or 310; PSY 120; SCT 100, 201; and two coaching methods classes.

Recommended Courses: CIS 105, 110, 115; PED 237, 335; PSC 113; SOC 203; additional PACS and coaching methods classes.

National Athletic Trainers Association Certification Program: (Please note: This is not a major, and students pursuing this certification must also have a major to satisfy graduation requirements): PED 104, 205, 305, 325; BIO 203 and 1500 hours of a supervised internship. (For information concerning additional requirements inquire at the Physical Education Department Office.)

Courses Offered:

PED 104. Personal and Community Health. A study of holistic health and lifetime wellness, with a view toward favorably influencing habits, attitudes, and knowledge relating to individual and community health. The course specifically focuses on topics relevant to college age students, such as stress, human sexuality, nutrition, exercise, impact of the environment, and death. In addition, the course includes physical activity related to developing health-related physical fitness. 3 hrs.

PED 107. First Aid. Covers practical applications of emergency treatment such as: strokes, heart attacks, life saving for water emergencies, burns, cuts and abrasions, broken bones. Practical application in resuscitation. 2 hrs.


PED 205. Athletic Training I. An introduction to the prevention, care, and rehabilitation of athletic injuries. Students will learn evaluation skills of injuries common to sports as well as preventative taping and wrapping of different anatomical joints. 3 hrs.

PED 227. Methods of Coaching Football. Theory of coaching, officiating, and administering intramural, recreational and interscholastic football programs. Some field work required. 2 hrs.

PED 228. Methods of Coaching Volleyball. Theory of coaching, officiating, and administering intramural, recreational and interscholastic volleyball programs. Some field work required. 2 hrs.


PED 238. Methods of Coaching Track. Theory of coaching, officiating, and administering intramural, recreational and interscholastic track programs. Some field work required. 2 hrs.

PED 239. Methods of Coaching Soccer. Theory of coaching, officiating, and administering intramural, recreational and interscholastic soccer programs. Extensive field work required. 2 hrs.


PED 248. Methods of Coaching Basketball. Theory of coaching and administering intramural, recreational and interscholastic basketball programs. Some field work required. 2 hrs.

PED 300. Elementary and Secondary Rhythms and Dance. An introduction to the principles and practices of various kinds of rhythmic activities. Special attention will be given to methods of teaching rhythms and dance. Prerequisite: PED 308 or permission of the instructor. 2 hrs.

PED 302. Psychology and Sociology of Sport. This course is an attempt to reflect upon the centrality of sports in modern society; it is also designed to be an essential component in the professional preparation for careers in physical education, recreation, and related areas. The student will study issues dealing with the psychological effects of sport and the roles of sport in modern society. Topics covered will include: aggression and the athlete, aggression and the spectator, drugs-alcohol-gambling in sports, fear of failure and fear of success, youth sports, team cohesion, and the psychology of injury rehabilitation. Prerequisites: PSY 120 or SOC 100. 3 hrs.

PED 305. Athletic Training II. Detailed study of athletic injuries including physiology of injuries, theories of rehabilitation, and the use of various modalities in treating an athlete. Includes discussion of current issues in sports. Prerequisite: PED 205. 3 hrs.

PED 308. Elementary Physical Education and Recreation. Knowledge of the physical development of the child and an awareness of resources for the child's activity and recreation. Emphasis upon materials and activities which will provide optimal physical development for each individual. Prerequisite: PSY 120. 3 hrs.
PED 318. Recreational Leadership. The student will develop a personal philosophy of recreation and recognize the importance of recreation in modern life. The student will develop skills needed to administer recreation programs in schools, churches, and community. Outside study will be required. 3 hrs.

PED 325. Kinesiology. The study of the science of human motion. All performances involve the movement of the body and its parts. They involve the manipulation of implements such as bats, balls, rackets, poles, and clubs. The use we make of these implements and how we handle them influence performance. Therefore, Kinesiology must deal with the factors affecting the use of implements, such as force, friction, elasticity, projection, and angles. Kinesiology helps us to analyze and improve performance. Prerequisites: BIO 100 and 203 or permission of the instructor. 3 hrs.

PED 410. Recreational Internship. The purpose of this course is to place the student in a recreational setting dealing with program, management, and leadership roles—beyond the formal course study. Prerequisite: approval by department chairperson. 3 hrs.

PED 417. Theory of Administration in Health, Physical Education and Recreation. This course includes the study of administrative philosophies and the processes of administration including administrative behavior, leadership, organizational procedures, etc. The course also includes theory and practice involving tests and measurements in physical education and sport as well as program evaluation procedures. Off campus work is required in this course. 3 hrs.

Physical Activity Courses (PAC)

In area 9 of the general education distribution requirement, students are required to complete 3 PAC classes, one of which must be from category (1) and one of which must be from category (2); OR complete PED 104 Personal and Community Health and one PAC from the category (2) courses. The category (1) classes address health related, lifetime fitness programs for non-athletic goals. The category (2) classes address learnings in the affective domain such as group process, responsible group membership, and moral and ethical issues related to sport and games. The category (3) courses are courses in which the students learn the fundamental skills, strategies and rules of physical activities common to our culture. In the following descriptions the particular category to which a given PAC belongs appears in parentheses. All PACs are 1 credit hour.

PAC 100A Coed Weight Training (1). Students learn the principles and techniques of strength training and apply them during active participation in weight lifting. In addition they are assisted in devising a personal weight training program which is consistent with health related fitness principles and is developed to meet their personal goals.

PAC 100B Coed Tennis (3). Students will learn and understand the rules that govern play in tennis, and will develop the skills and knowledge necessary for successful play in both singles and doubles. Students must provide their own racket and tennis balls.

PAC 100C Body Conditioning (1). Students become familiar with the principles and techniques of strength and cardiovascular training and various testing techniques which are applied during active participation in weight lifting and aerobic exercise. The focus of this course is on the application of health related fitness principles to personal fitness programs.

PAC 100D Racquetball (3). Students will learn and understand the rules that govern play in singles, doubles, and cutthroat games of racquet ball. Students will also develop the skills and techniques necessary for successful play, and will learn the strategies important at all levels of competition. Students must provide their own racket, eye protectors, and racquetballs.

PAC 100E Jogging (1). This course allows students to learn and experience the different aspects of cardiovascular exercise. The class explores jogging, walking, form running, flexibility programs, bicycling, swimming, aerobics, weight training, exercise weight equipment, stress and weight management, smoking cessation, and other cardiovascular training for health related purposes.

PAC 101 Lifeguarding (3). This course follows the American Red Cross Lifeguarding program. Students who complete the Red Cross requirements in this course will be granted a lifeguarding certificate. This course is offered when a certified instructor is available and the student enrollment warrants it. Prerequisites: adequate swimming skills and permission of the instructor.

PAC 100J Water Safety Instructor (3). This course follows the American Red Cross WSI program. Students who complete the Red Cross requirements in this course will be granted WSI certificates. This course is offered when a certified instructor is available and the student enrollment warrants it. Prerequisites: adequate swimming skills and permission of the instructor.

PAC 100K Beginning Swimming (1). The skills and knowledge included in this course are those of the Red Cross beginner program. Included are safety, basic survival skills and work on basic strokes. Besides developing competency in these skills, this course includes a physical fitness focus using swimming and water exercise as a means of developing and maintaining health related fitness.

PAC 100L Karate (2). The student in this course will learn the Korean style of karate, called "toe kwon." The art of karate is considered to be both physical and mental focusing on self evaluation. The physical training is divided into three basic parts—Kibon, Kata, and Kune. Proper behavior, safety, conditioning, and attitude are stressed in this course. Actual ranking is allowed; the student starts with a white belt and at the end of PAC 100L is a 9th Kup or yellow belt.

PAC 100M Advanced Swimming (3). Advanced swimming is an extension of the progression of knowledge and skills started in PAC 100K as designed by the American Red Cross. It includes safety, basic survival and rescue skills as well as diving and work on more advanced strokes.

PAC 100N Lifetime Fitness (1). In lifetime fitness the students will participate in a great variety of health related aerobic activities designed to help the student develop a health related fitness program for him/herself. Activities common to the class include walking, stair stepping, jogging, aerobic dance, aerobic game play, rope jumping and many others. Current health and fitness concepts and basic nutrition concepts are studied. Exams are based on information from the textbook and course lectures.

PAC 100O Non-traditional Team Sports (2). As its name suggests, the activities used in this course are of a non-traditional nature, including such games as ultimate frisbee, earthball, flickerball, Olympic team handball, etc. Games that rely on basic fundamental skills (run, jump, throw, catch, kick, etc.) are the only games used in this class. Games that require highly specialized skills are not used in this class. Because physical fitness is a secondary goal in this class, all activities included require all students to be active throughout the play. A weekly journal is used in this course for the purpose of helping students identify and examine be
Physics

Ottawa University does not currently offer a major in Physics, but does offer sufficient courses to support other science programs.

