PHILOSOPHY AND RELIGIOUS STUDIES

www.bsu.edu/philosophy
North Quadrangle 211, 765-285-1244

PHILOSOPHY (PHIL)

500 History of Ancient Philosophy. (3) Development of philosophical theories and ideas from the rise of philosophy in Greece through the medieval period. Emphasizes the theories in relation to one another, the times that produced them, and the thinkers who offered them.
Not open to students who have credit in PHIL 300.

503 Reading and Special Study. (3) For superior students: guided reading and investigation in topics in philosophy not covered intensively in available courses.
A total of 6 hours of credit may be earned, but no more than 3 in any one semester or term.

505 Ethics. (3-6) Variable content course involving a critical examination of broad topics in applied ethics or a critical examination of historical or current ethical theories and their application of contemporary problems.
A total of 6 hours of credit may be earned.
Not open to students who have credit in PHIL 415, 420.

510 Introduction to Theory of Knowledge. (3) A critical discussion of leading theories and problems of knowledge. The condition of knowledge and rational belief, the different kinds of knowledge, the nature of truth, and the challenge of skepticism.
Not open to students who have credit in PHIL 410.

513 Philosophy of Science. (3) Central philosophical problems in the sciences such as the nature of scientific explanation, the testing of hypotheses, and ethical issues arising from science; for example, the use of human subjects in experimentation and prolonging life.
Not open to students who have credit in PHIL 313.

RELIGIOUS STUDIES (RELST)

503 Reading and Special Study. (3) For superior students: guided investigation of topics related to religion not covered intensively in other available courses.
Prerequisite: permission of the department chairperson.
A total of 6 hours of credit may be earned, but no more than 3 in any one semester or term.

PHYSICS AND ASTRONOMY

www.bsu.edu/physics
Cooper Science Complex 101, 765-285-8860

PROGRAMS

The department offers programs in professional physics that lead to the master of arts (MA) degree or master of science (MS) degree. A student may also select a program of study in physics education for prospective high school teachers of physics, which leads either to the master of arts (MA) or to the master of science (MS) degree, or the master of arts in education

(MAE) in physics. The MA, MS, and MAE degree programs require a minimum of 30-33 hours, 6 of which may consist of courses in a minor area or electives in a related discipline. A student's curriculum must include a minimum of 24 hours of physics, applied physics, or astronomy, as approved by the department, which may include credit for successful completion of a thesis or research paper.

See the Science listing under the College of Sciences and Humanities, page 180, for the doctoral programs in science education and philosophy in environmental science.

Admission requirements

Applicants must meet the admission requirements of the Graduate School and the Department of Physics and Astronomy and take the Graduate Record Exam (GRE) or an equivalent test.

MASTER OF ARTS IN PHYSICS

Degree requirements

Requires the student to write a research paper on a research project in physics or physics education. The research paper earns a total of 3 hours of credit.

PREFIX	*NO*	*SHORT TITLE*	*CR HRS*
Core requirements			
PHYCS	534	Thermodynamc (3)	
	or		
	675	Thermal Phys (3)	3
	552	Elec Mag 2 (3)	
	or		
	673	Electdynamcs (3)	3
	565	Quant Mech	3
	530	Mechanics (3)	
	or		
	671	Clasicl Mech (3)	3
	683	Seminar (1-4)	3
Courses in physics, applied physics, or astronomy as approved by the department. A minimum of 12 credit hours must be in courses at the 600 level.			9-15
Research requirement			
RES	697	Research Ppr (1-3)	3

Minors and electives as approved by the department	0-6
	33 hrs

MASTER OF SCIENCE IN PHYSICS

Degree requirements

Requires a 6-hour thesis, which is normally a formal report on the student's research in some feature of experimental, theoretical or computational physics, or physics education.

PREFIX	*NO*	*SHORTTITLE*	*CR HRS*
Core requirements			
PHYCS	565	Quant Mech	3
	671	Clasicl Mech	3
	673	Electdynamcs	3
	675	Thermal Phys	3
	683	Seminar (1-4)	3
Courses in physics, applied physics, or astronomy as approved by the department			6-12
Research requirement			
THES	698	Thesis (1-6)	6
Minors and electives as approved by the department			0-6
			33 hrs

Topics for research leading to an MS or MA degree may include applied nuclear (Radon) studies; condensed matter/nanostructure studies; observational stellar astronomy, galactic structure, and extragalactic astronomy; solar energy applications; microprocessor-based instrumentation, computer vision; radiocarbon dating; elementary particle physics (Ball State University/Fermi Lab); physics studies applied to policies on arms control, energy, and the environment; and physics education.

If the student chooses experimental physics as a research topic, it normally will be in one of the above areas for which laboratory and apparatus are available. However, it is possible for research to be conducted at a cooperating industrial or national research and development laboratory or educational institution. For research in both experimental and theoretical physics, remote access to the university's central computer is available; students also have access to desktop computers in the department. Students' choices of research topics must be approved by the department.

Assistantships

Normally students who are awarded graduate assistantships will need about two years to complete work for the master's degree. Students should allow a minimum amount of time equivalent to about three semesters of thesis research for initial approval, completion, and final acceptance by the department and Graduate School.

MASTER OF ARTS IN EDUCATION IN PHYSICS

Admission requirements

Applicants must meet the admission requirements of the Graduate School and the Department of Physics and Astronomy and take the Graduate Record Exam (GRE) or an equivalent test.

Designed for students choosing a profession in public school teaching. Candidates must possess a valid teaching license or be in the process of securing a senior high, junior high/middle school, or secondary school teaching license.

Degree requirements

Requires students to write research papers on research projects in physics, astronomy, physics education, or astronomy education. The research paper earns a total of 3 hours of credit.

PREFIX	*NO*	*SHORT TITLE*	*CR HRS*
12-18 hours from APHYS, ASTRO, PHYCS as approved by the department			12-18
9 hours from Professional Education Core			9
0-6 hours from Minors and nondepartmental electives as approved by the department			0-6
Research requirement			
RES	697	Research Ppr (1-3)	3
			30 hrs

APPLIED PHYSICS (APHYS)

510 Introduction to Nanoscience and Technology. (3) Explores science and technology at the nanoscale. Studies the physical properties of nanomaterials, the tools and techniques for nanosystem fabrication and investigation; principles of mechanical, optical, electrical, and magnetic nanosystems; current state of technology in physics, chemistry, biology, engineering, and information systems; and future applications.

Prerequisite: PHYCS 260.

512 Fundamentals of Nanomaterials Growth and Device Fabrication. (4) Introduces basic experimental techniques in: nanomaterials growth, nanodevices fabrication, and materials and devices characterization. Introductory laboratory in the field of nanoscience and technology. Intended for those interested in semiconductor technology or experimental work in general.

Prerequisite: PHYCS 260 or permission of the department chairperson.

515 Medical Physics 1. (3) Biomechanics, statistical physics, bioelectric fields, biomagnetic fields, electricity, and magnetism at the cellular level.

Prerequisite: permission of the department chairperson or instructor.
Not open to students who have credit in APHYS 315.

516 Medical Physics 2. (3) Signal analysis, images, biomagnetism, x-rays, nuclear medicine, magnetic resonance imaging.
Prerequisite: permission of the department chairperson or instructor.
Not open to students who have credit in APHYS 316.

520 Solar Thermal Systems. (3) Physics of the solar energy resource, solar collection, concentration, thermal conversion, energy storage, and the design and performance of solar thermal energy systems.
Prerequisite: PHYCS 122; MATHS 162 or 166.
Not open to students who have credit in APHYS 420.

522 Photovoltaics. (3) Physics of photovoltaic systems, including basic operating principles, design and technology, and performance of individual solar cells and solar cell systems.
Prerequisite: PHYCS 260; MATHS 162 or 166.
Not open to students who have credit in APHYS 422.

ASTRONOMY (ASTRO)

530 Astronomy and Astrophysics 1. (4) A review of mechanics, electromagnetic radiation, and atomic structure in modern observational astrophysics. Solar system astrophysics—including an introduction to celestial mechanics and astronomical coordinate and time systems—are surveyed, and astronomical instruments are discussed.
Prerequisite: ASTRO 122; PHYCS 122.
Not open to students who have credit in ASTRO 330.

532 Astronomy and Astrophysics 2. (4) An examination of observational stellar astronomy with applications to the study of stellar structure and evolution and a review of the physics of stellar systems like star clusters, galaxies, and clusters of galaxies.
Prerequisite: ASTRO 530.
Not open to students who have credit in ASTRO 330.

580 Seminar in Modern Astronomy. (3) Seminar covering selected topics in contemporary astronomy. Extensive use of library facilities including current journals and periodicals in astronomy. Discussions of current astronomical research.
Prerequisite: permission of the instructor.
A total of 6 hours of credit may be earned, but no more than 3 in any one semester or term.
Not open to students who have credit in ASTRO 380 under the same title.

582 Instruments and Techniques in Planetarium Operations. (3) Use of planetarium instruments, console, and chamber. Organization and evaluation of planetarium programs and exhibits.
Prerequisite: ASTRO 122 or permission of the department chairperson.
Not open to students who have credit in ASTRO 382.

586 Instruments and Techniques of Astronomy Workshop for Teachers. (2) Observatory and laboratory experience in investigating the modern techniques of imaging in observational astronomy. Characteristics of telescopes, CCD cameras, film and emulsions, electronic data acquisition, and processing systems. Methods of reducing raw data.

602 Observational Astronomy Workshop for Teachers. (3) Lecture/laboratory- oriented course that prepares middle and high school teachers to explain celestial events, plan observing sessions, and use star charts and planetaria-type computer software. Introduces image acquisition and software to extract meaningful data.

Not open to students who have credit in PHYCS 602.

604 Physical Foundations of Astronomy Workshop for Teachers. (3) Lecture/ laboratory-oriented course that introduces middle and high school teachers to basic principles of physics presented in the context of modern astronomy and astrophysics. Fundamentals of mechanics and celestial mechanics and their applications to space exploration, as well as fundamental principles in optics and the structure of matter are discussed.

Not open to students who have credit in PHYCS 604.

606 Stellar Evolution and Black Holes Workshop for Teachers. (3) Lecture/ laboratory-oriented course that introduces middle and high school teachers to the basic principles of stellar properties and stellar evolutions. Fundamental laws are reviewed in the context of pulsars, neutron stars, and black holes. Provides practical applications through hands-on experiences in how stellar properties are determined.

Prerequisite: ASTRO 604 or PHYCS 604 or permission of the instructor.

Not open to students who have credit in PHYCS 606.

PHYSICS (PHYCS)

530 Mechanics. (3) Basic concepts of mechanics, general motion of particles in three dimensions. Simple and damped harmonic motion. Particle dynamics in noninertial frames of reference, central forces. Dynamics of systems of particles. Motion of rigid bodies in three dimensions. Dynamics of oscillation systems.

Prerequisite: permission of the department chairperson.

Not open to students who have credit in PHYCS 330.

534 Thermodynamics. (3) Laws of thermodynamics and introduction to the kinetic theory of gases. No regularly scheduled laboratory.

Prerequisite: PHYCS 330 or permission of the department chairperson.

Not open to students who have credit in PHYCS 434.

540 Physical Optics. (3) The electromagnetic wave theory of light; spectra, interference, diffraction, polarization, and double refraction.

Prerequisite: PHYCS 122.

Not open to students who have credit in PHYCS 340.

546 Acoustics. (3) Elements of pure and applied acoustics. Topics include solutions to the wave equation, acoustic impedances, electro-mechanical-acoustic analogies, direct-radiator loudspeaker and enclosure theory, and room acoustics.

Prerequisite: PHYCS 122.

Not open to students who have credit in PHYCS 346.

550 Electricity and Magnetism 1. (3) Application of vector analysis to electrostatics, dielectric theory, magnetostatics, dipole and multipole fields, currents, and Maxwell's equations.

Prerequisite: PHYCS 122; MATHS 267 or equivalent.

Not open to students who have credit in PHYCS 450.

552 Electricity and Magnetism 2. (3) The study of electric and magnetic fields in electrodynamics, Maxwell's equation, EM waves, radiation of moving charges, and relativistic kinematics and dynamics.
Prerequisite: PHYCS 450, 550 or equivalent.
Not open to students who have credit in PHYCS 452.

554 Electronics l. (4) Introductory DC and AC circuit theory, semiconductor components, power supplies, transistor amplification, integrated circuit operational amplifiers, active filters, oscillators, and function generators. Basic combinational logic circuits and Boolean algebra. Emphasizes application of integrated circuits.
Prerequisite: PHYCS 122 or permission of the department chairperson.
Not open to students who have credit in PHYCS 354.

556 Electronics 2. (4) Sequential logic circuits including scalars, displays, memories, shift registers, analog-to-digital and digital-to-analog conversion techniques. Microprocessor architecture and support electronics for microcomputer design. IC chips and circuits for experiment to microcomputer interfacing. Use of a microprocessor development system.
Prerequisite: PHYCS 354 or 554.
Not open to students who have credit in PHYCS 356.

560 Introductory Nuclear Techniques. (3) Experimental studies of radioactive disintegrations and decay products and their relationship to nuclear structure. Instrumentation in radioscope measurements. Two lectures and two two-hour laboratory periods a week.
Prerequisite: PHYCS 260.
Not open to students who have credit in PHYCS 360.

561 Elementary Particles. (3) Investigates the nature and behavior of elementary particles through the study of the symmetries and dynamics responsible for their production, reactions, and decays.
Prerequisite: PHYCS 464 or 564.
Not open to students who have credit in PHYCS 461.

563 Nuclear Physics. (3) The nucleus and nuclear interactions. Theoretical and experimental elements of radioactive decay and models of the nucleus.
Prerequisite: PHYCS 260.
Not open to students who have credit in PHYCS 463.

564 Introduction to Quantum Mechanics. (3) De Broglie's postulate, the uncertainty principle, the Schroedinger equation, the free particle, square well potentials, harmonic oscillator, the hydrogen atom, and angular momentum in quantum mechanics, and other selected wave mechanics problems. No regularly scheduled laboratory.
Prerequisite: PHYCS 260.
Not open to students who have credit in PHYCS 464.

565 Quantum Mechanics. (3) Review of barrier problems, the harmonic oscillator, and angular momentum using matrix methods. Problems involving perturbation theory, one-electron atoms, magnetic moments, spin, relativistic effects, symmetric and anti-symmetric wave functions, the helium atom, transition rates, and scattering theory.
Prerequisite: PHYCS 464 or 564.
Not open to students who have credit in PHYCS 465.

566 Solid State Physics. (3) Structure and physical properties of matter in the solid state. Electrical and magnetic properties and band theory of solids, with special emphasis on semiconductors.

Prerequisite: PHYCS 260.
Not open to students who have credit in PHYCS 466.

570 Introductory Mathematical Physics 1. (3) Application of mathematical techniques to the formulation and solution of physical problems in classical mechanics, thermodynamics, and electromagnetic theory and in quantum mechanics. Topics include computer algebra systems and applications.
Prerequisite: PHYCS 122, 260; or permission of the department chairperson.
Not open to students who have credit in PHYCS 370.

572 Introductory Mathematical Physics 2. (3) Techniques in the formulation and solution of physical problems. Computer algebra systems (e.g. mathematica) may be introduced for the study of topics such as boundary value problems, transforms, special functions of mathematical physics, and applications of tensor analysis in physics.
Prerequisite: PHYCS 122, 260; or permission of the department chairperson.
Not open to students who have credit in PHYCS 372.

580 Seminar in Modern Physics. (3) Seminar covering selected topics in contemporary physics. Extensive use of library facilities including current journals and periodicals in physics. Discussions of current research in physics and related fields.
Prerequisite: permission of the instructor.
A total of 6 hours of credit may be earned, but no more than 3 in any one semester or term.
Not open to students who have credit in PHYCS 380 under the same title.

585 Measures of Learning in Physics. (1) Integration of the fundamental principles underlying undergraduate physics education and related measures of learning. Emphasis is on developing familiarity with the contents of local and national exams in physics which are often reflected in graduate level qualifying exams. Emphasis will be focused on basic concepts in the context of problem solving.
Not open to students who have credit in PHYCS 485.

602 Observational Astronomy Workshop for Teachers. (3) Lecture/laboratory-oriented course that prepares middle and high school teachers to explain celestial events, plan observing sessions, and use star charts and planetaria-type computer software. Introduces image acquisition and software to extract meaningful data.
Not open to students who have credit in ASTRO 602.

604 Physical Foundations of Astronomy Workshop for Teachers. (3) Lecture/ laboratory-oriented course that introduces middle and high school teachers to basic principles of physics presented in the context of modern astronomy and astrophysics. Fundamentals of mechanics, celestial mechanics, and their applications to space exploration as well as fundamental principles in optics and the structure of matter are discussed.
Not open to students who have credit in ASTRO 604.

606 Stellar Evolution and Black Holes Workshop for Teachers. (3) Lecture/laboratory-oriented course that introduces middle and high school teachers to the basic principles of stellar properties and stellar evolutions. Fundamental laws are reviewed in the context of pulsars, neutron stars, and black holes. Provides practical applications through hands-on experiences in how stellar properties are determined.
Prerequisite: ASTRO 604 or PHYCS 604 or permission of the instructor.
Not open to students who have credit in ASTRO 606.

641 Laser and Holography Workshop for Teachers. (2) The field of lasers and holography for junior high and high school science teachers. Basic geometrical optics, physical optics, and atomic theory phenomena in relation to laser operation and hologram making. Laboratory-oriented with considerable emphasis on laser safety and the use of lasers for demonstrating optical phenomena in the classroom.

Prerequisite: PHYCS 112 or 122 or permission of the department chairperson.

Not open to students who have credit in PHYCS 340, 540.

657 Introductory Integrated Circuit Analog Electronics Workshop for Teachers. (2) Laboratory-oriented course that acquaints teachers who do not have a strong electronics background with the uses of modern integrated circuitry. Emphasizes the construction and use of circuits that can be presented in the classroom. Introduces analog electronics topics.

Prerequisite: PHYCS 112 or 122 or permission of the department chairperson.

Not open to students who have credit in PHYCS 354, 356, 554, 556.

658 Introductory Integrated Circuit Digital Electronics Workshop for Teachers. (2) Laboratory-oriented course that acquaints teachers who do not have a strong electronics background with the uses of modern integrated circuitry. Emphasizes the construction and use of circuits that can be presented in the classroom. Introduces digital and micro-processor electronics topics.

Prerequisite: PHYCS 112 or 122 or permission of the department chairperson.

Not open to students who have credit in PHYCS 354, 356, 554, 556.

659 Application of Nuclear Techniques Workshop for Teachers. (2) Applications of nuclear techniques in research, medicine, the environment, energy production, and industry. Designed for junior high and high school science teachers. Laboratory oriented. Uses radiation detection devices and radiation safety procedures.

Prerequisite: PHYCS 112 or 122 or permission of the department chairperson.

Not open to students who have credit in PHYCS 360 or 560.

669 Work and Learning Experience in Physics. (1-3) Paid work and learning experiences in applied or theoretical physics in an institutional, industrial, or university research or development setting.

Prerequisite: approval of a proposed program by the department chairperson.

A total of 3 hours of credit may be earned.

No more than 3 hours in combination with PHYCS 369 may be used as approved electives toward a departmental major.

671 Classical Mechanics. (3) Classical Hamiltonian mechanics as applied to particles and rigid body motion.

Prerequisite: PHYCS 330 or permission of the department chairperson.

673 Electrodynamics. (3) Advanced mathematical techniques for solving problems in electrostatics and magnetostatics; fundamental concepts of electrodynamics. Applicants to electromagnetic fields in matter, waves, and radiation.

Prerequisite: PHYCS 450, 550 or equivalent.

675 Thermal Physics. (3) Thermal physics, kinetic theory, and statistical mechanics.

Prerequisite: PHYCS 434 or 534 or permission of the department chairperson.

677 Quantum Theory of Solids. (3) The quantum mechanical theory of the structure, cohesion, and static and dynamic processes in solids, particularly crystalline solids but with some reference to amorphous solids.

Prerequisite: PHYCS 565 or permission of the department chairperson.

681 Resources and Methodology of Physics Research. (3) Periodical resource material in physics, methodology of literature research. This course may be used to satisfy requirements of the graduate research methodology plan for a master's degree.

Prerequisite: permission of the department chairperson.

683 Seminar in Physics. (1-4) Critical examination and discussion of recent experimental and theoretical developments in physics. Participation in and contribution of a presentation at departmental physics colloquia are expected.

A total of 4 hours of credit may be earned.

685 Special Studies in Physics. (1-8) Special activities in physics involving one or more of the following: experimental work, study of advanced topics in physics, and attendance in prescribed classes.

Prerequisite: permission of the department chairperson.

A total of 8 hours of credit may be earned.

691 Advanced General Science. (3) Further study of the principles of physics, chemistry, meteorology, geology, and astronomy that were introduced in the prerequisite: PHYCS 101.

693 Theories of Physics for Secondary Physics Teachers. (3) Classical mechanics, relativity, electricity, quantum mechanics, and statistical mechanics used to enable students to use new developments and recent scientific advances. Designed primarily for teachers and workers in the field who need to update their general knowledge of physics. No regularly scheduled laboratory.

Prerequisite: 8 hours of credit in college physics.

696 Modern Developments in Physics Teaching. (1-3) Recent developments in secondary physics curricula, multimedia teaching methods, national and local trends in physics teaching, laboratory work, textbooks, tests.

Prerequisite: permission of the department chairperson.

A total of 3 hours of credit may be earned.

Not open to students who have credit in PHYCS 396.

790 Internship in Science Education. (3) Supervised experience in instruction of physics or science education courses.

PHYSIOLOGY AND HEALTH SCIENCE

www.bsu.edu/physiology

Cooper Science Complex 325, 765-285-5961

The Department of Physiology and Health Science offers graduate programs leading to either the master of arts or the master of science degree in health science or in physiology. Both physiology and health science may be used as academic cognate areas for students pursuing doctoral or specialist in education programs in related disciplines.

Although each graduate program has specific requirements, there is flexibility to meet individual student's interests and needs. For example, a student who wants to earn a master of science degree in either physiology or health science will be required to complete a thesis. Graduate students who wish to professionalize their Indiana teaching licenses in health and safety will complete appropriate course work in the master of arts or master of science degree program in health science.

PROGRAMS

Master of science (MS) in health science; master of arts (MA) and master of science (MS) in physiology.

See the Science listing under the College of Sciences and Humanities, page 180, for the doctoral programs in science education and philosophy in environmental science.

MASTER'S PROGRAM IN HEALTH SCIENCE

Admission requirements

Applicants must meet the admission requirements of the Graduate School and must have a bachelor's degree from an accredited college or university with at least an academic minor in health education, health and safety education, health science, or an equivalent subject. A student applying for a graduate teaching assistantship must have a grade-point average (GPA) of at least 3.0 on a scale of 4.0.

MASTER OF SCIENCE IN HEALTH SCIENCE

Students are expected to demonstrate a higher level of research skills in this program by completing a thesis (THES 698).

PREFIX	*NO*	*SHORT TITLE*	*CR HRS*
Core requirements			
HSC	670	Rsearch Tech	3
	671	Research Sem	2
	687	Stat Mth HSc (3)	
	or		
EDPSY	641	Statist Meth (3)	3
THES	698	Thesis (1-6)	6

Complete one of the following tracks:

Community health education, 11 hours

HSC	585	Co Hl Mthds	4
	669	Pd HSc Pract (3-6)	
	or		
	675	Internship (3-6)	3
	686	Prg Pln Eval	4
Electives			2

School health education, 12 hours

HSC	563	CSHP: Org Is	3
	595	Mth Mtrl H E	3
6 hours from			
HSC	550	El S Hlth Pg (3)	

562	Hl Pro Wkste (3)	
564	H Ed Clinic (3)	
565	Alcohol Prob (3)	
567	Drug Depn Ab (3)	
568	Con Hlth Iss (3)	
569	Health Aging (3)	
571	Death Dying (3)	
572	Women Health (3)	
581	Stress Mang (3)	
582	Environ Hlth (3)	
589	Pub Hlth Ent (3)	

Category II or III education courses (3)	6
Electives	4
	30 hrs

MASTER'S PROGRAMS IN PHYSIOLOGY

These programs are designed for students seeking in-depth coverage of physiological principles pertaining to the human organism, endocrinology, renal function, cardiovascular dynamics, and pathophysiology.