Courses Offered:

**PHY 109. Physical Science.** Basic methods and principles of physical science, examining selected problems in physics, chemistry, geology, and astronomy, with particular emphasis on relating fundamental physical laws to current environmental, energy, and other societal problems. 3 hrs. lecture, one two-hour laboratory per week. 4 hrs.

**PHY 220. College Physics I.** Designed primarily for students with specific interest in the sciences. Fundamental laws of physics with application to contemporary problems. Topics include mechanics, relativity, heat, wave motion, and sound. Prerequisite: MAT 110. 3 hrs. lecture, one three-hour laboratory per week. 4 hrs.

**PHY 221. College Physics II.** Continuation of PHY 220. Topics include electricity and magnetism, light, optics, atomic and nuclear structure, and wave/particle duality. Prerequisite: PHY 220. 3 hrs. lecture, one three-hour laboratory per week. 4 hrs. (Alternate Years)

**PHY 247. University Physics I.** A calculus based version of PHY 220 specially recommended for pre-engineering students. Prerequisite: MAT 210. 3 hrs. lecture, one three-hour laboratory per week. 4 hrs. (Alternate Years)

**PHY 248 University Physics II.** A calculus based version of PHY 221. Prerequisite: MAT 210. 3 hrs. lecture, one three-hour laboratory per week. 4 hrs. (Alternate Years)

The Division of Social and Behavioral Sciences

- Accounting
- Business Administration
- Computer Information Systems
- Economics
- History
- Human Services
- Political Science
- Psychology
- Sociology

Accounting

Accounting is a specialized professional field that in its full scope goes beyond the usual bounds of a liberal arts curriculum. Accounting is a communication process involving the recording, classifying, reporting, and analyzing financial data. The study of accounting promotes skills in problem solving, making decisions, analyzing systems, and planning. As such, the study of accounting is a valuable support to many other disciplines and is especially useful to those interested in the study of economics, law, organizational administration, and computer information systems.

The accounting major includes introductory and intermediate course work in both financial and managerial accounting. It is supplemented by course work in federal income taxes, finance, and auditing as well as introductory courses in economics, computer systems, and management theory. An internship giving the student practical experience in the field of accounting is highly recommended as a capstone for the accounting major.

Successful accounting graduates have a number of career options open to them. Almost any organization a person might select will have need of persons with an understanding of accounting systems, though some systems may be more specialized than others. Three important vocational areas of accounting are private industry, governmental work, and public practice as a Certified Public Accountant.

**Required Major Courses:** ACC 203, 204, 331, 332, 362, 441, 450; BUS 310; plus one of the following: ACC 301, 332; BUS 328.

**Required Supporting Courses:** BUS 305, 318; ECO 201, 202, and one intermediate level economics course (ECO 301, 303, or 403); MAT 106; PSY 120 or 221; PSC 133; SBS 230.

**Recommended Courses:** ACC 401; Any programming language; CIS 105, 110, 115; ECO 315, 408; ENG 237 or 310; HIS 201; MAT 210; PHIL 217; SCT 110; SOC 117.
Business Administration

The major in Business Administration is designed to provide basic concepts, principles, and information in the broad field of management studies. It provides an opportunity to develop skills of analysis and problem solving.

Students will find support here for a variety of management-related careers ranging from direct supervision of others to task achievement to staff functions of planning and control. The major is designed to be useful to private and public organizations, to profit and non-profit organizations. Through special projects in major courses and through internships, students may focus on a particular type of organization.

Required Major Courses: 26 hours from the following courses: BUS 305, 310, 318, 325, 328, 425; plus two of the following: BUS 403, 405; ECO 315, 408.

Computer Information Systems

The major in Computer Information Systems is designed to prepare the student for today's complex information environment. Courses stress management techniques as well as technological skills. Graduates of the program will be prepared to assume roles in the business community or to seek advanced educational opportunities. The program is designed to be compatible with many other programs, and people majoring in other programs are encouraged to consider the possibility of a second major. The major has two possible emphases. The Business Systems emphasis is designed to prepare students for technical positions as programmers and/or analysts to support the needs of business organizations. The Management Information Systems emphasis is designed to prepare students to assume management-oriented positions within information system departments of business organizations.
**Required Major Courses:** CIS 150, 200, 250.

**Required Supporting Courses:** ACC 203; BUS 205, ECO 120; MAT 106; SBS 230.

**Recommended Courses:** ACC 331; BUS 318; 425; ECO 201; ENG 237; MAT 200, 210, 211; PHIL 217.

**Business Systems Emphasis:** CIS 300, 342, 370, 470, and two CIS electives numbered 300 or over.

**Management Information Systems Emphasis:** CIS 450, 480, ECO 315; and one BUS elective and one CIS elective.

**Teacher Certification Requirements:** CIS 105, 110, 115, 140, 150, 200, 300, 342, 370, 380, 420.

Courses Offered:

**CIS 105. Introduction to Software: Word Processing.** Hands-on study of introductory word processing techniques. 1 hr.

**CIS 110. Introduction to Software: Database.** Hands-on study of introductory database processing techniques. 1 hr.

**CIS 115. Introduction to Software: Spreadsheets.** Hands-on study of introductory spreadsheet techniques. 1 hr.

**CIS 120. Introduction to Software: Operating Systems.** Hands-on study of introductory operating systems techniques. 1 hr.

**CIS 125. Introduction to Software: Advanced Word Processing.** Hands-on study of advanced word processing techniques. 1 hr.

**CIS 130. Introduction to Software: Topics.** Hands-on study of a selected software application. 1 hr.

**CIS 140. BASIC.** Fundamental concepts of the programming language BASIC. Topics include I/O techniques, control structures, arrays, subprograms and structured programming methodology. Prerequisite: one course from CIS 105 - CIS 130 or equivalent. 3 hrs.

**CIS 150. Introduction to Programming with Pascal.** This is an introductory course in program design and development. Topics include I/O techniques, control structures, data types, arrays, subprograms and structured programming methodology. Applications will be developed to solve problems frequently encountered in business organizations. 3 hrs.

**CIS 200. Database Systems.** Basic concepts of database systems. Topics include survey of database models, file processing, SQL, database design, normalization and database administration. The use of DBMS to support information needs of a business organization. Prerequisites: CIS 105, 110, or equivalent experience. 3 hrs.

**CIS 230. Software Exploration.** Self-paced study of current software packages. Appropriate study guides will be determined at registration time. Evaluation will consist of written and oral presentations. Prerequisite: permission of instructor. 1 - 3 hrs.

**CIS 250. Business Programming with COBOL.** Students will learn to solve business-oriented problems using structured programming concepts. Topics include I/O techniques, sequential and VSAM file structures, and general rules of the COBOL language. Students will develop appropriate computer programs and will analyze the results from the viewpoint of computer manager. 3 hrs.

**CIS 300 Advanced Database Systems.** The design and development of large-scale database applications on a scale appropriate to the needs of business organizations. Group projects will be required. Prerequisite: CIS 200. 3 hrs.

**CIS 342. Systems Programming.** Introduction to systems programming using C and Assembly languages. Topics will include machine organization, instruction set, addressing, data types, control structures and data structures. System tools will be developed using C and Assembly Language. Prerequisite: CIS 150. 3 hrs.

**CIS 370. Operating Systems.** A study of microcomputer and minicomputer operating systems. Selected topics will include batch processing, concurrent processing, memory management and processor scheduling. Prerequisite: CIS 150. 3 hrs.

**CIS 380. Systems Analysis.** Introduction to the techniques and tools of business computer system development organized around the system development life cycle. A group project is required of all students. The use of CASE tools is an integral component of the course. Prerequisites: CIS 250, 200, BUS 305. 3 hrs.

**CIS 400. Artificial Intelligence.** Introduction to basic concepts including problem-solving, search methods, knowledge representation and expert systems. Applications to support decision making will be developed using languages such as Prolog and expert system shells. Prerequisite: CIS 150. 3 hrs.

**CIS 420. Data Communications.** Topics include the ISO model, network topology, physical networks, error control, transmission and multiplexing, local and wide area networks and network security. Prerequisites: CIS 150, 200. 3 hrs.

**CIS 430. Advanced Software Exploration.** Self-paced study of current high-level software packages. Emphasis will be on those packages that are in demand by business and society. Appropriate study guides will be determined at registration time. Evaluation will consist of written and oral presentations. Prerequisite: permission of instructor. 1 - 3 hrs.

**CIS 450. Advanced Business Computing.** Advanced business applications utilizing the COBOL language. Emphasis will be on group problem-solving and real-world applications. Prerequisite: CIS 250. 3 hrs.

**CIS 470. Computer Design and Organization.** Introduction to the design and organization of hardware. Topics include data representation, logic circuit design, hardware components and architectural configurations of computer systems. Prerequisite: CIS 370. 3 hrs.

**CIS 480. Management Information Systems.** Introduction to information systems which support management decision making and problem solving. Topics include information systems management, data processing systems, decision support systems, office automation, expert systems and organizational information systems. Prerequisites: CIS 380 and ACC 122. 3 hrs.

**CIS 490. Topics in Computer Information Systems.** Study of new software or software that is not typically offered in regularly scheduled courses. Prerequisite: consent of instructor. 3 hrs.

**Economics**

The economics major focuses on the economic approach to discerning and evaluating the problems of individuals, groups, nations and the world. Inflation, unemployment, stagnation, the impact of technological change, waste, economic fads, and the concentration of market power are some of the complex and interrelated issues dealt with in this major.

Economists find a variety of occupational opportunities in business, government, education, investment management, banking, and in economic and financial consulting. Economists research, analyze, forecast and instruct. Many ply their trade in the pragmatic world where getting a job done is the measure of success. Although an advanced degree is generally necessary to qualify for top jobs as an economist, there are frequently openings as an assistant economist or economic analyst for those with a B.A. degree in economics. Teaching positions at the college level are available only to those holding graduate degrees in the field.
Required Major Courses: ECO 201, 202, 216, 301, 303, 313, 403, 408; SBS 230.
Recommended Supporting Courses: SOC 104; PSY 120; PSC 133; ACC 203; CIS 200.

Required Courses: MAT 110, 210, 211, 230; PSY 221; PHL 110, 210, 217; BIO 100; PHY 109; HIS 201, 254; PCS 224 or 232; SOC 117; ENG 237 or 301.

Courses Offered:

ECO 120. Economy and Society. An examination of the history and philosophy of capitalism, with emphasis on the leading figures in the development of economic thought; the emergence of socialism as an alternative to capitalism; the morality of the market; the causes and the effects of economic growth. 3 hrs.

ECO 201. Introductory Macroeconomics. The inflationary consequences of monetary and fiscal policies designed to eliminate poverty and unemployment, the significance of money and government deficits on the attainment of the goals of high employment and economic growth in a non-inflationary environment, and the international role of the dollar in international trade. 3 hrs.

ECO 202. Introductory Microeconomics. The role of prices in generating and developing scarce resources to meet the needs and demands of consumers, the impact of the profit motive on business size and efficiency, the economic power of large-scale business firms, and the interplay of private and public choice through price controls, business regulation, and taxation. Prerequisite: ECO 201. 3 hrs.

ECO 216. Investments. Comparison of the return vs. risk of United States Treasury bonds and bills, corporate bonds, common stock, stock options, mutual funds, annuities, life insurance, savings accounts, certificates of deposit, and other money market funds; analysis of Modern Portfolio Theory, the economic environment and the psychology of market behavior. 3 hrs. (Alternate years).


ECO 303. Money and Banking. The role of money and banking in U.S. economic development and in international finance. The significance of money, banking history and development, commercial banking operations and structure, central banking and monetary management, alternative international monetary systems, monetary theory and monetary policy. Prerequisite: ECO 201. 3 hrs.

ECO 313. Economics and the World Community. A survey of the world as an economic system, with some emphasis on the role and influence of the U.S. The history, the politics, and the economics of international trade and finance; the distribution of the world's resources and income; the costs and benefits of economic growth; the gradual decline of national economic sovereignty as the world community becomes more fully integrated. Prerequisite: ECO 201 or 202. 3 hrs. (Alternate years).


ECO 403. National Income Analysis. Integration of the product market, factor market, and money market in a national income analysis model to evaluate trade-offs between full employment, a stable price level, balance of payments, equilibrium, economic growth, egalitarianism, and economic freedom. Prerequisites: ECO 201, 202, and 303. 3 hrs. (Alternate Years)

ECO 408. International Business. The principal topics of international economics (the balance of payments, exchange rates, free trade, managed trade, protectionism, economic development) are examined from the perspective of the business major; the outcome will be much keener appreciation of the world economic environment as it impinges on choices and decisions made by managers of all firms, large and small. 3 hrs.

History

History is the study of past human activity in all its variety. It is the interpretation of accomplishments and failures. History enables the student to understand public events, affairs, and trends of the time. It is the basis of liberal education since it embraces all facets of human activity from religious and philosophical aspirations to political, social, and economic transactions. History deals with vital contemporary problems, including the interrelationship between society and its environment, issues of war and peace, critical thinking and sound decision-making. The study of history enhances basic communication skills, requires the ability to think clearly and critically, and provides one of the few substitutes for direct experience. History majors have become teachers, lawyers, stockbrokers, and doctors, and entered other endeavors which require a broad and disciplined mind. At Ottawa University there is a major in both American History and World History.

American History Emphasis

Required Major Courses: HIS 110, 218, 253, 254, 316, 342, 343; PSC 133.

Required Supporting Courses: CIS 105, 110, 115; SCT 110; ENG 237 or 310; HIS 201; SBS 230; and at least one course in Economics, Sociology, and Psychology.

World History Emphasis

Required Major Courses: HIS 110, 201, 253, 254, 314, 350 or 351, 360.

Required Supporting Courses: CIS 105, 110, 115; ENG 201, 237 or 310; PSC 224 or 232; REL 111 or 338, and at least one course in Economics, Sociology, and Psychology.

Teacher Certification Emphasis (Check Teacher Education Handbook for current requirements)

Required Certification Courses — Secondary U.S. history, U.S. government and world history: HIS 110, 201, 210, 253 or 254, 342 or 343, 350 or 351; PSC 133, 224 or 232, 333; ECO 120; SOC 104 or 260, 203 or 306; BIO 206; SBS 230.

Courses Offered:

HIS 110. The American Experience. Introduction to the study of American history and its cultural, intellectual, political, economic, religious, racial, and diplomatic topics. Emphasis is placed upon development of the country from discovery through Reconstruction. 4 hrs.

HIS 201. World Geography. An introduction to the study of geography. Learning of the earth's natural resources as a limiting and conditioning influence upon the development of human culture and as a source of political and economic power. Study of developing environmental problems in the world and attempts to address those problems. 3 hrs.

HIS 210. Kansas History. A study of the settlement and development of Kansas from the time of Coronado's travels to the present. 2 hrs. (Alternate Years)

HIS 218. The American West. Westward expansion as a key to the character of America. Use of primary sources and regional and local materials is encouraged. Prerequisite: one course in history or consent of the instructor. 4 hrs. (Alternate Years)
HIS 253. World Civilization I. The beginnings and development of human culture and institutions, western and non-western. A basic introduction to historical study. 3 hrs.

HIS 254. World Civilization II. The development of civilization, western and non-western, in the modern era. An analysis of the political, economic and cultural revolutions that have created contemporary culture and its tensions. 3 hrs.

HIS 314. Russian History. A study of Russia with emphasis upon the Tsarist and Communist periods. Prerequisite: HIS 253 or HIS 254. 4 hrs.

HIS 316. Twentieth Century America. A study of the political, social, intellectual, and other aspects of American civilization in this century. Special emphasis is placed on the nation since 1945. Prerequisite: one course in American history. 4 hrs.

HIS 342/PSC 342. HIS 343/PSC 343. Topics in American History and Politics. A selection of readings and topics on American history and government. Common theme, assigned readings, individual projects. Inquire in advance for information on selected topics. Credit in either history or political science. Prerequisite: junior or senior standing and one course in history or political science. 4 hrs.

HIS 350/351 Topics in World History. A selection of readings and topics in world history. Common theme, assigned readings, and individual projects. Inquire in advance for information on assigned topics. Prerequisite: junior or senior standing and one course in history or political science. 4 hrs.

HIS 360. Asian History. A study of the major nations of Asia, with special emphasis upon modern development. Prerequisite: HIS 253 or HIS 254. 4 hrs.

Human Services

The Human Services major is designed for those who plan to commit their professional lives to serving people. The Human Services program is developed through the guidance of the National Organization for Human Services Education to meet the demands for skills and knowledge by professionals in the field.

Major coursework includes a core of classes focusing on skills, knowledge and values of the profession. In addition, the major requires a solid foundation in the liberal arts which emphasizes the need to think critically about issues and diversity in our world. Students are required to consider and select a focus area within Human Services such as advocacy, children and families, corrections, gerontology, or management/administration.

An internship requirement provides students with educationally focused opportunities that integrate academic content with field experience. Internship provides a valuable learning experience while preparing students to make significant contributions to the community and to those with whom they will work.

Students in Human Services are preparing for careers in organizations such as, but not limited to: welfare agencies, church ministries, community development programs, youth and adult group homes, nursing homes, senior centers, retirement centers, poverty assistance programs, governmental agencies, law enforcement agencies, courts and probation offices and community correction programs.