Admission requirements

Applicants must meet the admission requirements of the Graduate School and must also have a bachelor's degree from an accredited college or university with an academic major or minor in biology, the life sciences, or equivalent science fields. For students applying for graduate teaching assistantships, a GPA of at least 3.0 on a scale of 4.0 is required.

MASTER OF ARTS IN PHYSIOLOGY

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CR HRS*
CHEM	563	Prn Biochm 1	3
	564	Prn Biochm 2	3
PHYSL	585	Resrch Tech	3
3 hours from			
PHYSL	511	Endocrinolgy (3)	
	513	Renal Physl (3)	3
3 hours from			
PHYSL	514	Cardiovsculr (3)	
	520	Neuroscience (3)	3
3-4 hours from			

ANAT	525	Embryo/Histo (4)	
PHYSL	590	Ad Tpc Physl (1-3)	3-4

ANAT or PHYSL electives
(excluding MED PHYSL 640)
(at least 3 credit hours must be in physiology) 9

General electives 3

30-31 hrs

MASTER OF SCIENCE IN PHYSIOLOGY

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CR HRS*
CHEM	563	Prn Biochm 1	3
	564	Prn Biochm 2	3
PHYSL	585	Resrch Tech	3
THES	698	Thesis (1-6)	6

3 hours from

PHYSL	511	Endocrinolgy (3)	
	513	Renal Physl (3)	3

3 hours from

PHYSL	514	Cardiovsculr (3)	
	520	Neuroscience (3)	3

3-4 hours from

ANAT	525	Embryo/Histo (4)	
PHYSL	590	Ad Tpc Physl (1-3)	3-4

PHYSL or ANAT electives
(excluding MED PHYSL 640)
(at least 3 credit hours must be in physiology) 3

General electives 3

30-31 hrs

CERTIFICATE PROGRAM IN PUBLIC HEALTH EDUCATION

PREFIX	*NO*	*SHORT TITLE*	*CR HRS*
HSC	585	Co Hl Mthds	4
	686	Prg Pln Eval	4
	562	Hl Pro Wkste	3

Electives course(s): any health-related graduate course(s) approved by the department chairperson	3
	14 hrs

COGNATE AREAS FOR DOCTORAL DEGREE PROGRAMS

Health Science Cognate

This 15-hour or 24-hour concentration of courses in health science and related academic disciplines is offered to qualified doctoral students who want a high level of competency in advanced content and program planning, implementation, and evaluation pertaining to health promotion and disease prevention.

Physiology Cognate

This 15-hour or 24-hour concentration of course work in physiology, anatomy, and related science disciplines is offered to qualified doctoral students who want advanced courses in body function and structure.

ANATOMY (ANAT)

505 Human Neuroanatomy. (3) A strong background in the basic structural and functional relations of the central nervous system. Emphasizes the location of nerve-cell centers and the fiber tracts entering and leaving these centers. Two two-hour laboratory periods weekly.
Prerequisite: ANAT 201 or ZOOL 330.

525 Human Embryology and Histology. (4) Examines human development from germ cell formation to organ formation including microscopic structure of tissue and abnormal development.
Prerequisite: BIO 111, 112 or ANAT 201 or permission of the department chair-person.
Not open to students who have credit in ANAT 425.

601 Human Gross Anatomy. (8) A strong background in basic morphologic and functional relations. Emphasizes regional anatomy. Four two-and-one-half hour laboratory periods weekly.
Prerequisite: admission to the medical education program.

606 Medical Neuroanatomy. (4) Normal structural and functional organization of the human central nervous system as a background for the interpretation of its dysfunction. Assumes prior knowledge of human peripheral nervous system and effector mechanisms. Two-and-one-half hour lecture plus four hours of laboratory weekly.
Prerequisite: ANAT 601.

631 Medical Histology-Embryology. (5) Normal and abnormal developmental processes related to the differentiation of tissues and organs; microscopic study of organs and tissues as background for physiological and pathological consideration.
Prerequisite: admission to the medical education program.

690 Special Studies in Anatomy. (1-3) Problems of special interest in anatomy or in anatomy teaching. Individual work under the direction of a staff member may involve one or more of the following:

experimental work, attendance in undergraduate classes, wide reading, and development of special techniques or skills in scientific investigation.

Prerequisite: permission of the department chairperson.

A total of 3 hours of credit may be earned.

HEALTH SCIENCE (HSC)

550 Elementary School Health Programs. (3) School's role in promoting health and preventing disease among preschool and elementary school children. Focus on the school health program (instruction, services, and environment), community resources, and health problems common to school children. No regularly scheduled laboratory.

Prerequisite: HSC 160.

Not open to students who have credit in HSC 350.

562 Health Promotion in the Worksite. (3) Explores the major components of planning, implementing, and evaluation of health promotion programs at the worksite.

Not open to students who have credit in HSC 462.

563 Coordinated School Health Programs: Organization and Issues. (3) Addresses the processes and issues associated with the planning, implementing, evaluating, and organizing of a coordinated school health program in accordance with national and state guidelines.

Prerequisite: HSC 261 or 467 or 471 or permission of the department chairperson.

Not open to students who have credit in HSC 363.

564 Health Education in the Clinical Setting. (3) Theories of client education and application of the educational process to individuals and groups in a variety of health-care settings. Emphasizes the multidisciplinary team concept in planning, implementing, and evaluating client education. Application of knowledge of growth and development in meeting learning needs of clients from a variety of ages and intellectual levels.

Not open to students who have credit in HSC 464.

565 Alcohol Problems. (3) Alcohol as a mood modifier and its use, nonuse, and abuse in drinking societies. Critical and controversial issues relevant to alcohol ingestion will be explored for medical, economic, legal, educational, historical, physiological, and public health implications.

Not open to students who have credit in HSC 465.

567 Drug Dependence and Abuse. (3) The medical, psychological, sociological, and legal dimensions of drug use in the United States. Examines the incidence and prevalence of drug abuse along with the roles played by the school and community in dealing with this health problem.

Not open to students who have credit in HSC 467.

568 Consumer Health Issues. (3) Health services and consumer protection organizations. Analysis of fraudulent health practices and nostrums, available health care systems, and health products.

Not open to students who have credit in HSC 468.

569 Health and Aging. (3) Dynamics of later life and the aging process with specific emphasis on health. The physiological and behavioral dimensions of the aging process.

Not open to students who have credit in HSC 469.

571 Death and Dying. (3) The relationship between death and health with emphasis on physiological, psychological, legal, and medical aspects of death in contemporary America. Roles of individual, family,

school, community, and various professionals. Problems in meaning of death, care of the dying, death education, and attitudes toward death.

Prerequisite: HSC 160 or permission of the department chairperson.

572 Women and Health. (3) General overview of issues related to women and health: health needs of working women, special nutritional concerns, the gynecological exam, reproductive anatomy and physiology, fertility and infertility, breast problems, wife abuse, and rape.

Not open to students who have credit in HSC 472.

581 Stress Management. (3) Aids in understanding the physiological, psychological, and sociological aspects of stress. Students will increase their awareness of the effects of stress, identify personal stress triggers, and develop strategies to minimizing stress throughout their daily lives.

Not open to students who have credit in HSC 481.

582 Environmental Health. (3) Physical environment and its relationship to disease causation. Review of environmental health problems and their solutions. Areas of study include air and water pollution, food sanitation, disposal of human excreta and waste, radiation and occupational health problems, and risk.

585 Community Health Methods. (4) Provides the skills necessary to become effective community health educators including policy development, advocacy, coalition building, grant writing, cultural competency, fund raising, and community health assessment.

Not open to students who have credit in HSC 385.

589 Public Health Entomology. (3) A survey of diseases caused or transmitted by insects and other arthropods. Emphasizes the recognition of medically important arthropods and their biology and control. A weekly three-hour laboratory provides an opportunity to collect and study live and preserved arthropod specimens.

Not open to students who have credit in HSC 389.

595 Methods, Materials, and Curriculum for Teaching Health Education. (3) Application of the roles of the health teacher in a school setting. Functions considered include needs assessment, program planning, direct instruction and evaluation, and curriculum development.

Prerequisite: EDSEC 150, 380; identification to pursue a teaching curriculum.

Not open to students who have credit in HSC 395.

598 Workshop in Health Science. (1-6) Critical contemporary issues in health science. May include consultants, guest lecturers, field trips, and group activities.

Prerequisite: permission of the department chairperson.

A total of 6 hours of credit may be earned.

669 Paid Health Science Practicum. (3-6) A paid work and learning experience in an approved health agency, facility, educational institution, professional organization, or private business for a time commensurate with the hours of credit to be earned. Assignments depend upon students' interests and the resources of participating organizations.

Prerequisite: permission of the department coordinator of practicums and internships.

A total of 6 hours of credit may be earned.

670 Health Science Research Techniques. (3) An introduction to the study and practical application of research design as it applies to the health sciences. Emphasizes the necessary skills and competencies required to develop an acceptable research proposal.

671 Research Seminar. (2) Review, analysis, and discussion of the literature related to selected topics of current interest in health science. Includes public presentation of research proposal.

Prerequisite: HSC 670.

Open only to students enrolled in health science master's degree programs.

675 Internship in Health Science. (3-6) Assignment to an approved health agency or educational institution for a period of time commensurate with the hours of credit to be earned. The student will make periodic and final reports to an academic advisor and to the administrator of the participating agency.

Prerequisite: permission of the department coordinator of practicums and internships.

A total of 6 hours of credit may be earned.

683 Principles of Epidemiology. (3) Introduction to the epidemiological perspective on health and disease. Emphasizes the principles and methods used to describe and evaluate the patterns of contemporary health problems in communities and population subgroups. Methods and research designs used in the investigation of the etiological causes of disease are presented.

686 Health Promotion Program Planning and Evaluation. (4) Advanced study of program development, implementation, and evaluation. Includes an in-depth examination of the theories, models, and techniques/methods associated with these processes.

687 Statistical Theory and Methods in Health Science. (3) Designed for the application of statistics in health science. Focuses on statistical reasoning and techniques required for the analysis and interpretation of data in health science research.

695 Seminar in Health Science. (3-9) Selected literature on current scientific research. Extensive reading in scientific journals. Seminar members report at stated intervals on assigned problems in health science or health science teaching.

A total of 9 hours of credit may be earned.

697 Special Studies in Health Science.
(1-3) Problems of special interest in health science or in health science teaching. Individual work under the direction of a staff member may involve one or more of the following: experimental work, attendance in undergraduate classes, wide reading, and development of special techniques or skills in scientific investigation.

Prerequisite: permission of the department chairperson.

A total of 6 hours of credit may be earned, but no more than 3 in any one semester or term.

PHYSIOLOGY (PHYSL)

511 Endocrinology. (3) Endocrine functions in humans and mammals with special emphasis on mechanisms. Normal hormone regulation and pathophysiological principles. Laboratory experience with small mammal surgery and endocrine testing. One three-hour laboratory period weekly.

Prerequisite: ANAT 201; one year of general chemistry.

513 Renal Physiology. (3) Detailed study of the urinary system and excretory functions. Emphasizes human physiology but includes comparative vertebrate systems. Laboratory study includes gross, microscopic anatomy, and small mammal surgery. One three-hour laboratory a week.

Prerequisite: one course each in chemistry, anatomy, and physiology or permission of the instructor.

514 Cardiovascular Physiology. (3) A study of the dynamics of the human cardiovascular system, stressing applications of basic physical principles and the operation of physiological regulatory systems. Includes seminar-style discussion of recent literature.

Prerequisite: one course in physiology.

Not open to students who have credit in PHYSL 414.

515 Physiology of Aging. (3) Study of how physiological systems change with age and the mechanisms that are thought to cause these changes. Disorders and diseases of aging will be covered.

Prerequisite: one course each in chemistry and physiology or permission of the instructor.

516 Human Toxicology. (3) Chemical, physical, zoological, and botanical toxicoses in human health. The implications and methodology of dealing with hazardous substances and poisons.

Prerequisite: CHEM 101 or 111, and 112; one year of biology or physiology or combination of both; or permission of the instructor.

Not open to students who have credit in PHYSL 416.