Required Major Courses: HUS 118, 200, 300, 405, 410/420, plus the required focus area courses (to be arranged by advisor and student).


Recommended Courses: SCT 110; CIS 105, 110, 115; SOC 440; PSY 301, 405; ECO 120; PHIL 110; ENG 102, 237, 317; PSC 133; HUS 212.

Courses Offered:

HUS 118. Social Welfare as a Social Institution. An examination of social welfare as a fundamental social reality, not as a collection of programs and services. Other critical institutions such as family, religion, politics, and the economy are examined, and their relationship to social welfare explored. This course is an introductory course for all students to increase their knowledge about institutions and their relationship to our society. 3 hrs.

HUS 200. Values & Explorations in Human Services. A broad overview of the profession of Human Services. The course examines the historical developments of human services and the knowledge, values, and skills required to function in the role of a human service worker. The course also allows the students to evaluate their strengths and weaknesses as a potential human service professional. Prerequisite: SOC 101, 104 or PSY 120. 3 hrs.

HUS 201. Adult Development & Aging. This course views adult development as an integrative, dynamic, and continuous process that contains predictable developmental phases. The periods of the life-cycle examined within this course include those years between young adulthood and death. An overall emphasis throughout the study of the material is our continuous preparation for meaningful adjustments to the numerous anticipated crises encountered in our adult years. Prerequisites: SOC 104 and PSY 120. 3 hrs. (Alternate Years)

HUS 212. The Family. This course explores the historical and theoretical perspectives of the family. Dynamics of family relationships, communication styles and interactions will be addressed as well as issues relating to: societal stress on the family: structural and subcultural family lifestyles and the future of the family within society. Prerequisites: either PSY 120 or SOC 101 or 104. 3 hrs.

HUS 300. Human Services & the Community. Designed to help the student to function as a human service worker in a community or small neighborhood setting. The course defines the community, raises issues and questions about the power structure and cultural and environmental pressures within the community. Community resources and relational linkages of community agencies are analyzed. Community dynamics and the change processes are explored and critiqued in terms of their effect on the people living within the community. Prerequisites: HUS 118 and SOC 101. 3 hrs. (Alternate Years.)

HUS 301. Issues in Gerontology. The purpose of this course is to examine the causes and consequences of aging. The biological, psychological, behavioral, and sociological aspects of aging are examined theoretically and practically (1/3 of the course is field experiences). Prerequisite: SOC 101 or 104, PSY 120. 3 hrs. (Alternate Years)

HUS 405. Skills and Techniques in Human Services. This course will identify a set of basic skills that might be used in the different settings in which helpers work. Although the course will describe a wide array of human service intervention strategies, there will be particular focus on how to interview and/or counsel clients. The course will try to make students aware of both the technology and the art of human service practice. Prerequisite: HUS 200, 300, and PSY 323. 3 hrs.
Political Science

Political Science courses provide valuable preparation for a variety of careers. These careers include government service at the national, state, and local levels. Many attorneys have chosen political science as their undergraduate major. People active in various movements for social change have taken advantage of the knowledge provided by the study of political science to support their cause more actively and effectively. Many undergraduates who study political science enter business careers where a knowledge of politics has become increasingly necessary as relationships between government and business become more complex. In every vocation, knowledge of political science has become crucial as the role of government expands in our society.

Required Major Courses: PSC 133, 224, 232, 322, 342, 343; HIS 110, 253 or 254, 316.

Required Supporting Courses: SBS 230; SCT 110; ENG 237 or 310; and at least one course from Computer Information Systems, Economics, Sociology, and Psychology.

Teacher Certification Emphasis: (check Teacher Education Handbook for current requirements)

Required Certification Courses — Secondary Level: PSY 110, 120, 221, 222, 301, 303, 323, 334, 405; and SBS 230.

Psychology

Psychology is the scientific study of behavior. The discipline utilizes the scientific method of investigation, experimentation, and data analysis in arriving at psychological theories. Areas of study include Life-Span Development; Theories of Personality; Abnormal Behaviors; Social Psychology; Personal Growth; and Counseling Theories and Dynamics. Psychology is a very interesting and useful discipline in understanding and working with people in a variety of professional and para-professional applications.

Required Major Courses: PSY 110, 120, 221, 222, 301, 303, 323, 334, 405; and SBS 230.

Recommended Courses: PSY 410/420 (Internship in Psychology), PSY 308; HUS 201, 212; PHL 110, 210, 217; MAT 106 and/or MAT 110; SCT 110, 201; BIO 100, 203; SOC 101, 104, 117, 407; CIS courses in computer applications.

Required Certification Courses — Secondary Level: PSY 110, 120, 221, 303, 323, and 334. For Teacher Certification Emphasis, check Teacher Education Handbook for current requirements.

Courses Offered:

PSY 110. Personal Growth. The psychology of personal growth focuses primarily on the personal dynamics and psychosocial processes involved with self actualization. The approach which is utilized is both theoretical and experiential. The course is designed to promote both individual and interpersonal competence. Students will have an opportunity to participate in small group experiences and to explore their personal life styles, strategies of coping, defense mechanisms, and communication skills. 3 hrs.

PSY 120. Principles of Psychology. Principles of Psychology is an introductory course designed to provide students with an understanding of human behavior. The emphasis in this survey course will be on the basic concepts and terminology of psychology. Topics will include: the biological basis of behavior, sensation, perception, history of psychology, growth and development, motivation, learning, measurement and scientific methodology, emotion, personality, abnormal behavior, and psychotherapy. 3 hrs.

PSY 221. Social Psychology. This class will consist of a review of psychological literature pertaining to social influences on human behavior. This survey will include attitude formation and change, influence and persuasion, social attraction, theories of aggression, conformity, group dynamics, cultural influences, leadership styles, power and status, social roles, and influences of the physical environment. Prerequisite: PSY 120. 4 hrs.

PSY 222. Behavioral Research. This course consists of a review of the basic methods of research, experimental design, data analysis and the professional style of writing. The study of behavioral research will acquaint students with the general methodological problems involved in psychological research. Students will design and conduct experiments, gather and analyze data, and report their results in the approved formal style of writing. This course will be beneficial for all students who desire a basic understanding of research methods and design. Prerequisite: PSY 120 and SBS 230. 3 hrs.

PSY 301. Theories of Personality. This course will cover psychoanalysis, behavioristic, and humanistic theories of personality. Theorists will include Sigmund Freud, Carl Jung, Erik Erikson, B.F. Skinner, Abraham Maslow, Alfred Adler, Carl Rogers, Karen Horney, Erich Fromm, and other personality theorists. This course will be helpful to students in understanding of human personality. Prerequisite: PSY 120. 4 hrs.
PSY 303. Abnormal Behavior. This course will consist of a study of the biological, psychological, and sociocultural influences contributing to abnormal behavior patterns. Topics will include the historical perspective, theories of etiology, diagnostic evaluation and assessment. Study of the various pathological syndromes will include: stress disorders, schizophrenia, personality disorders, psychophysiological disorders, sexual dysfunctions, disorders of childhood, suicide, substance abuse, and organic brain disorders. Prerequisite: PSY 120. 4 hrs.

PSY 308. History and Systems of Psychology. This is a course designed to review the historical antecedents of contemporary psychology. This survey will include Ancient Greek and Latin Psychology, Medieval Scholastic Psychology, Renaissance Enlightenment, British Empiricism. The schools of Association, Sensationalism, Behaviorism, German Experimental and Physiological Psychology. Emphasis will include Structuralism and Functionalism, Clinical Psychology, Gestalt Psychology and Phenomenological-Existential Psychology. This course will contribute to a basic understanding of significant concepts and historical contributions to the study of psychology. Prerequisite: PSY 120. 3 hrs.

PSY 323. Developmental Psychology. This course is designed to provide an overview of human growth and development through the life span. The biological, psychological, and sociological aspects of human growth and development are explored throughout each of the ages, stages, tasks and crises of life. Included in this course will be the works of Piaget, Kohlberg, Erikson, and other significant contributors to understanding human growth and development. Prerequisite: PSY 120. 4 hrs.

PSY 334. Tests and Measurements. This course will provide an understanding of the functions of testing and measurement in behavioral sciences. We will study the importance of validity, reliability, and standardization procedures; test construction, selection, administration, and application of psychological instruments. Assessment topics will include aptitude, ability and intelligence measures, personality and vocational interest inventories as well as projective devices. Prerequisites: PSY 120 and SBS 230. 3 hrs.