520 Neuroscience. (3) Introductory study of the organization and function of the nervous system. Emphasizes integration of the structure and function of the nervous system.

Prerequisite: one year of chemistry and one year of biology or physiology.

535 Pathophysiology. (3) The physiological pathology of selected disease processes and dysfunctions. The pathogenesis of certain derangements with broad applicability. Underlying chemical, biological, and physical mechanisms. Laboratory experience will include demonstrations, visitations, and specimen study. One three-hour laboratory period weekly.

Prerequisite: one course each in anatomy, physiology, and chemistry.

Not open to students who have credit in PHYSL 435.

585 Research Techniques in Physiology. (3) Introduction to experimental design, laboratory techniques, and data analysis and interpretation in anatomy and physiology. Laboratory will include methods employing animal preparations, modern cellular/ molecular techniques, and general histological procedures. Introduction to computer data acquisition and analysis.

Prerequisite: one course in physiology or permission of the instructor; CHEM 563 recommended.

590 Advanced Topics in Physiology. (1-3) Involves discussion of current topics in research as well as exploring current laboratory techniques and advances in molecular and cellular aspects of physiology.

Prerequisite: permission of the department chairperson.

A total of 3 hours of credit may be earned.

640 Medical Physiology. (8) Summary of human physiology for medical students. Cellular and organ-system physiology; physiological regulation. Laboratory exercises will demonstrate general principles of physiology and introduce basic techniques and instrumentation.

Prerequisite: admission to the medical education program.

645 Emergency Medicine. (2) Designed to develop an awareness of proper diagnosis and treatment during emergency medical care by professional medical personnel. Fractures; environmental emergencies; injuries to the eye, chest, and abdomen; shock; and wound care.

Prerequisite: admission to the medical education program.

690 Special Studies in Physiology. (1-3) Problems of special interest in physiology or in physiology teaching. Individual work under the direction of a staff member may involve one or more of the

following: experimental work, attendance in undergraduate classes, wide reading, and development of special techniques or skills in scientific investigation.

Prerequisite: permission of the department chairperson.

A total of 3 hours of credit may be earned.

SCIENCE (SCI)

501 Electron and Confocal Microscopy. (3) Introduction to the techniques and theory of electron and confocal microscopy. Emphasizes basic procedures employed in specimen preparation, production of micrographs and operation of the transmission, scanning, and confocal microscopes.

POLITICAL SCIENCE

www.bsu.edu/poli-sci
North Quadrangle 240, 765-285-8780

PROGRAMS

Master of arts (MA) in political science, master of public administration (MPA), and master of public administration (MPA) with a criminal justice and criminology concentration

Admission requirements

Applicants for the master of arts (MA) and master of public administration (MPA) programs must meet the admission requirements of the Graduate School, submit Graduate Record Examination (GRE) scores, and be accepted by the Department of Political Science. Students seeking admission to the MPA program with a concentration in criminal justice and criminology must also be accepted by the Department of Criminal Justice and Criminology. Applicants whose undergraduate majors are not political science or closely related subjects may be required to complete undergraduate courses to acquire background knowledge. Credit for these courses does not apply to degree requirements.

MASTER OF ARTS IN POLITICAL SCIENCE

This degree gives students opportunities to broaden and strengthen their understanding of political science. The master of arts in political science prepares students for a variety of goals. Some students may wish to pursue doctoral work at another university after earning the MA degree at Ball State University. Some may wish to enter law school; others may seek governmental employment; still others will go into business or professional organizations that require a knowledge of governmental processes. The MA degree program is flexible enough to prepare students for such a range of possibilities.

Degree requirements

Requires a minimum of 30 hours, at least 15 of which must be earned in political science courses at the 600 level. The 600 level courses must include POLS 625 Research Methods in Political Science and at least three additional 600-level courses in at least two subfields of the discipline chosen by the student in conjunction with her/his advisor. Subfields include American politics, comparative politics/international relations, and public policy/administration. The university research and writing requirement can be met in one of four ways: a thesis for 6 hours of credit, a research paper for 3 hours of credit, a creative project for

either 3 or 6 hours of credit, or satisfactory completion of POLS 626 Research Seminar. Before graduation, students must pass a departmental comprehensive exam in two subfields of political science.

MASTER OF PUBLIC ADMINISTRATION (MPA)

This degree provides graduate professional education to students who wish to prepare for administrative or research careers in public management at the federal, state, or local government level with nonprofit organizations or private sector corporations extensively involved with government.

The flexibility of the program allows students to tailor an interdisciplinary curriculum to their needs, objectives, and goals. A full-time student can complete the MPA program (including internship) in four semesters or two academic years. An in-service student with a strong background may be able to complete the program with a minimum of one calendar year of course work. The requirements of the program ensure that each student will have a theoretical understanding and practical awareness of public policy and of the principles of management and administration in the public sector. The program blends the study of politics and administration with the techniques of modern management.

To accommodate practitioners and others who have daytime commitments, evening and Saturday morning classes are offered as well as weekday classes. Many opportunities exist for student participation in workshops and experiential learning settings where students and public administrators can interact.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CR HRS*
MPA with administrative concentration			
Core area of study			
POLS	625	Research Mth	3
15 hours from			
POLS	642	Publc Policy (3)	
	648	Polcy Analys (3)	
	650	Pub Administ (3)	
	651	Adm Org Mgt (3)	
	652	Personnl Adm (3)	
	653	Pub Fin Adm (3)	15
Electives in public administration related courses			9-12
Research requirements			
POLS	626	Rsrch Semnar (3-6)	
	or		
RES	697	Research Ppr (1-3)	
	or		
THES	698	Thesis (1-6)	3-6
Minor area of study and/or Electivesin related complementary area			6-9
			36-45 hrs

Before graduation, students must pass a departmental comprehensive exam in public administration and public policy.

MPA with criminal justice and criminology (CJC) concentration

Core area of study			
POLS	625	Research Mth	3
15 hours from			
POLS	633	Amer Jud Sys (3)	
	642	Publc Policy (3)	
	648	Polcy Analys (3)	
	650	Pub Administ (3)	
	651	Adm Org Mgt (3)	
	652	Personnl Adm (3)	
	653	Pub Fin Adm (3)	15
CJC concentration			
CJC	650	Crim Jus Adm	3
	651	Intp Rel CJC	3
	652	Phil Asp CJC	3
	690	Indpen Study (1-3)	3
Electives in related area			3-6
Research requirements			
POLS	626	Rsrch Semnar (3-6)	
	or		
RES	697	Research Ppr (1-3)	
	or		
THES	698	Thesis (1-6)	3-6
			36-42 hrs

Before graduation, students must pass a departmental comprehensive exam in public administration and criminal justice.

In addition, for both the MPA and the MPA with CJC concentrations, each student is required to have a basic understanding of and ability to deal with introductory accounting. This may be fulfilled by a previous undergraduate accounting course or completion of ACC 501 or the equivalent. The student's plan of study, including electives, will be selected in consultation with the program advisor.

Each student’s background will be evaluated individually, and recommendations on program content will be made according to the student’s educational and job experiences and career plans. Students without appropriate professional experience will be required to complete for credit (6 hours) a full-time internship.

Interdisciplinary Emphasis

Courses in a number of other departments may be taken as electives to broaden and strengthen the student’s training. Selection of such courses must be made in consultation with the major advisor.

Students may complete part of their MPA elective courses in such departments as accounting, criminal justice and criminology, economics, journalism, educational leadership, management science, marketing, natural resources and environmental management, physiology and health science, and sociology.

POLITICAL SCIENCE (POLS)

503 Issues in Political Science. (3) Survey and investigation of a particular topic, problem, or issue in political science with emphasis on subfields, specialties, and materials not covered in other courses. Exact content will be announced before each offering.
Not open to students who have credit in POLS 403.

505 Reading and Special Study. (3-6) For students whose special aptitudes and interests qualify them to study semi-independently. Topics to be chosen and investigated in consultation with the department chairperson and a professor possessing special competence in the topic involved.
Prerequisite: basic courses in the topic selected for special study.
A total of 6 hours of credit may be earned.

507 Workshop in Political Science. (2-6) Intensive study of selected problems in political science.
Prerequisite: permission of the department chairperson.
A total of 6 hours of credit may be earned.

511 American Political Thought. (3) American political thought from the colonial period to the present. Puritanism, nature of rights, constitutionalism and federalism, nature of the Union, democracy, liberalism, conservatism, individualism and collectivism, welfare state, isolationism and internationalism, and national security and freedom.
Not open to students who have credit in POLS 411.

512 Early Western Political Thought. (3) Analysis of political thought of the early Mediterranean and medieval worlds that became the foundation of modern political theories and systems of the West. Emphasizes writings by Plato, Aristotle, Cicero, St. Augustine, St. Thomas Aquinas, and Machiavelli.
Not open to students who have credit in POLS 312.

513 Modern Western Political Thought. (3) Analysis of selected writings of leading political theorists from the Age of Reformation to the present.
Not open to students who have credit in POLS 313.

527 Voter Polling Techniques. (3) Methods by which information is acquired on the voting behavior and attitudes of the electorate. Emphasizes producing a working knowledge of polling techniques. Sampling, interviewing, and questionnaire construction.
Not open to students who have credit in POLS 373.

531 Legislation. (3) Legislative bodies and law-making: organization of legislative bodies, operation of the committee system, relations with interest groups, executive branches, bill drafting, legislative aids, controls over legislation, and movement for reform.
Prerequisite: POLS 130 or the equivalent.
Not open to students who have credit in POLS 431.

534 State Legislatures. (3) Legislative systems in American state government. External influences (constituencies, political parties, interest groups), internal influences (organizational structure, staff, norms, decision making), issues confronting state legislatures, and reform proposals.
Prerequisite: POLS 130, 237.

535 Intergovernmental Relations. (3) Analysis of relationships among national, state, and local governments. Consideration of constitutional and legal bases, and the nature of such phenomena as grants-in-aid, tax immunity, education, and interstate compacts.

Prerequisite: POLS 130, 237.

Not open to students who have credit in POLS 435.

537 Government and Politics in Indiana. (3) Survey of Indiana's political culture and tradition as compared to other states. Critical examination of Indiana's contemporary political processes and governmental policies.

Not open to students who have credit in POLS 437.

538 Metropolitan Problems. (3) Cities and metropolitan communities; the nature, characteristics, functions, governmental structure, intergovernmental relations, social makeup and problems, economic base, decision-making structure, and other related topics; the present and future roles of planning and citizen participation in the entire community.

Prerequisite: POLS 238.

Not open to students who have credit in POLS 438.

540 Introduction to Law and Enforcement. (3) The development of law and contemporary law enforcement in the United States with special attention to various components of law enforcement systems, their interrelationships, purposes, and needs.

Prerequisite: POLS 130, 237.

Not open to students who have credit in POLS 340.

543 American Constitutional Law. (3) The Constitution of the United States, its development and interpretations through principal statutes and judicial decisions. Congressional policies embodied in socioeconomic legislation and doctrines developed by the Supreme Court.

Prerequisite: POLS 130.

Not open to students who have credit in POLS 443.

544 Constitutional Liberties. (3) Relations between the individual and government as revealed through cases in constitutional law. Cases involving the Bill of Rights and the Fourteenth Amendment.

Prerequisite: POLS 130.

Not open to students who have credit in POLS 444.

545 National Defense Policy. (3) An international survey of military capacity and function as background for analysis of the national defense policy of the United States. Emphasizes American strategic interests and problems of weapons, technology, nuclear control, and disarmament.

Prerequisite: POLS 130.

Not open to students who have credit in POLS 345.

547 Environmental Law and Policy. (3) The legal system's response to conflicting demands upon environmental resources. Composition of environmental problems, control issues, policy formulation, and legal remedies.

Not open to students who have credit in POLS 347.

549 Land-Use Regulation. (3) The legislative and constitutional components of the regulation of land use at various levels of government, including zoning, subdivision regulations, urban renewal, codes, enforcement, eminent domain, conservation, reclamation, interstate compacts, and metropolitan and regional agencies.

554 Politics and Administration of Local Government Budgets. (3) Local government budgeting with emphasis on political and administrative issues in budget preparation and accountability. Revenue development from tax and nontax sources, capital expenditure programming, financing pensions, contracting for services, cost/ benefit analysis, and federal and state grant mechanisms.

Not open to students who have credit in POLS 454.

555 Administrative Law. (3) Legal and political study of independent regulatory agencies; their powers, functions, and roles as determined by an analysis of relevant cases in which basic principles are identified and synthesized with other elements of public law.

Not open to students who have credit in POLS 455.

561 Community Planning and Its Administration. (3) Planning and development of improved land use and service activities of cities and predominantly urban communities. Consideration of scope, legal basis, implementation, and problems of planning for streets, utilities, education, recreation, transportation, zoning, and related community services.

Prerequisite: POLS 237, 350.

Not open to students who have credit in POLS 461.

565 Labor-Management Relations in Government. (3) Public employee unionization, legal provisions for collective bargaining, determination and recognition of bargaining units, bilateral negotiation, and third-party involvement procedures, administration of agreements, and the processes and strategies in collective bargaining negotiations in public organizations.

Not open to students who have credit in POLS 465.

566 Administrative Problems in State Government. (3) Administrative procedures and organizational behavior at the state level. Emphasizes the provision of government services and functions in budgeting and taxation, education, environmental protection, public health, and public works.

Prerequisite recommended: POLS 237 or 350.

Not open to students who have credit in POLS 466.

570 Public Opinion and Political Behavior. (3) The nature of public opinion, instruments, techniques, and institutions involved in the formation of public opinion; the political uses and implications at home and abroad of public opinion and propaganda.

Not open to students who have credit in POLS 370.

571 Public Interest Groups and Government. (3) The internal government and external political strategy of private associations—trade associations, unions, and professional, church, and patriotic organizations. The implications of pressure group activities for constitutionalism, majoritarianism, and constituency, and the effects of pressure groups upon political parties and the political process.

Not open to students who have credit in POLS 371.

572 Political Campaigns. (3) Political campaigns considered as the linkage between citizens and the government in a representative democracy, from theoretical and practical perspectives. The course will answer questions on the why (theory), what (strategies), and how (techniques) of political campaigns.

Not open to students who have credit in POLS 372.

573 American Political Parties. (3) Organization and functions of political parties in the United States and their role in a representative democracy.

Not open to students who have credit in POLS 473.

574 Women and Politics. (3) National survey of women and the political process, with an emphasis on women and contemporary public policy issues.

Not open to students who have credit in POLS 474.

575 Minority Group Politics. (3) The political effects of ethnic groups on American politics. Emphasizes both legal and extralegal means by which ethnic groups become involved in and influence public policy.

Prerequisite recommended: POLS 130.

Not open to students who have credit in POLS 475.

582 Governments and Politics of Western Europe. (3) Europe as a political and cultural area: the government and political structures of the three major powers in Western Europe—Great Britain, France, and Germany; the current state of the Western European integration movement.

Prerequisite: POLS 130.

Not open to students who have credit in POLS 382.

584 British Government and Politics. (3) The political system of the United Kingdom, including a discussion of the Commonwealth and Britain's place in an expanding European community. Emphasizes Anglo-American relations and British contributions to American political arrangements.

Not open to students who have credit in POLS 384.

585 Politics of the European Union. (3) Study of the development of the European Union as an evolving political entity—its politics, institutions, and policies—and the prospects for European unification.

Not open to students who have credit in POLS 385.

586 Politics of Russia and the Successor States. (3) Evaluates political, economic, and social change and performance in Russia and the other successor states of the former Soviet Union. Also assesses the historical and cultural context of modern Russia from the Bolshevik Revolution through the post-communist era.

Not open to students who have credit in POLS 386.

588 Government and Politics of China. (3) A comprehensive survey of the government and politics of modern China, both of the Republic of China and Communist China.

Not open to students who have credit in POLS 488.

590 International Law. (3) A survey of the Law of Nations by analyzing prominent decisions of international tribunals, examining representative legal principles, briefing appropriate cases, and conducting mock court trials.

Not open to students who have credit in POLS 490.

592 The United Nations and International Organizations. (3) International organizations; the structure, functions, and current issues facing the United Nations. Students participate in a mock security council at Ball State and may have an opportunity to participate in the National Model United Nations Conference.

Not open to students who have credit in POLS 392.

593 World Politics. (3) Theories of contemporary interactions among states, especially the major powers, with particular attention to conflict resolution.

Not open to students who have credit in POLS 493.

594 International Relations in Asia. (3) Contemporary international relations in Asia with emphasis on the roles of China, Japan, the United States of America, and the former Soviet Union.

Not open to students who have credit in POLS 394.

595 Communist China's Foreign Policy. (3) Communist China's role in international politics, with special emphasis on the effect of Communist China's foreign policy and the response to it.

610 Issues in International Relations. (3) Examines important theoretical questions confronting students of international relations as a basis for examining current issues that are changing the nature of global and regional relationships.

611 International Political Economy. (3) Explores the theoretical frameworks through which scholars understand the international political economy in order to understand the structures, institutions, and processes that are changing the nature of global and regional relationships.

Open only to graduate students.

615 Western Political Theory. (3) In-depth examination of classic works in the Western political tradition including Plato, Aristotle, Aquinas, Machiavelli, Locke, Rousseau, and Marx. Special emphasis on the contributions of each thinker to the evolution of western concepts of justice, liberty, power, and the good society.

625 Research Methods in Political Science. (3) A critical examination of methodological problems and practices in the formulation, execution, evaluation, and reporting of political science research, including a comparison of data-gathering techniques, their respective limitations, and appropriate application.

626 Research Seminar. (3-6) Advanced techniques and applications of political and governmental research. According to need, the seminar will focus on one of the following: traditional political research, behavioral political research, and applied research in policy and administration.

Prerequisite: POLS 625 or permission of the department chairperson.

A total of 6 hours of credit may be earned.

632 The American Presidency. (3) This course will explore the theoretical, historical, and contemporary forces that combine to shape the modern presidency.

Open only to graduate students.

633 The American Judicial System. (3) Examines the workings of the American judicial system, composed of courts, judge, jurors, lawyers, spectators, and rules. Topics covered include legal theory, roles of lawyers and judges, judge selection, trial and appellate courts, judicial policy, and the future of law.

636 Seminar in Comparative Politics. (3) Study of the theories, methods, and approaches in comparative politics. Covers themes that can be applied to analyze different countries and regions of the world.

Prerequisite: POLS 210, 280, 625 or equivalents are recommended.

642 Problems in Public Policy. (3) Current political, economic, and social problems in the United States. Examines different approaches to the study of public policy and problems inherent in carrying out the basic stages of the policy process including issue definition, choices among alternatives, agenda setting, decision making, implementation, and evaluation.

Prerequisite recommended: POLS 130.

648 Policy Analysis. (3) Equips students with the tools of the policy analyst through systematic analysis of programs and projects. Emphasizes problem definition, goal determination, systematic evaluation of alternatives, socioeconomic and political indicators, performance measures, and impact evaluation.

Prerequisite recommended: POLS 342 or 642.

650 Public Administration. (3) Organization, personnel, and functions of the various agencies of administration—national, state, and local.

Prerequisite: POLS 130.

651 Administrative Organization and Management. (3) Governmental administrative organizations as companies composed of people taking action under conditions of conflict and cooperation: the nature and role of administrative organization and management, growth and effect on the government of the scientific management movement, formal and informal organization of administrative authority, operational problems and processes, and criteria for evaluation of administration.

Prerequisite recommended: POLS 350.

652 Personnel Administration in Government. (3) The organization and operation of personnel administration in the public service. Scope and character of public employment in the United States, development of federal, state, and local civil service systems, organization of public personnel agencies, and methods and techniques of personnel administration in government.

Prerequisite recommended: POLS 350.

653 Public Financial Administration. (3) Survey of the principles and practices of administration of national, state, and local finances: administrative financial organization, budgetary procedure, accounting of revenues, expenditures, pre-audit and post-audit, assessment and collection of taxes, purchasing, letting of contracts, management of publicly owned undertakings, public debt, and grants-in-aid.

Prerequisite recommended: POLS 350.

669 Paid Internship in American Government. (3-6) Students are paid for part-time or full-time work for one semester in the office of a public official in national, state, or local government, or of a candidate for public office, or of a political party. Assignments depend upon the interests of students and the convenience of sponsors.

Prerequisite: permission of the department chairperson.

A total of 6 hours of credit may be earned.

679 Practical Experience in Government.
(3-6) Unpaid full or part-time assignment in a public office with a candidate for public office, a political party, or private organization. Assignments depend upon the student's interest and the convenience of the sponsor.

Prerequisite: permission of the department chairperson.

A total of 6 hours of credit may be earned.

689 Comparative Politics and Government. (3) Analysis of politics and government in selected major countries of the world. Considers political processes, governmental institutions, and/or public policies from a cross-national perspective.

Open only to graduate students.

694 Terrorism and Homeland Security. (3) Introduction to political terrorism ranging from low-level acts of threats and violence to large-scale acts of violence using weapons of mass destruction. The nature of terrorism, policies and programs to reduce the risk and to manage terrorist events and the policies and programs to manage the consequences of terrorist violence will be discussed.

PSYCHOLOGICAL SCIENCE

www.bsu.edu/psysc
North Quadrangle 104, 765-285-1690

PROGRAMS

Master of arts (MA) degrees in clinical psychology and in cognitive and social processes

Admission requirements

Applicants must meet the admission requirements of the Graduate School; have an undergraduate grade-point average of at least 3.0 on a 4.0 scale; have a Graduate Record Examination (GRE) combined verbal and quantitative score of at least 1000; submit three letters of reference, transcripts of all previous graduate and undergraduate course work, and departmental applications; and have taken undergraduate courses in psychology that include experimental design and methodology and statistics.

MASTER OF ARTS IN CLINICAL PSYCHOLOGY

A two-year program designed to provide training consistent with that expected of a scientist-practitioner clinical psychologist.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CR HRS*
PSYSC	632	Abnormal	3
	640	Assessmnt 1	3
	644	Assessmnt 2	3
	652	Intr Psythrp	3
	653	Adv Psythrp	3
	685	Clinical Int (3-6)	6
EDPSY	642	Interim Stat	3
PSYSC	616	Percp Cognit (3)	
	or		
	623	Theor Persnl (3)	3
	668	Physiologcal	3
	680	Res Meth Psy	3
	691	Systems	3
	696	Sem Divrsity	3
Additional requirements Approved electives by the graduate program director and/or RES 697 or THES 698			9

			48 hrs

PSYSC 623 is required if no undergraduate personality course was taken. The university research and writing requirement is met by PSYSC 680 and EDPSY 642.

All graduate courses in psychological science are required to include diversity as a course objective.

MASTER OF ARTS IN COGNITIVE AND SOCIAL PROCESSES

A two-year program designed to provide extensive training in social and cognitive psychology, research methods and statistics.

Degree requirements

PREFIX	*NO*	*SHORT TITLE*	*CR HRS*
EDPSY	642	Interim Stat	3
PSYSC	616	Percp Cognit	3
	617	Memor	3
	618	Thinking	3
	623	Theor Persnl	3
	680	Res Meth Psy	3
	691	Systems	3
	696	Sem Divrsity	3
SOPSY	610	Social	3
	615	Social Cog	3
	660	Contemporary	3
Electives (general)			6-12
THES 698 or RES 697 or elective approved by graduate program director			3-6
			42-45 hrs

The university research and writing requirement can be met by PSYSC 680 and EDPSY 642. All graduate courses in psychological science address diversity as one of the course objectives. PSYSC 691, SOPSY 610 may be waived if equivalent undergraduate course(s) taken.

Internship Placement

The department maintains a training agreement with local community mental health agencies, hospitals, and the university Counseling and Psychological Services Center. Clinical students complete an internship (minimum 400 hours) at one of these facilities during their second year.

Teaching and Research Assistantships

Approximately 65 percent of students are awarded assistantships and partial fee remissions. In return, students help faculty instructors or assist in faculty research. Exceptional second-year students may be offered the opportunity to teach introductory-level classes.

Interdepartmental Cooperative Arrangements

The department maintains a cooperative teaching and research arrangement with the counseling psychology and educational psychology departments for maximum flexibility in training. In addition, the department is involved in the university's Fisher Institute for Wellness and Gerontology.