PSY 405. Counseling Theories and Dynamics. This course will examine a number of approaches to counseling and psychotherapy. Included will be psychoanalysis, behavioral learning approaches, client-centered therapy, gestalt, transactional analysis, rational-emotive therapy, and reality therapy. Emphasis will be placed on practical applications of the various paradigms. Group therapy, ethical and legal issues, as well as other selected topics will also be reviewed. This course will be particularly meaningful to students planning to enter the helping professions. Prerequisites: PSY 120 and 301 or 303. 4 hrs.

PSY 410/420. Internship in Psychology. Both PSY 410 and PSY 420 may be taken for 1 to 8 hours of academic credit. Students interested in obtaining practical experience in their major area of interest are encouraged to pursue an internship. The internships are arranged individually and are usually taken after the completion of the major course work.

Sociology

Sociology is the systematic study of human social behavior. Students of sociology study the processes of social interaction in and between groups and societies. The program incorporates the flexibility needed to meet various student interests through the special topics option. This means that every student will develop an expertise in a specific interest area. Students may also choose to focus on anthropology as a part of the sociology curriculum. Another important facet of the program involves the field research component in the senior year. This course requirement is the equivalent of an internship which provides the student with practical experience in the field.

This program is preparatory for careers which require a knowledge of the various ways in which ethnic groups interact; the relationship between an individual and patterns of behavior in society, particularly as they relate to problem oriented issues; an ability to do program assessment and evaluation; and an ability to do data gathering and interpretation to explain social behavior. These abilities prepare students for work in occupations which might include social research and analysis, consulting, teaching, law enforcement, marketing, community organization and city planning, organizational development, personnel services, and administration in social agencies. Graduate school is an additional option for sociology majors.


Required Supporting Courses: PSY 120, 221; PSC 133; SBS 230.

Recommended Courses: CIS 201; ECO 201.

Anthropology Focus: SOC 104, 260, 306, 315, 400, 420; PSY 120; PSC 133; PSY 221; FRE 101, HIS 253; BIO 311; REL 338.

Courses Offered:

SOC 101. History of Western Social Thought. This course focuses on concepts fundamental to the existence of society through a sociological perspective. The course will cover the historical development and contemporary manifestation of ideas including freedom, inequality, ethnicism, belief, and individual responsibility as they relate to culture in the United States. It is designed for those students who need to fulfill a distribution requirement in Area VI, but is not required for students in the major. It is recommended that students enroll in this course in the first three semesters of their academic career. Students majoring in Teacher Education are not advised to use this course to fulfill state certification requirements (SOC 104 Introduction to Sociology is recommended for education majors). 3 hrs.

SOC 117. Social Problems and American Values. This course will analyze human maladjustments as they relate to the culture of the U.S., concentrating on the social factors operative in both personal and social problems. Additional analysis of programs to alleviate or eliminate social problems will be included. 3 hrs.

SOC 260 Cultural Anthropology. This course is an introduction to Cultural Anthropology. It will survey history, theory and method in the field through an examination of basic concepts in anthropology including culture, adaptation, cooperation, social order and change. 3 hrs.

SOC 245/445. Special Topics in Sociology. These courses are designed to allow students to focus on specific topics and research skills. Focus area will be determined by the student and approved by the professor. The course is divided into three sections: research paper, application, and synthesis paper. SOC & HUS Majors only. 3 hrs.

SOC 306. Ethnic Relations and Multiculturalism. This is a survey course of the major ethnic groups in the United States which explores issues related to race and ethnicity using relevant sociological theory on intracultural relations. This course is required for Sociology and Human Service Majors. Prerequisites: SOC 101 or SOC 104. 3 hrs.
SOC 315. Directions of Social and Cultural Change. Analysis of the processes of social change at various levels of society. Application of sociological theory regarding the cause, manifestation and consequence of change agents in society. Prerequisites: SOC 104 and SOC 117 or 260. 3 hrs.

SOC 400. Theory and Method in Sociology. Application of social science methods to theory testing. Particular attention given to qualitative methods and computer applications. SOC & HUS Majors only. Prerequisite: SOC 240 and SOC 306. 3 hrs.

SOC 407. Sociology of Deviance. The course explores various theoretical definitions and explanations of the frequency and extent of deviance and crime in our society. It includes treatment of criminology with consideration of the social characteristics of offenders, victims, crime rates and various punishment strategies. SOC & HUS Majors only, or by permission. Prerequisites: SOC 306, 240. 3 hrs.

SOC 420. Field Research. 4 hrs.

Other Academic Programs

- University Courses
- Individualized Major
- Pre-Professional Programs
- Special Study Opportunities
- Graduate Courses of Study
- Ottawa University's Non-Residential Centers
- English Language Institute

University Courses

The following courses are listed separately because of their relevance to several courses of study. Neither of them belongs to any particular department or program.
UNV 114. Introduction to Basic College Skills. Attention to the improvement of basic and developmental level reading and writing competencies. Areas dealt with include: reading comprehension and speed, organization, sentence structure, developing ideas, word choice, word forms, and punctuation. Study skills and time management are also addressed. 3 hrs.

Individualized Major

Throughout the decade of the 1970s, Ottawa University's academic program was one which required all students enrolled to develop a unique statement of their own vocational and avocational interests and expectations and to construct an educational program from scratch with the aid of an advisory committee. Through that process each student, therefore, developed his or her own major and no traditional academic major program was published or expected to be followed by those students. As a result of that experience, Ottawa University has developed a tradition of working with students to help them explore and consider options that depart from standard major programs.

Students whose interests involve several disciplines and who would like to develop a course of study that combines a number of academic areas around a common theme will find the individualized major ideally suited for their needs. The students will need to find a faculty member willing to work with them to develop the statement of the program and its content and submit the program for review to the Academic Council. For that reason, no courses are listed as part of the individualized major. Each student's program is uniquely designed for the particular student.

Pre-Professional Programs

Pre-Ministerial Program

Study for the ministry does not presuppose any particular undergraduate course of study. In addition to a sense of vocation for the ministry, most seminaries are more concerned with whether an applicant has acquired a broad background of knowledge and the skills of communication and critical thinking than with his/her undergraduate major. As a result, students may attend seminary having pursued virtually any area of concentration. It is clear, however, that some majors may be more helpful to seminary studies than others, and pre-ministerial students are urged to choose a course of study that will enhance their effectiveness both in seminary and in the ministry. Thus pre-ministerial students often major in psychology, sociology, English, human services, philosophy, or religion (though some seminaries discourage applicants from an undergraduate major in religion since so much of that study will be duplicated in their seminary training).

In keeping with the need for a broad background of knowledge, pre-ministerial students are urged to be sure that they have an adequate introduction to the major areas of liberal arts study and, in particular, to the disciplines dealing with the study of society, government, economics, ethics, philosophy, literature, human behavior, and the arts.

In addition, pre-ministerial students are encouraged to acquire particular kinds of managerial and interpersonal skills that will be of use in their ministry and, therefore, should consider the following courses as especially relevant to their pre-ministerial program, regardless of their particular major:

ACC 203 Financial Accounting
CIS 105-115 Introduction to Computing
ENG 237 Intermediate Writing
ENG 310 Advanced Expository Writing
PSY 221 Social Psychology
PHL 217 Introduction to Logic
SCT 110 Speech Preparation and Delivery
SCT 201 Interpersonal and Small Group Communication
SCT 205 Oral Interpretation

Pre-Law Program

Admittance to professional school of law is available to students with a variety of major fields of concentration. Law schools are not interested in a specific program of study which could be called a pre-law major, but rather are interested in a number of specific skills most of which are concentrated in the use of language and in the communication arts.

Students seeking admittance to law schools are advised to select a major appropriate to their own interests but to be sure to include as many courses as possible to assist them in the preparation for the use of the English language in its written and oral forms.

In addition, students are encouraged to consider that the practice of law involves the handling and administration of other people's money and estates and will also involve dealing with all types of individuals. Thus, students are well advised to seek those courses which prepare them to understand human growth and development, general psychological principles, and sufficient accounting or related business courses to familiarize them with the administrative details of the handling of financial affairs. Therefore, in addition to the student's specific major field, the following courses should be considered as recommended for pre-law majors:

ENG 237 Intermediate Writing
ENG 310 Advanced Expository Writing
SCT 202 Argumentation and Debate
SCT 110 Speech Preparation and Delivery
ACC 203 Introductory Financial Accounting
ACC 204 Managerial Accounting
ECO 201 Introduction to Macroeconomics
CIS 105-115 Introduction to Computing
PHL 217 Introduction to Logic
PSY 120 Principles of Psychology
PSY 221 Social Psychology
SOC 101 History of Western Social Thought
Pre-Medical Program and Pre-Dentistry Program

Medical schools and dental schools are looking for college graduates who are able to cope with many facets of an individual's life. They know that physicians must help patients with personal, social, and spiritual problems as well as attending to their physical well-being. Ottawa University's pre-medical and pre-dental program is designed to build the foundation which will help the student be prepared for medical school as well as for the variety of problems that physicians must handle in serving the needs of patients. A major field may be selected in a variety of different disciplines as long as the specific courses indicated below are included in the undergraduate program in order to satisfy some of the expectation for admission to the professional study of medicine or dentistry.