PSYCHOLOGICAL SCIENCE (PSYSC)

524 Psychology of Women. (3) Psychological approaches to the study of women with special emphasis on achievement motivation and dependency, attitudes toward women, development of sex-role identity, biological and social influences on women's behavior, self-concepts and psychological conflict in women, and a critical appraisal of research in sex differences.

Not open to students who have credit in PSYSC 324.

573 Industrial Psychology. (3) Application of psychological principles to personnel selection and training, worker motivation and satisfaction, leadership, engineering psychology, and personnel problems in industry.

Not open to students who have credit in PSYSC 373 or equivalent.

574 Organizational Development: A Psychological Perspective. (3) Examines organization change and development techniques from the perspective of psychological theory and research. Emphasizes individual and team level interventions.

Prerequisite: any one of PSYSC 373, 573; MGT 300, 500; or equivalents, or permission of the instructor.

Not open to students who have credit in PSYSC 474 or equivalent.

575 Advanced Industrial Psychology. (3) Principles of personnel testing as applied to the selection and placement process. Focuses on the development of predictors and criteria, selection of an appropriate validation model, and the psychological dynamics of interview processes.

Prerequisite: PSYSC 373 or 573, or permission of the department chairperson.

584 Experimental Psychology. (3) The study of behavior by the experimental method. Experimental studies will be conducted to evaluate research techniques and appropriate controls.

Prerequisite: PSYSC 241 or EDPSY 641.

Not open to students who have credit in PSYSC 284.

595 Special Topics in Psychology. (1-12) Investigation of various topics related to psychology. Topics will vary at the discretion of the instructor.

Prerequisite: permission of the department chairperson.

A total of 12 hours of credit may be earned.

613 Developmental Psychology. (3) Concepts, principles, theories, and research concerning the biological and environmental influences on behavioral and psychological development. Emphasizes issues and topics related to the normal human life span. Designed primarily for students without undergraduate work in human growth and development.

Prerequisite recommended: PSYSC 241 or the equivalent.

615 Learning and Motivation. (3) Analysis of research and theories of basic conditioning, learning processes, and motivation. Biological bases of motivation will also be considered. The major concentration will be on animal learning and motivation, but parallels to human behavior will be drawn.

Prerequisite: PSYSC 284 or 584.

616 Perception and Cognition. (3) Analysis of research and theories of perception, cognition, and language. Covers information processing, attention, verbal learning and memory, problem solving, concept formation, and psycholinguistics.
Prerequisite: PSYSC 284 or 584.

617 Memory Processes and Applications. (3) Explores models of human memory processes, as well as biological, environmental, and social factors affecting memory.
Prerequisite: PSYSC 616.

618 Thinking. (3) Examines psychological theories, models, research, and applications of problem solving, decision making, reasoning, and other kinds of intelligent human cognitive processing.
Prerequisite: PSYSC 616.

623 Theories of Personality. (3) Review and comparison of theories of the structure, development, dynamics, and assessment of normal personality, with emphasis on empirical data presented by proponents of various theoretical positions.
Prerequisite recommended: PSYSC 241.

632 Abnormal Psychology. (3) Introduction to adult psychopathology with emphasis on contemporary systems of classification of behavior disorders, expression of behavior disorders in the context of cultural factors, problems associated with diagnostic decision making, and current research concerning descriptive boundaries, etiology, course, and prognosis.
Prerequisite: PSYSC 284; permission of the department chairperson.
Prerequisite recommended: PSYSC 317.
Open only to students in the clinical MA program.

640 Introduction to Psychological Assessment. (3) Theoretical and practical implications of psychodiagnostic tools including age, gender, ethnicity, language, disability, and culture factors related to the assessment and evaluation of individuals and groups. Emphasizes issues of reliability, validity, and ethics, plus the development of basic diagnostic skills.
Prerequisite: PSYSC 623, 632.
Open only to students in the clinical MA program.

644 Advanced Psychological Assessment. (3) Continuation of PSYSC 640 with emphasis on the selection, administration, interpretation, and use of objective and projective personality assessment devices in conjunction with other techniques. Emphasizes development of advanced diagnostic skills and ethical considerations.
Prerequisite: PSYSC 623, 632, 640.

652 Introduction to Psychotherapy. (3) Introduction to treatment of abnormal behavior using individual psychotherapy. Selected theories and techniques are surveyed. Emphasizes development of basic therapeutic skills, therapist and client characteristics that influence helping processes, ethical considerations, and implications of sociocultural, demographic and lifestyle diversity.
Prerequisite: permission of the department chairperson.

653 Advanced Topics in Psychotherapy. (3) Selected topics in psychotherapy and related interventions are examined, including crisis intervention, medications, prevention, and community intervention. Also covered are historical, legal, financial, and ethical considerations, procedures for determining accountability, and public policy issues related to mental health services.
Prerequisite: PSYSC 632, 652; permission of the instructor.

Open only to students in the clinical MA program.

668 Physiological Psychology. (3) Introduction to the physiological basis of behavior, involving the nervous system, its structure, biochemistry, and function. Emphasis on basic neuroscience and research methods. Includes a survey of the role of neurophysiology and neuroanatomy in functions of consciousness and mental disorders.
Prerequisite: PSYSC 284, 584.

670 Health Psychology. (3) A systematic introduction to the use of psychological procedures in the prevention, diagnosis, and treatment of such medical problems as cardiovascular disorders, headaches, obesity, asthma, and chronic pain.
Prerequisite: PSYSC 632.

680 Research Methods in Psychology. (3) Overview of research methods in psychology, including experimental, quasi-experimental, correlational, single case, and program evaluation techniques.
Prerequisite: PSYSC 241, 284, or their equivalents; permission of the instructor.

682 Orientation to Professional Clinical. (1) A 100-hour clinical practicum in a mental health setting. Designed to introduce students to issues involved with professional practice, including history, roles, organizational structures, ethics, standards, and credentialing.
Prerequisite: permission of the department chairperson.
Open only to clinical graduate students in psychological science.

685 Clinical Internship. (3-6) Supervised applied clinical experience in one or more appropriate settings. Students must have earned 20 hours of graduate credit in psychological science, at least half of which should be from the clinical sequence.
Prerequisite: permission of the department chairperson.
A total of 6 hours of credit may be earned.
Open only to students in the clinical MA program.

686 Applied Practicum. (3-6) Supervised experience in an applied setting.
Prerequisite: 21 hours of graduate credit in psychology; permission of the department chairperson.
A total of 6 hours of credit may be earned.
Open only to master's candidates in cognitive and social processes.

687 Advanced Clinical Internship. (3) Supervised advanced clinical experience in one or more appropriate settings. Emphasizes the development of advanced skills, the integration of professional knowledge, and skills appropriate to professional practice.
Prerequisite: PSYSC 685.
Open only to students in the clinical MA program.

691 Systems of Psychology. (3) The major concepts of various schools of psychological thought and contemporary theoretical systems as they have evolved from their historical origins.

695 Seminar in Psychology. (1-3) Investigation in the current literature of psychology. Topics will vary each semester, at the instructor's discretion.
Prerequisite: 12 hours of graduate credit in psychology.
A total of 3 hours of credit may be earned.

696 Seminar on Diversity. (3) Introduces the application of diversity perspectives to psychological research and practice. Race, ethnicity, economic status, national origin, disability, gender, sexual identity,

age, and religious beliefs will be considered. Emphasizes why all psychological subdisciplines need to understand diversity issues.

Prerequisite: permission of the instructor.

698 Psychological Investigations. (1-3) For students with special aptitude: an opportunity to pursue a line of psychological investigation individually under faculty supervision. Students will be expected to read the relevant literature and to participate in designing and conducting the investigation. Time spent in the investigation may vary from one semester to a full academic year, sometimes including the summer.

Prerequisite: permission of the department chairperson.

A total of 6 hours of credit may be earned, but no more than 3 in any one semester or term.

SOCIAL WORK

www.bsu.edu/socwk
Fine Arts Building 227, 765-285-1016

SOCIAL WORK (SOCWK)

570 Selected Aspects of Social Work Practice. (3 or 6) Exploration of social work practice with selected client populations and types of practice with emphasis on individualized study, reporting, and group discussion. Study will focus on social work practice and social service delivery within the identified field.

SOCWK 575 Social Welfare Policy with the Elderly (3).
The course is concerned with the major social welfare policies that affect the elderly. Focus will be on problems of the elderly and social welfare policies and social welfare policies and programs directed at the reduction of such problems. Prerequisite: SOC 431, 531.

A total of 12 hours of credit may be earned, but no more than 6 in any one semester or term.

Not open to students who have credit in SOCWK 370.

SOCIOLOGY

www.bsu.edu/sociology
North Quadrangle 205, 765-285-5977

PROGRAM

The master of arts (MA) in sociology is designed to prepare students for professional employment or doctoral study in sociology at other universities

MASTER OF ARTS IN SOCIOLOGY

Admission requirements

Applicants must meet the admission requirements of the Graduate School take the Graduate Record Examination (GRE), and present evidence of preparation to do work in sociology.

Degree requirements

The master of arts in sociology requires 33 hours. Students must complete a 15-hour core of required courses. To complete the remaining 18 hours, students will choose one of the following options, depending on their needs and backgrounds: thesis, institutional research certificate, teaching certificate, or directed electives in methods and statistics. The research methodology course requirement is met by SOC 681.

PREFIX	*NO*	*SHORT TITLE*	*CR HRS*
Core requirements, 15 hours			
SOC	600	Soc Inquiry	3
	603	Readings	3
	681	Survey	3
	682	Statistics	3
	684	Data Analys	3
Complete one option			
Thesis option, 18 hours			
THES	698	Thesis (1-6)	6
Electives			12
			33 hrs
Institutional research certificate option, 18 hours			
ID	602	Instit Res	3
SOC	588	Field Exp (1-3)	3
Electives			12
			33 hrs
Certificate in college and university teaching option, 18 hours			
EDHI	609	Prep Prof	3
	610	Isu High Ed	3
ID	601	Teach Prac	3
6 hours from			
EDAC	634	Adlt Learner (3)	
	635	Tchg Adlts (3)	
	699	Internship (2-6)	
EDFON	610	Wmn Gndr Ed (3)	
EDHI	611	Tch Cur H Ed (3)	
	613	Adm Fin H Ed (3)	
	640	Comm Col (3)	
EDTEC	660	Instr Design (3)	
	690	Practicum (2-4)	6

Electives			3
			33 hrs

Directed electives in methods and statistics option, 18 hours

6 hours from			
COMM	602	Quan Resrch (3)	
	605	Qual Resrch (3)	
EDPSY	645	Nonpar Stats (3)	
EDSTU	660	Ethno Res Ed (3)	
	697	Grantmnshp (3)	
GEOG	544	Adv GIS Anly (3)	
HSC	670	Rsearch Tech (3)	
PSYSC	680	Res Meth Psy (3)	
	or		
equivalent courses to be determined with advisor			6
Electives			12
			33 hrs

Graduate Assistantships

A limited number of graduate assistantships are available each year to students who have maintained a minimum undergraduate grade-point average (GPA) of 2.75 on a scale of 4.0. There is a stipend, and part of the tuition is waived. Graduate assistants should plan for and expect assistantships to begin in the fall semester and end at the close of the spring semester. Renewal of the assistantship for a second year is available.

SOCIOLOGY (SOC)

502 Sociological Theory. (3) Focuses on sociological theories of the nineteenth and early twentieth centuries. The investigation includes the intellectual and cultural backgrounds from which theories developed.

Not open to students who have credit in SOC 402.

520 Social Inequality. (3) Examines causes and consequences of social class, status, and mobility in the United States and other countries.

Not open to students who have credit in SOC 320.

521 Racial and Cultural Minorities in the United States. (3) Examines the causes of prejudice and discrimination toward minorities in the United States, minority group experiences, and proposals for reducing prejudice and discrimination.

Not open to students who have credit in SOC 421.

522 Social Trends in Contemporary Societies. (3) Analysis of social trends in contemporary societies.

Not open to students who have credit in SOC 422.

523 Industrial and Post-Industrial Society. (3) Examines the social effects of the Industrial Revolution and Post-Modernity, the continuing importance of technological change, social structures of industrial organizations, and expansion of the service and health sectors.

527 Sociology of World Religions. (3) Study of the relationship between society and religion.
Not open to students who have credit in SOC 427.

528 Globalization and Third-World Societies. (3) Examines developmental and globalization trends in third-world societies. The effects of industrialization, mass media, population growth, rapid urbanization, and pressures from other societies are also examined.

531 Social Gerontology. (3) Examines the effects of social and cultural factors of the aging process including an analysis of policies and programs designed to meet the needs of older adults.
Not open to students who have credit in SOC 431.

537 Global Inequality. (3) Examines social inequalities linked to race, ethnicity, gender, religion, and other conditions occurring worldwide.

541 Social Change. (3) Analyzes social movements and resistance to these movements.
Not open to students who have credit in SOC 441.

570 Population and Demography. (3) Investigates contemporary demographic patterns and their implications for the future. Issues of composition, distribution, and growth of human populations are addressed.
Not open to students who have credit in SOC 470.

572 Urban Dynamics and Problems. (3) Examines the historic functions and institutional dynamics of the city with special reference to contemporary urban problems, including issues of community diversity and solidarity.
Not open to students who have credit in SOC 472.

574 Seminar on Middletown Studies. (3) Focuses on two works by the Lynds, “Middletown” and “Middletown in Transition,” and more recent studies about Muncie, Indiana. Includes participation in a continuing sociological project.

580 Sociological Research Design. (3) Examines the basic principles of conducting and analyzing sociological research.
Not open to students who have credit in SOC 380.

583 Evaluation and Qualitative Research. (3) Examines the nature of evaluation and qualitative research methodology. Provides experience in proposal writing as well as evaluation design and implementation.

588 Internship 3: Field Experience. (1-3) Unpaid supervised field experience in a business, industrial, governmental, educational, or other setting. Supervision will be jointly provided by sociology faculty and employers.
Prerequisite: permission of the sociology internship coordinator and the department chairperson.
A total of 6 hours of credit may be earned, but no more than 3 in any one semester or term.

590 Independent Study in Sociology. (1-3) Topics to be chosen and investigated in consultation with an instructor possessing special competence in the subject involved.

Prerequisite: permission of the department chairperson.
A total of 6 hours of credit may be earned, but no more than 3 in any one semester or term.

600 Sociological Inquiry. (3) Examines the nature of sociology, types of research data, and the formulation and reporting of sociological research. Focuses on the preparation of research proposals.

603 Readings in Sociological Theory. (3) Focuses on the reading and in-depth study of significant contemporary sociological works.
Prerequisite: SOC 502 or equivalent.

644 Family and Gender. (3) Comparative perspectives on the historical transformations that have influenced family and gender relationships are considered. Cultural variations will be evaluated as they relate to social problems and policy initiatives.

664 Advanced Seminar in Social Gerontology. (3) Examines the sociological components of aging as an increasingly significant social phenomenon in contemporary American society.
Prerequisite: SOC 531 or equivalent.

669 Internship 2: Paid Field Work. (3) Paid supervised field experience in a public agency or business setting. Training involves data analysis, evaluation research, and implementation of agency programs under the supervision of the employer and the department.
Prerequisite: permission of the department chairperson.
A total of 6 hours of credit may be earned, but no more than 3 in any one semester or term.

681 Survey Research Methods. (3) Provides practical knowledge on how to develop and conduct surveys.

682 Social Statistics. (3) Calculation, application, and interpretation of statistics used in social and behavioral sciences.

684 Advanced Sociological Data Analysis. (3) Selection and use of advanced statistical techniques for analyzing sociological data. Topics include multiple regression and other multivariate models.
Prerequisite: SOC 682.

699 Seminar in Selected Topics in Sociology. (3) Explores selected topics relevant to the discipline of sociology providing a critical evaluation from a variety of perspectives. May be repeated for different topics.
A total of 18 hours of credit may be earned, but no more than 3 in any one semester or term.

SPEECH PATHOLOGY AND AUDIOLOGY

www.bsu.edu/spaa
Arts and Communications Building 104, 765-285-8161

PROGRAMS

Master of arts (MA) in speech-language pathology and doctor of audiology (AuD)

Admission requirements

Applicants must meet the admission requirements of both the Graduate School and the program in the Department of Speech Pathology and Audiology and must submit transcripts of grades from completed bachelor's degree programs (including all schools attended at the undergraduate or graduate level), three letters of recommendation, and Graduate Record Examination (GRE) scores. Applicants to the doctor of audiology degree program must also submit a statement of purpose and complete an interview.

MASTER OF ARTS IN SPEECH-LANGUAGE PATHOLOGY

Program is accredited by the Council on Academic Accreditation (CAA) in Audiology and Speech-Language Pathology. The master's degree is a basic requirement for employment as a certified and licensed speech-language pathologist. Graduate study in speech-language pathology includes the academic and practicum requirements needed for Indiana School Services Personnel certification, as well as Indiana state licensure and the Certificate of Clinical Competence (CCC) awarded by the American Speech-Language-Hearing Association (ASLHA). To qualify for the state licensure or the CCC, students must pass a national examination and demonstrate adequate clinical skills during a Clinical Fellowship Year (CFY) under supervision by a certified speech-language pathologist.

Admission requirements

- Students must be admitted to both the department and to the Graduate School to enroll as a degree student.
- Minimum grade-point average (GPA) of 3.0. We receive more qualified applicants than we can accept; meeting or exceeding this average does not guarantee admission.
- Prefer a combined score of 900 on the verbal and quantitative sections of the GRE.
- Three letters of reference (on department forms).
- Transcripts of all previous graduate and undergraduate course work.
- Completed graduate school application.

Degree requirements

The master's program in speech-language pathology has a strong clinical orientation. Extensive practicum work with close supervision is required and is considered to be a critical component of the program.

For students with backgrounds in speech and hearing (usually bachelor's degrees), the program consists of a minimum of 56 semester hours including courses in which clinical practicum experience is acquired. For students with undergraduate major in speech and hearing, the program usually takes six consecutive semesters to complete.

The program requires sufficient clinical practicum hours to meet the ASLHA clinical practicum requirements. A comprehensive examination is also required.

Students with no background in speech and hearing but who have bachelor's degrees must take undergraduate deficiency classes before the regular graduate program can begin. The length of such programs will vary, but they typically take nine consecutive semesters.

Course requirements include the following:

PREFIX	*NO*	*SHORT TITLE*	*CR HRS*
SPAA	601	Intro Resrch	3
	610	Child Lang 1	3
	611	Child Lang 2	3
	620	Dx Cl Pract (1-2)	2
	621	Sp Sd Dis 2	3
	622	Fluency	2
	624	Diagnostics	3
	625	Voice	4
	628	Ad Clin Prac (2-10)	6
	629	Prof Issues	3
	631	Aug Alt Comm	3
	632	Neurogencs 1	3
	633	Neurogencs 2	3
	640	Dysphagia	3
	642	Aud for SLP	2
	690	Sem S L Path (1-6)	4
	693	Internship (3-9)	3
	695	Sch Intern (3-9)	3
			56 hrs

Approved graduate courses in other departments may be substituted for SPAA 690.

DOCTOR OF AUDIOLOGY (AuD)

The doctor of audiology degree is a post-baccalaureate degree designed to prepare students for the professional practice of audiology. The program is accredited by the Council of Academic Accreditation in Audiology and Speech-Language Pathology (CAA) and meets requirements for Indiana state licensure. The typical program is four calendar years. The first three years include academic study and intense supervised clinical practicum both on and off campus. The final year consists of a 12-month externship at an approved audiologic facility.

Admission requirements

Applicants must meet the admission standards of the Graduate School and the department's AuD admissions committee. The committee's decision is based on several factors, including the applicant's undergraduate transcripts, Graduate Record Examination (GRE) scores, written recommendations, a written statement of purpose, and an interview. Admission to the program is competitive, and meeting admission requirements does not ensure admission. Preference is given to applicants with undergraduate GPA of 3.2 or higher (on a 4.0 scale) and GRE scores of 500 or higher in the verbal and quantitative sections. Per Graduate School requirements, students admitted to the program are required to maintain a 3.2 GPA or higher throughout their AuD program to remain in good academic standing. Applicants

admitted to the program may be required to take undergraduate courses to acquire needed background knowledge if any areas of deficiency in undergraduate preparation are identified. Often, any needed deficiency courses can be taken during the AuD program without extending the length of the program; however, credit for these deficiency courses does not apply toward the AuD degree requirements.

Degree requirements

Degree requirements include a total of 100 credit hours (73 academic credit hours, 18 clinical practicum credit hours, and 9 externship credit hours). Students must accumulate a minimum of 800 practicum hours and complete a 12-month audiologic externship during their final year of study. Students must pass comprehensive examinations and successfully pass a national audiology examination during their last year of on-campus study, prior to externship placement.

Academic and clinical course requirements include:

PREFIX	*NO*	*SHORT TITLE*	*CR HRS*
SPAA	562	Neuro Anat	3
	601	Intro Resrch	3
	648	Hearing Anat	4
	650	Ped Aud	3
	651	Aud Prob Adl	3
	652	Psychoacoust	3
	653	Meas Balance	3
	654	Evkd Pot Tst	3
	655	Diagn Audiol	3
	656	Spch Hrg Aid	4
	657	Adv Diag Aud	3
	658	Private Prac	2
	659	Industrial	2
	660	Otoac Emiss	3
	661	Cochlr Impl	2
	662	Pharm Aud	2
	663	Counsel Aud	1
	664	Hstry/Issues	2
	680	Genetics	2
	749	Audiol Prac (1-4)	18
	766	Hear Aid 2	3
	770	Grand Rounds (1)	3
	771	Aud Project (2 or 3)	2
	793	Aud Extern (3)	9
SNLNG	551	Sign Lang 1	3
Electives			11
			100 hrs

SPEECH PATHOLOGY AND AUDIOLOGY (SPAA)

500 Survey of Speech-Language Pathology and Audiology. (2) Introduction to speech-language pathology and audiology and a survey of communication disorders. Particularly helpful for persons

thinking about careers in communication disorders or in related fields (teaching, nursing, gerontology, etc.).

Not open to students who have credit in SPAA 100.

518 Organic Speech and Language Disorders. (3) An overview of speech and language disorders resulting from organic problems. Areas covered include cerebral palsy, aphasia, cleft palate, dysphagia, vocal abuse, head trauma, and laryngectomy.

Prerequisite: SPAA 161; permission of the department chairperson.

Not open to students who have credit in SPAA 418.

519 Speech Pathology and Audiology Practicum. (1-4) Students engage in observation and preprofessional participation with clients with various speech, language, and hearing disorders.

Prerequisite: SPAA 210, 311.

A total of 4 hours of credit may be earned.

Not open to students who have 4 hours of credit in SPAA 319.

542 Audiology for Deaf Education. (3) Overview of audiology and aural rehabilitation for deaf-education majors.

Prerequisite: SPAA 101; SPCED 240 or 540.

Not open to students who have credit in SPAA 342.

Open only to deaf-education majors or by permission of the department chairperson.

543 Introduction to Audiology. (3) Overview of the anatomy and physiology of hearing, hearing disorders, hearing assessment, and hearing screening.

Prerequisite: SPAA 161, 260 or 560.

Not open to students who have credit in SPAA 343.

544 Aural Rehabilitation. (3) Overview of aural rehabilitation. Practical implications of various types of hearing losses and appropriate rehabilitative procedures. Amplification, auditory training, speechreading, educational and vocational considerations, and psychosocial implications of hearing loss.

Prerequisite: SPAA 210, 270, 343; or permission of the department chairperson.

Not open to students who have credit in SPAA 344.

545 Clinical Audiology: Orientation and Visitation. (2) Orientation to the practice of clinical audiology in various settings and work environments.

Prerequisite: permission of the department chairperson.

Not open to students who have credit in SPAA 345.

Open only to AuD students.

560 Speech Acoustics. (3) Introduction to the physical nature of speech and its relationship to speech production and perception.

Prerequisite: SPAA 101, 161.

Not open to students who have credit in SPAA 260.

562 Neuroanatomy and Neurophysiology of Speech, Language, and Hearing. (3) Overview of neuroanatomy and neurophysiology with a concentration on neurological mechanisms related to speech, language, and hearing.

Prerequisite: SPAA 161.

Not open to students who have credit in SPAA 361.