To assist students in the process, the University provides a Health Professions Committee that can be of considerable assistance in both advising and counseling students on the appropriate course selection and procedures for pursuing entrance to professional school at the end. The program is demanding and requires commitment on the part of the student. However, students who complete the program are usually accepted in professional schools and are adequately prepared and have established the self-confidence necessary for success in medicine and dentistry. The specific courses that should be included in the curricula of all pre-medical and pre-dental students at Ottawa University include:

BIO 100 Principles of Biology
BIO 203 Human Physiology and Anatomy
BIO 212 Genetics and Society
BIO 401 Biochemistry
BIO 403 Vertebrate Structure and Development
CHE 120, 121 General Chemistry I and II
CHE 230, 231 Organic Chemistry I and II
CHE 330 Chemical Analysis
MAT 110 Elementary Functions
MAT 210 Calculus I
PHY 220, 221 College Physics

In addition to these basic courses, students should consider courses in other areas such as psychology, religion, sociology, literature, and history to prepare for the personal contact required in health professions.

Allied Health Programs
(pre-pharmacy, pre-nursing, pre-physical therapy)

Ottawa University's Division of Natural Sciences offers basic science preparation in several of the allied health professions. These include Physical Therapy, Nursing, and Pharmacy.

Professional schools in each of the above areas require the basic science courses and elective liberal arts requirements to be fulfilled at an accredited college.

Students preparing in the allied health careers are in demand, and they provide the trained graduate the opportunity to serve society in a challenging and meaningful way.

Students in these programs will take courses such as:

BIO 100 Principles of Biology
BIO 203 Human Physiology and Anatomy
BIO 214 Nutrition
BIO 302 Microbiology
CHE 120, 121 General Chemistry I and II
CHE 230, 321 Organic Chemistry I and II
MAT 106 College Algebra
MAT 110 Elementary Functions
MAT 210 Calculus
PHY 220, 221 College Physics
PSY 120 Principles of Psychology
PSY 323 Developmental Psychology

Medical Technology

Ottawa University offers a four-year program plus one year of clinical work which leads to a Bachelor of Arts Degree and after the clinical year, a Medical Technology Certificate.

FOREIGN STUDENTS are cautioned that most of the clinical programs are not authorized to accept non-immigrant foreign students.

APPLICATION to the clinical program is usually made in the fall of the senior year. Applications are processed through the Program Director/Coordinator of the clinical program.

PROCESS OF SELECTION is done by each clinical program and is competitive. Criteria includes state of health, academic performance and personal characteristics. Minimum grade point average ranges from 2.0 to 2.5 for both overall GPA and the GPA for science courses.

COSTS vary with each clinical program. The student is responsible for his/her living expenses.

CERTIFICATION: Upon graduation, students are eligible to take a national certification examination. Examination fee is approximately $50.

FINANCIAL AID varies with each clinical program. Financial aid through Ottawa University is not available for students in their year of clinical education. The student should apply for financial aid from Ottawa for the Ottawa portion of the program and apply to the clinical program director for financial aid for that portion of the program.

Pre-Veterinary Medicine

Pre-veterinary studies are offered by the Natural Science Division. The pre-professional courses appropriate to this focus are comparative to those listed for other programs preparatory for study in the medical field as listed above in this catalog.

Pre-Engineering Studies

Many of the problems facing our society need technological solutions which will come only with a strong work force of engineers and scientists. But simply to be technically trained will not be sufficient to do the job. Engineers working in the decades of the eighties and nineties and beyond must be sensitive to the
environmental, societal, and human implications of both problems and solutions. It is essential that engineers be liberally educated to meet the demands of a changing world, a fact recognized by more and more engineering schools as they broaden their undergraduate programs to include more of the traditional liberal arts courses.

At Ottawa University, the primary objective is to provide just such a liberal arts education. The pre-engineering curriculum is designed to do this at the same time that it provides a grounding in science and mathematics courses to prepare the student for the upper level engineering courses which he/she will encounter after transferring to an engineering college to complete his/her studies. The pre-engineering program operates as follows:

The student meets with the Pre-Engineering Advisor at Ottawa University and develops a contract for a three year program. In most cases all the requirements for a degree from Ottawa can be met in the three year period except for the required major in Mathematics and 124 credit hour rule for graduation. The contract specifies that after appropriate courses in applied mathematics are completed at the engineering school chosen by the student, the major in mathematics will be considered fulfilled. The same type of specifications made concerning the 124 hour requirement. When official transcripts are received by Ottawa University showing that these additional courses and hours have been completed, a B.A. degree from Ottawa University is granted.

This program is the same regardless of the engineering school chosen and the area of interest: Civil, Mechanical, Electrical, etc. In the advising process, it would be beneficial for the student to be guided by a catalog from the school to which they wish to transfer. It is important that you contact the Pre-Engineering Advisor as soon as possible so that an individualized plan can be developed.

For a list of mathematics courses you would take at Ottawa University, see the required major courses for Mathematics. In addition, courses included are:

CHE 120 General Chemistry I
CHE 121 General Chemistry II
CHE 230 Organic Chemistry I
CHE 231 Organic Chemistry II
PHY 247 University Physics
PHY 248 University Physics
A Computer Language Course

The student should be sure to get a solid mathematics background in high school work, including geometry, two years of algebra and trigonometry or pre-calculus.

In addition to the technical courses, the student will take courses in such areas as English composition, psychology, religion, sociology, and economics so as to meet graduation requirements at both OU and the engineering school; but more importantly, to be a liberally educated person.

Special Study Opportunities

A selected number of courses are designed by instructors so that they may be taken by arrangement during a regular enrollment period: fall, spring, or summer. Not all such courses will be available at any given time depending upon the schedule and responsibilities of the faculty member teaching the course. Information about these courses should be obtained from the academic advisor or the academic dean. The following descriptions identify the kinds of special opportunities which are available.

A student who has already demonstrated academic ability in a particular field and who seeks to go beyond the formal courses available at Ottawa University may do so under certain conditions.

A student may request an Independent Study provided:

1. The student has reached junior standing.
2. The student has a cumulative GPA of 3.0 or higher.
3. The student has the consent of the instructor who will supervise the independent study.
4. The supervisor has worked with the student in a prior course or the student has been recommended to the supervisor by another faculty member.
5. The supervisor is a member of the department in which the independent study is to be done.
6. The Chairperson of the appropriate department and the Academic Dean approve the request.

The purposes, methods of learning, and evaluation processes for the independent study will need to be explained on a form which can be obtained from the Registrar.

The following independent study work has been undertaken in recent years and illustrates the range and variety available for the prepared student:

Plant Pathology
Chemical Equilibrium
Personnel Administration
History through Literature
Music Therapy
The Institution of the Presidency
The Philosophy of Death
Technology and the Future
The Zen Tradition
Coaching Women's Sports
Community Recreation
Fluid Mechanics
Industrial Psychology
Drugs: Effects and Treatment
Behavior Modification
Paul's Concept of the Church
Modern Roman Catholic Thought
Directed Study

Ottawa University acknowledges the fact that due to certain factors (size of student body, size of faculty, number of course offerings, contract changes, certification requirements, and the like) scheduling conflicts occasionally arise. To facilitate student progress toward their educational goals, selected courses in the catalog have been designed by instructors to be available for enrollment without the usual frequent classroom meeting schedule. The courses are pre-designed rather than open to a variety of topics as would be the case in Independent Study enrollments. Nevertheless, only students with considerable motivation and self-direction should attempt these courses.

To make Directed Studies a viable option for students and faculty, the following must be satisfied:

1. The student must have a cumulative GPA of 2.2 or higher to request a Directed Study from a faculty member.
2. All Directed Study courses must start at the beginning of a semester or term, that is, before the last day to add a class.
3. The Directed Study must have the approval of the faculty member involved as well as the student's advisor and the Academic Dean.
4. Directed Studies are treated like other regularly scheduled classes and should be completed by the end of the term in which they are taken.

Internships, 410, 420.

Internships are job-related experiences in which students work in the community and apply concepts, ideas, and techniques learned in the classroom. Internships are available in a number of majors and pre-professional programs, including banking, business, education, health, human services, and pre-law.

Internships can be a very valuable part of a student’s educational program. Academic credit is available for internships, but the academic credit is not given simply for satisfactory performance in an internship job. Students in internships must also produce satisfactory written work demonstrating understanding of concepts, ideas, and techniques in the context of work in the community.