Open only to AuD students.

569 Child Language Disorders 1. (3) Introduction to the nature, cause, and treatment of language disorders in children.

Prerequisite: SPAA 270 or 570.

Not open to students who have credit in SPAA 371.

Open only to AuD students.

570 Language Development. (3) Overview of language and language development. Consideration of phonology, morphology, syntax, and semantics. Theories of language acquisition. Cultural diversity as related to language.

Not open to students who have credit in SPAA 270.

601 Introduction to Research in Speech Pathology and Audiology. (3) Orientation to research in speech-language pathology and audiology. Develops the abilities to read, evaluate, apply, and conduct research. Includes research writing style, critical reading, literature searches, research design, basic statistics, and computer applications.

Prerequisite: permission of the department chairperson.

610 Child Language: Birth to Five. (3) Emphasis on profiling the language and communication characteristics of various populations (e.g., neonates, autism spectrum disorders, specific language impairment) of young children seen in SLP. Contemporary assessment and intervention practices are reviewed, pertinent to evaluating the efficacy of communication treatment through participation and quality of life outcomes.

Prerequisite: SPAA 371 or equivalent; permission of the department chairperson.

611 Child Language: School Age to Adolescent. (3) Emphasizes communicative competency at the narrative and conversational levels of children with Language-Learning-Disabilities (LLD). Applied clinical service delivery models (e.g., curriculum based-instruction) are reviewed, pertinent to promoting oral language through literacy based assessments and interventions. Various reading disorders (e.g., dyslexia) are discussed when attributed to language impairments.

Prerequisite: SPAA 610; permission of the department chairperson.

620 Diagnostic Clinical Practicum. (1-2) Supervised clinical practice in assessment strategies, collecting clinical data, client interviewing, counseling, preparation of reports, and referral procedures.

Prerequisite: SPAA 319 (3 enrollments) or equivalent and permission of the department chairperson.

A total of 2 hours of credit may be earned.

Open only to SPAA graduate students.

621 Speech Sounds Disorders 2. (3) Advanced study of pediatric articulation and phonologic disorders. Survey of modern approaches to phonologic analysis and intervention techniques emphasizing critical review of the professional literature in its historic context. Overview of single subject designs and accountability procedures.

Prerequisite: SPAA 210 or its equivalent.

Open only to SPAA graduate students.

622 Fluency. (2) Nature, symptoms, development, diagnosis, and treatment of dysfluency. Overview of evidence based practices related to assessment and
treatment of dysfluency disorders. Overview of relevant evidence related to theoretical constructs underlying the concepts of fluency and dysfluency.

Open only to SPAA graduate students.

624 Diagnosis and Appraisal 2. (3) Emphasis on the evaluation of communication disorders across the life span with diverse populations. Psychometric properties of norm-referenced and criterion-referenced tests are reviewed in relationship to assessment practices in SLP. Alternative assessment models are introduced, which provide functional and meaningful data for the diagnosis and treatment of communication disorders.

Prerequisite: SPAA 312 or equivalent.

Open only to SPAA graduate students.

625 Voice and Resonance Disorders. (4)
Assessment and therapy strategies for voice and resonance disorders including functional, organic, neurologic, larynegectomy, velopharyngeal insufficiency, and cleft lip and palate are addressed. Description and treatment strategies involving criterion-referenced, instrumented assessments, and introduction to videostroboscopy are included.

Open only to SPAA graduate students.

628 Advanced Clinical Practice. (2-10) Students diagnose and treat children and adults with speech and/or language disorders. Ordinarily a total of 6 hours of credit is earned during three enrollments.

Prerequisite: SPAA 319 (3 enrollments) or the equivalent; SPAA major and permission of the department chairperson.

A total of 10 hours of credit may be earned.

Open only to graduate students majoring in speech-language pathology.

629 Professional Issues in Speech-Language Pathology. (3) Overview of professional issues facing clinicians. Examines ethical, multicultural, and service delivery issues in a variety of work settings with clients across the lifespan. Also reviews certification, licensure, and healthcare and education legislation and regulation. Employment and internship opportunities and issues are discussed.

Open only to SPAA graduate students.

631 Augmentative/Alternative Communication and the Nonvocal Individual. (3) Needs assessment and communication evaluation considerations; selection and development of appropriate and effective augmentative/alternative communication systems for nonvocal people including communication boards, electronic instrumentation, etc. Program development for individual needs and abilities of clients.

632 Neurogenic Disorders 1. (3) Advanced study of the central nervous system and its relationship to the causes, assessment and management of aphasia, right hemisphere dysfunction, and associated motor speech disorders.

Prerequisite: SPAA 161, 361 or equivalents; permission of the department chairperson.

633 Neurogenic Disorders 2. (3) Advanced study of the nature, causes, assessment, and management of dementia and traumatic brain injuries. Includes the study of normal aging and cognitive functions.

Prerequisite: SPAA 632; permission of the department chairperson.

640 Dysphagia. (3) Introduction to dysphagia with emphasis on knowledge needed to evaluate and treat adults with swallowing disorders. Current trends and issues will be studied. Normal and disordered swallowing across lifespan examined. Clinical and ethical decision making will be discussed.

Prerequisite: permission of the department chairperson.

Open only to SPAA graduate students.

642 Audiology for Speech-Language Pathologists. (2) Overview of audiology oriented towards the needs of speech-language pathologists. Hearing screening and follow-up. Audiogram interpretation.

Hearing aids and FM systems. Cochlear implants. Central auditory processing problems: symptoms and management.

Prerequisite: SPAA 343, 344 or permission of the department chairperson.

648 Hearing Anatomy, Physiology, and Disorders. (4) Graduate level study of the anatomy and physiology of the hearing mechanism and of conductive, sensorineural, and central hearing disorders.

Prerequisite: SPAA 343.

649 Clinical Orientation and Practicum in Audiology. (2-10) Orientation to clinical practicum in audiology. Practicum experience in a variety of diagnostic and habilitative procedures.

Prerequisite: SPAA 343, 344 and concurrent or prior enrollment in SPAA 655; permission of the department chairperson.

A total of 10 hours of credit may be earned.

650 Pediatric Audiology. (3) Topics specific to the nature and management of auditory problems in children. Development of the auditory system. Genetics of hearing loss. Syndromes associated with hearing loss. Educational audiology.

Prerequisite: SPAA 343, 344.

651 Auditory Problems and Management in Adults. (3) Topics specific to the nature and management of auditory problems in adults. Tinnitus, cerumen management, assistive devices, adult and aural rehabilitation and hearing aid orientation, self-assessment scales, consumer groups and advocacy.

Prerequisite: SPAA 343, 344.

652 Psychoacoustics, Instrumentation, and Calibration. (3) Psychoacoustics and acoustic phonetics. Calibration of audio-logic equipment.

Prerequisite: SPAA 260, 659.

653 Balance Function and Assessment. (3) Anatomy and physiology of balance. Assessment of balance function through electronystagmography, evoked potentials, and other available measures. Diagnosis and treatment of balance disorders as related to the audiology scope of practice.

Prerequisite: SPAA 161, 343; permission of the department chairperson.

654 Evoked Potential Testing. (3) Nature, use, administration, and interpretation of evoked potentials. Relationship of evoked potentials to other diagnostic procedures.

Prerequisite: SPAA 161, 343, 648; permission of the department chairperson.

655 Diagnostic Audiology. (3) Standard audiological testing and interpretation. Masking. Speech audiometry. Functional disorders: symptoms and diagnostic procedures. Immittance testing and interpretation.

Prerequisite: SPAA 260, 343.

656 Speech Perception and Hearing Aids. (4) Hearing loss and speech perception as related to amplification. Overview of hearing aids.

Prerequisite: SPAA 655.

657 Advanced Diagnostic Audiology. (3) Site-of-lesion tests other than immittance, evoked potentials, and electronystagmography. Central auditory processing disorders: nature, diagnosis, and management.

Prerequisite: SPAA 655.

658 Private Practice and Related Professional Issues. (2) Consideration of issues related to private practice audiology. Includes information on how the history of audiology and hearing aid dispensing has affected the profession. Other professional issues, such as certification and licensing, will be discussed.

659 Industrial Audiology and Noise Induced Hearing Loss. (2) Audiologic practice in industrial settings, noise induced hearing loss, and industrial sound surveys.
Open only to students enrolled in the AuD program.

660 Otoacoustic Emissions. (3) Nature, use, administration, and interpretation of otoacoustic emissions. Relationships of otoacoustic emissions to other diagnostic procedures.
Prerequisite: SPAA 343, 648; permission of the department chairperson.
Open only to students enrolled in the AuD program.

661 Cochlear Implants. (2) Cochlear implants, including candidacy, devices, speech perception and production, aural rehabilitation, and educational implications. Includes brainstem implants.
Prerequisite: SPAA 343, 344, 648, 650, 654, 656, 657.

662 Pharmacology for Audiologists. (2) Pharmacology as related to the practice of audiology, including ototoxic agents and interdrug reactions.
Prerequisite: SPAA 648, 655.

663 Counseling Issues in Audiologic Practice. (1) Counseling issues related to the practice of audiology.
Prerequisite: SPAA 650, 651, 655.

664 History and Issues of the Profession of Audiology. (2) History of the profession of audiology. Past, present, and future issues facing the profession.
Prerequisite: permission of the department chairperson.
Open only to students enrolled in the AuD program.

680 Genetics of Communication Disorders. (2) Current issues in the genetics of communication disorders. Introduction to cytogenetics, mutation and chromosomal aberrations, traditional and nontraditional inheritance, development, pedigree analysis, genetic testing, genetic counseling, ethical considerations, and the latest on clinical characteristics and molecular genetics of syndromic and non-syndromic communication disorders.
Open only to Audiology or Speech Language Pathology graduate students.

690 Seminar in Speech-Language Pathology. (1-6) Seminars will be offered on selected topics in speech-language pathology. Topics to be covered will be identified in advance for each seminar offered.
Prerequisite: permission of the department chairperson.
A total of 12 hours of credit may be earned, but no more than 6 in any one semester or term.

691 Seminar in Audiology. (1-4) Offered on selected topics in audiology. Topics to be covered will be identified in advance for each offering.
Prerequisite: permission of the department chairperson.
A total of 4 hours of credit may be earned.

692 Directed Study in Speech-Language Pathology and Audiology. (1-3) Individual directed study in speech-language pathology and audiology.
Prerequisite: permission of the department chairperson.
A total of 6 hours of credit may be earned, but no more than 3 in any one semester or term.

693 Internship in Speech Pathology or Audiology. (3-9) On-the-job experience in such places as hospitals, rehabilitation centers, private practices, nursing homes, community speech and hearing centers, etc.

Prerequisite: permission of the department chairperson.

A total of 18 hours of credit may be earned, but no more than 9 in any one semester or term.

695 School Internship in Speech-Language Pathology or Audiology. (3-9) On-the-job experience in a school setting.

Prerequisite: permission of the department chairperson.

A total of 18 hours of credit may be earned, but no more than 9 in any one semester or term.

749 Audiology Practicum. (1-4) Supervised clinical practicum in audiology on and off campus. Experience in a variety of diagnostic and rehabilitative procedures.

Prerequisite or parallel: SPAA 343, 655; permission of the department chairperson.

A total of 26 hours of credit may be earned, but no more than 4 in any one semester or term.

Open only to AuD students.

766 Hearing Aids 2. (3) Advanced course on hearing aids, including middle ear implants.

Prerequisite: SPAA 656.

770 Grand Rounds in Audiology. (1) An in-depth review and analysis of a variety of clinical cases and topics related to the professional practice of audiology.

A total of 3 hours of credit may be earned, but no more than 1 in any one semester or term.

Open only to students enrolled in the AuD program.

771 Audiology Doctoral Project. (2 or 3) Audiology doctoral project on approved topic.

A total of 3 hours of credit may be earned.

Open only to students enrolled in the AuD program.

793 Audiology Externship. (3) Full-time, 12-month externship in an approved audio-logic facility under the joint supervision of the university audiology faculty and the externship site professional staff. Externship may be completed at one or more sites. Taken for three consecutive semesters.

Prerequisite: permission of the department chairperson.

A total of 9 hours of credit may be earned, but no more than 3 in any one semester or term.

Open only to students enrolled in the AuD program.