As a general guideline for determining the credit value of a given internship, 40 hours of work over 16 weeks (i.e., an average of 2.5 hours per week) along with the appropriate written and reflective requirements may be given 1 hour of academic credit. Thus an internship that is given 8 hours of academic credit will require the student work on the job for 20 hours/week for a full 16-week semester.

Internship courses are designated by the number 410 and 420. Participation in these courses requires an approved contract as well as approval from the academic supervisor of the internship and the student’s program advisor.

Teaching Participation, 245, 345, 445.

Participating in teaching is another area in which the student has a sphere of responsibility and also can see learning and teaching as two aspects of one process. Such course work is available in each department and may be a part of student progress toward a degree. Advanced standing in the discipline and approval of the instructor and the Academic Dean is required.

Ottawa University's Non-Residential Centers

During the 1970's many adult students entered college. It became obvious their access to higher education was limited by work responsibilities, families, having young children to care for, and difficulties in getting to campus-based programs because of either time or distance.

In 1974 Ottawa University established its first non-residential center to serve the educational needs of such adults. Programs in the non-residential adult centers are consistent with the educational philosophy and programs of the residential campus. Studies in the non-residential programs maintain the same high standards, and work completed in any location of the University is acceptable in any other location. All credit granted for study in a non-residential center is applicable to an Ottawa University degree, consistent with the student's own educational goals and program selection. The non-residential programs incorporate the University's insistence upon quality in design and offerings, individual educational planning, service by permanent on-site faculty advisors, an interdisciplinary approach, and emphasis on continuous self-education.

The significant difference between the non-residential centers and the residential campus lies in the flexibility of the centers in overcoming two barriers to access for adult students — location and schedule. Learning is not confined to certain buildings, nor is it limited to a semester calendar which begins in the fall and the spring. Learning in the adult centers is possible at many different sites or classrooms anywhere in the metropolitan area served, or wherever enough students can gather to make the teaching/learning situation practical. Through the non-residential centers, Ottawa University offers programs leading to the B.A. and M.A. degrees, and upper divisional or post-baccalaureate courses for personal and professional growth primarily in Kansas, Arizona, Wisconsin and California. Students in the non-residential centers may enter the educational program at any time, and may accelerate or slow the process to fit their own needs. Some courses are offered in a few weeks, while other classes meet once a week over a longer period. Credit is awarded in standard semester hours. Learning and evaluation at the non-residential centers may be fairly described as traditional education with non-traditional entry points and scheduling.

In addition to providing the individualized educational programs, the adult centers can work with any agency, business, or group to provide high quality instruction for credit or continuing education units at locations convenient to the group.

The first Ottawa University center to serve adults was established in the Kansas City area in 1974. Kansas City is the metropolitan area nearest the residential campus; it is 45 minutes distant by interstate highway. A second center was opened in Phoenix, Arizona, in 1977, responding to interests expressed by local American Baptists who welcomed Ottawa University into their area where private, church-related educational institutions are rare. An additional instructional site was opened in Tempe, Arizona, in 1989. A third center opened to classes in metropolitan Milwaukee in 1993. As with Phoenix,
the Milwaukee location was a response to demographic patterns of adult access to higher education and American Baptist relationships. The non-residential programs have enrolled more than six thousand part-time students in a single academic year and more than 2800 persons have completed their college degrees. Approximately one in three of these adult graduates have gone on to further education in graduate and professional schools.

Further information about non-residential center programs may be obtained in separate publications available from each location.

Contact:

Ottawa University Kansas City
10865 Grandview, Building 20
Overland Park, KS 66210
(913) 451-1431

Ottawa University Phoenix
2340 West Mission Lane
Phoenix, AZ 85021
(602) 371-1188

Ottawa University Milwaukee
300 North Corporate Drive, Suite 110
Brookfield, WI 53045
(414) 879-0200

Graduate Program

Master of Arts (M.A.)

Ottawa University offers a Master of Arts Degree in Human Resources through two of its non-residential centers for adult students. This 36-credit-hour degree program is designed for working adults in the Kansas City and Phoenix metropolitan areas who wish to increase their knowledge and skills in human resources. Since 1993 the program is also available for qualified adults in Hong Kong, administered through the OU Phoenix center. The program is designed to provide professional growth for adults in various fields associated with human resources, as well as prepare those who wish to enter the profession. Provision is made to encourage interdisciplinary work based on the needs and goals of the student, and to equip students with the ability to learn how to learn.

The program seeks to promote professional excellence and academic attainment, and to encourage students to examine their value systems.

In addition to the graduate courses offered through the M.A. program, the Ottawa University non-residential adult centers also offer a limited number of graduate courses for educators. Courses taken in this manner may or may not be applicable to the M.A. in Human Resources.

For further information regarding the Graduate Program, contact:

Director of Graduate Studies
Ottawa University Kansas City
10865 Grandview, Bldg. 20
Overland Park, KS 66210
(913) 451-1431

International Program

In 1987 Ottawa University opened its first degree completion program in the Far East with approval by North Central Association of Colleges and Schools. Adults residing in Hong Kong, Malaysia and Singapore must have completed three years of acceptable college level work and present at least 94 semester hours of transferable credit in order to be eligible for admission to the program.

The 31 credit hour degree completion program leads to the B.A. in business administration or education. All instruction is conducted by Ottawa University faculty who travel to the Pacific Rim to lead intensive study periods with students. Directed study assignments are then completed by students during the periods of time between intensive class meetings. The program requires each student to complete a period of time on the residential campus in Ottawa, Kansas.

For further information regarding the International Program, contact:

Coordinator
International Program
Ottawa University Kansas City
10865 Grandview, Building 20
Overland Park, KS 66210

English Language Institute

In 1973 Ottawa University established the English Language Institute, a program in which international students may improve their skills in speaking, understanding, writing, and reading English as a second language. The program consists of both class instruction and individual tutoring by American students. In addition, arranged special activities and personal encounters help the student to grasp something of the cultural setting so important to truly understand a second language.
Faculty

Division Chairpersons:
Division of the Arts and Humanities: Martha S. Gage
Division of the Natural Sciences: George L. Chaney
Division of Social and Behavioral Sciences: Richard L. Andrews

Department Chairpersons:

Art .................................................. Frank J. Lemp
Biology ............................................. J. Edward Morrissey
Chemistry ......................................... Tom B. Lewis
Computer Information Systems ................ David R. Kraemer
Accounting, Economics, and Business Administration .......... Donald W. Owen
Education ........................................ Martha S. Gage
English ........................................... Lora K. Reiter
Foreign Languages ................................ L. Murle Mordy
History and Political Science .................. Ronald A. Averyt
Mathematics and Physics ...................... George L. Chaney
Music ............................................ Byron W. Jensen
Physical Education ............................. Rosalie R. Hedlund
Psychology ...................................... Bill G. Ballinger
Religion and Philosophy ...................... Charles C. Anderson
Sociology and Human Services ................ Kelly F. Steans
Speech, Communication, and Theatre .......... Larry D. Peters
Emeriti

Maude N. Adams (1957-1970)

W. David Bemmels (1940-1979)
Professor Emeritus of Physics and Mathematics, B.A., Colorado College, 1934; M.A., Syracuse University, 1936; Ph.D., University of Colorado, 1941; M.H.L., Ottawa University, 1970.

Bill B. Boucek (1954-1989)
Associate Professor Emeritus of Physical Education, B.A., Ottawa University, 1948; M.S., Kansas State Teachers College, 1958; M.H.L., Ottawa University, 1970.

Evelyn Kinney (1946-1981)
Professor Emeritus of Physical Education, B.S., University of Kansas, 1941; M.S., University of Colorado, 1952; M.H.L., Ottawa University, 1970.

Emory J. McKenzie (1948-1985)
Professor Emeritus of English, B.A., Ottawa University, 1945; M.A., Duke University, 1947; Ph.D., University of Nebraska, 1962; M.H.L., Ottawa University 1970.

H. William Myers (1954-1985)
Professor Emeritus of Sociology, B.A., William Jewel College, 1944; B.D. Yale Divinity School, 1948; S.T.M., ibid., 1949; Ph.D., Yale University, 1959; M.H.L., Ottawa University, 1970.

J. Marion Rith (1966-1988)
Assistant Professor Emeritus of Education and Librarian Emeritus, B.A., Ottawa University, 1951; M.E., University of Kansas, 1952; M.S., Kansas State Teachers College, 1972.

Elmer A. Roth (1954-1984)
Associate Professor Emeritus of Biology, B.A., Ottawa University, 1953; M.A., University of Kansas, 1954; M.H.L., Ottawa University, 1970.


Active

Glenn Adamson (1989)

Charles C. Anderson (1961)

Richard L. Andrews (1986)
Assistant Professor of Accounting, B.A., University of Texas at El Paso, 1971; M.B.A., University of Kansas, 1985; C&GSOL, Ft. Leavenworth, Ks., 1989; M.H.L., Ottawa University, 1993.

Wayne D. Angell (1956)
Professor of Economics, B.A., Ottawa University, 1952; M.A., University of Kansas, 1953; Ph.D., ibid., 1957; M.H.L., Ottawa University, 1971.

Kenneth Arnold (1980)

Assistant Professor of Education, B.A., St. Cloud State University, 1986; M.S., Northeastern Oklahoma State University, 1988; Ed.D., University of Arkansas, 1993.

Ronald A. Avery (1961)
Professor of History and Political Science, B.A., Texas Technological University, 1956; M.A., ibid., 1958; Ph.D., University of Kansas, 1970; M.H.L., Ottawa University 1972.

Billy G. Ballinger (1965)
Associate Professor of Psychology, B.A., Southwestern College, 1959; M.S., Mankato State College, 1961; M.H.L., Ottawa University, 1972.

James C. Billick (1968)
Professor of Political Science, Provost of Ottawa University at Kansas City, B.A., Ohio State University, 1963; M.A., University of Pittsburgh, 1965; Ph.D., ibid., 1969; M.H.L., Ottawa University, 1972.

Virginia Boyle (1992)
Assistant Professor of Education, B.S., Youngstown State University 1956; M.Ed., Westminster College 1967; Ph.D., University of Pittsburgh 1972.

William A. Breyspraak (1977)

Clifford E. Burke (1963)
Assistant Professor of Psychology and Religion, Dean of Students, B.A., Ottawa University, 1955; B.D., Berkeley Baptist Divinity School, 1958; M.S., University of Kansas, 1967.
Andrew R. Carrier (1990)
Instructor in Physical Education and Head Men's Basketball Coach, B.A.,
Bethany College, 1981; M.S., Emporia State University, 1986.

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Professor of Mathematics, B.S., University of Kansas, 1953; M.S., Kansas State
College of Pittsburg, 1959; Ph.D., University of Kansas, 1967; M.H.L., Ottawa
University, 1972.

June W. Clark (1990)
Instructor in Human Services, B.A., Marymount College, 1981; M.S.W., Arizona
State University, 1986.

Michael D. Cummings (1991)
Assistant Professor of Speech, B.A., Wabash College, 1986; M.A., Pittsburg State
University, 1987.

David W. Dallas (1989)
Instructor in Physical Education and Head Football Coach, B.S.E., Missouri
Western State College, 1984.

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Business Manager and Assistant Professor of Accounting, B.A., Ottawa University,

Daniel L. Foxx, Jr. (1982)
Associate Professor of History, B.A., Brigham Young University, 1969; M.A.,
ibid., 1970; M.H.L., Ottawa University, 1989.

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Associate Professor of Psychology, B.S., Wheaton College, 1958; M.A.E., Arizo-
na State University, 1965; Ph.D., ibid., 1973; M.H.L., Ottawa University, 1993.

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Professor of Education, B.A., Ottawa University, 1964; M.S., University of

Harold D. Germer (1989)
Associate Professor of Religion and President, B.A., Denison University, 1957;
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Instructor in Music and University Organist, B.M., Hope College, 1972; M.Mus.,
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Campus Minister, B.A., Furman University, 1983; M.Div., The Southern Baptist

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Associate Professor of Biology, B.S., Wichita State University, 1975; M.S.,
Colorado State University, 1977; Ph.D., Arizona State University, 1980; M.H.L.,
Ottawa University, 1991.

Linda L. Heines (1992)
Assistant Professor of Anthropology, B.A., University of Wisconsin-Milwauk-
eee, 1975; M.A., Ohio State University, 1976; Ph.D., ibid., 1979.

Anne C. Hargrove (1989)
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University, 1972.

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University, 1984.

Neil S. Harris (1969)
Professor of English and Associate Dean of Graduate Studies, B.A., Kalamazoo
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Ottawa University, 1971.

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Assistant Professor of Music, B.M.E., University of Northern Colorado, 1979;
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Barry B. King (1990)
Assistant Professor of Communications, B.S., West Texas State University, 1969;

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Associate Professor of Computer Information Systems, B.A., Lakeland College,
1970; M.S., University of Michigan, 1971; Ph.D., ibid., 1977; M.H.L., Ottawa
University, 1990.

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Assistant Professor of Business Administration, B.A., McPherson College, 1986;

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Assistant Professor of Education, B.A., Lea College, 1970; M.S., Mankato State
University, 1974.

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Associate Professor of Art, B.A., Ottawa University, 1972; M.A., Kansas Univer-

Alice Joy Lewis (1967)
Instructor in Music, B.M.E., University of Kansas, 1964; B.M., ibid., 1965.

Tom B. Lewis (1965)
Professor of Chemistry, B.A., William Jewell College, 1960; M.S., University of
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Jack D. Maxwell (1983)
Instructor in Computer Information Systems and Director of Administrative Computing, B.S., Purdue University, 1968; M.S., Washington State University, 1969; M.S., Purdue University, 1972; Ph.D., ibid., 1974.

Callistus W. Milan (1980)

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Associate Professor of Political Science, B.A., Upsala College, 1963; M.A., University of Missouri at Kansas City, 1976; M.H.L., Ottawa University, 1983.

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Instructor in Computer Information Systems, B.S., Carroll College, 1986; M.S., University of Toledo, 1989.

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Associate Professor of French, Director of English Language Institute, and Foreign Student Advisor, B.A., Kansas State University, 1963; M.A., ibid., 1965; M.Ph., University of Kansas, 1969; Ph.D., University of Kansas, 1979; M.H.L., Ottawa University, 1989.

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Assistant Professor of Theatre, B.A., Buena Vista College, 1975; M.A., University of South Dakota, 1978.

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Professor of Economics and Organization Administration, Director of Graduate Studies, OU Phoenix, B.S., Kent State University, 1955; M.A., Ohio State University, 1958; C.P.A., 1961; D.B.A., Indiana University, 1969; M.H.L., Ottawa University, 1971.

Kelly G. Spurgeon (1990)
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Kelly K. Steanson (1987)

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Assistant Professor of Music, B.A., Ottawa University, 1952; M.A., University of Kansas City, 1963.

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Fredric B. Zook (1967)

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Clifford E. Burke Dean of Students
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Catherine Peck Director of the University Union
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Ottawa University Milwaukee
Ilene C. Risley Provost
Marcia Dilley Administrative Assistant for Academic and Financial Records

Campus Information Directory

Academic Matters
Dean of the College .................................................. Ext. 5500

Admissions
Tim Adams
Director of Admissions ............................................. Ext. 5555

Adult Students, Non-Residential Degrees
Harold D. Germer
President ................................................................. Ext. 5506

Alumni, Gifts, Estate Planning, Public Relations, Church Relations
James R. Smith
Vice President for University Relations .......................... Ext. 5510

Concerts, Lectures and Arts Programs
Dean of the College .................................................. Ext. 5500

Expenses, Student Loans
Marsha M. Denniston
Business Manager ..................................................... Ext. 5530

Financial Aid, Scholarships, Student Employment
Ronald Yingling
Director, Financial Aid ............................................... Ext. 5570

Foreign Students
L. Murle Mordy
Director, English Language Institute ........................... Ext. 5473

Placement and Career Planning
Cheerie Finch
Director of Career Planning and Placement ..................... Ext. 5540

Religious Programs
John W. Gravley
Campus Minister ..................................................... Ext. 5474

Student Affairs, Housing, Health Service
Clifford E. Burke
Dean of Students ..................................................... Ext. 5560

Transcripts, Grade Reports
Elaine Pyle
Assistant Registrar .................................................... Ext. 5580

Other Information
Stephen E. Markwood
Provost ................................................................. Ext. 5500

Ottawa University is an undergraduate collegiate institution of study recognized and accredited by the North Central Association of Schools and Colleges.
### Academic Calendar Dates *

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Main Campus
1. Brown Hall
2. Price Hall
3. Tauy Jones Hall
4. Behan Technology Center
5. Atkinson Hall
6. Mammel Art Center
7. Myers Library
8. Administration Building
9. Mowbray Univ., Union
10. Mowbray Univ., Bookstore
11. Mowbray Univ., Cafeteria
13. Wellness Center
14. Ward Science Hall
15. Greenhouse
16. Chapel
17. Centennial Hall
18. Martin Hall
19. Mabee Bldg.
20. Wilson Fieldhouse
21. Mabee Courts
22. PE/Intramural Field
23. Main Maint. Shop
24. Cook Field
25. 11th Street House
26. Drama Workshop Bldg.
27. Soccer Game Field
28. Football Practice Field
29. "Doc" West Track
30. Practice Field
31. Practice Field
32. Practice Field
33. Haigh Meadows Stu. Housing

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