

FACULTY

INTERIM DEAN
Garry L. Gordon

PROFESSORS
Paula S. Cochran, Jerry Mayhew

ASSOCIATE PROFESSORS
Michael Bird, Carolyn C. Cox, Carlton O. DeFosse, Janet L. Gooch, Stephen Hadwiger, Alex Koch, Christopher Lantz, James Padfield, Stephanie Powelson

ASSISTANT PROFESSORS
Sarah P. Delaware, Roberta Donahue, Pam Gardner, Mariquit Hadwiger, Melissa Holcomb, Jennifer Eldridge Houser, Jeremy Houser, Rebecca McClanahan, Sharon A. McGahan, Brenda Wheeler, Amy F. Wilson, Janice Young

INSTRUCTORS
Jeff Arabas, Evonne Bird, Michelle Boyd, Mike Cannon, Adam Cline, John Cochrane, Shannon Currier, Tim Deidrick, Elizabeth Economon, Joseph Fanthorp, Marne Fauser, Charles Flohr, Melody Jennings, Elizabeth Jorn, Pete Kendall, Carrie Lundy, Teak Nelson, Aaron Rasset, Daric Riley, Lacey Schanz, Edward Schneider, Jack Schrader, David Schutter, Larry Scully, Sheri Simmons, John Sloop, Scott Strohmeier, Corrie Willis

DIRECTOR OF COMMUNICATION DISORDERS
Janet L. Gooch

DIRECTOR OF HEALTH AND EXERCISE SCIENCES
Christopher Lantz

DIRECTOR OF NURSING
Stephanie Powelson

CLINIC DIRECTOR, SPEECH AND HEARING CLINIC
Melissa Passe

CLINICAL SUPERVISORS (Communication Disorders)
Sheila Garlock
Melissa Passe

DEGREES OFFERED

Bachelor of Arts, BA
Bachelor of Science, BS
Bachelor of Science in Nursing, BSN
Master of Arts, MA

UNDERGRADUATE MAJORS

Communication Disorders
Exercise Science
Health Science
Nursing

HUMAN POTENTIAL AND PERFORMANCE

The Division of Human Potential and Performance is home for disciplines that focus on Applied Life Sciences. Each degree program is grounded in liberal arts and sciences that serve as the foundations for content studied within the major. Communication Disorders, Exercise Science, Health Science, and Nursing require their students to participate in clinical and/or internship experiences that allow the student to apply didactic studies in real world settings. Programs within the division are accredited by national, state and professional boards that allow students to be eligible for certification and licensure. In addition to meeting the needs of its majors, the HPP disciplines offer interdisciplinary support courses for other university areas of study.

The intense concentration on career preparation ensures a high level of student-faculty interaction that affords various opportunities for individualized learning. Research is highly valued in the various HPP disciplines as is seen in the number of student research presentations at state, regional and national conferences. Each discipline offers students an opportunity to become members of their respective student honor societies. These societies allow students to gain valuable leadership experience that further enhances their marketability upon graduation.

The faculty members within the division are highly student-oriented, willing to share their time and knowledge outside the classroom as well as within. This personal interest contributes to the reason for the high number of graduates who elect to continue their education in graduate or professional schools.

COMMUNICATION DISORDERS

The undergraduate major in communication disorders is designed to provide a broad background in normal communication processes, an introduction to the techniques and tools with which speech, language, and hearing disabilities are evaluated, and an introduction to the characteristics of disorders of communication in adults and children. The American Speech-Language-Hearing Association (ASHA) explicitly recommends that the best preparation for graduate work in communication disorders is a strong undergraduate background in liberal arts and sciences. The undergraduate major in communication disorders, in conjunction with the Truman general education curriculum, is designed to provide such preparation.

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An undergraduate major in communication disorders draws from the content and methodologies associated with many closely related areas of study, such as linguistics (phonetics), psychology (language development), biology (anatomy of speech and hearing, audiology), physics (speech and hearing science), and education (principles of clinical practice, aural rehabilitation). Courses in the major are carefully sequenced, leading to a senior-level culminating experience. Students choose a clinical or non-clinical culminating experience, depending upon their qualifications, interests, and long-term career goals.

Students who have questions about majoring in communication disorders should contact the Program Director in Communication Disorders (660-785-4669) for more information. The number of students permitted to major is limited.

Mission Statement

The mission of the communication disorders undergraduate program is to mentor students of strong academic ability and character and to establish in them a commitment to lifelong learning and interest in the complex and diverse process of communication. Through the program's emphasis on typical and atypical speech, language, and hearing, students gain knowledge, skills, and values that foster their individual growth as well as a passion for contributing to society and improving the lives of others.

Program Objectives

1. To ensure that students who major in communication disorders gain a broad understanding of typical human communication and development across the lifespan, with sensitivity to cultural and individual variations.
2. To ensure that students who major in communication disorders gain a basic familiarity with a range of atypical conditions that result in impairment of speech, language, and/or hearing abilities.
3. To ensure that through the study of communication and communication disorders, students develop and value strong communication skills.
4. To provide superior opportunities for students to apply their knowledge and skills in a supportive clinical environment, including involved faculty supervision and excellent clinical facilities.
5. To provide individual advising and support for students to help them accomplish their personal goals and maximize the benefits of a liberal arts and sciences education.
6. To provide opportunities for students to form mentor relationships with faculty, collaborate closely with peers and faculty, and explore topics of individual interest through learning communities, special assignments, independent study, and/or research projects.
7. To model and promote integrity and ethical conduct in clinical practice, academic achievement, and research.
8. To model and promote professional values that include a respect for diversity, the importance of lifelong learning, and the rewards of service to others and the community.

Special Facilities

The Communication Disorders program staffs and maintains the Truman State University Speech and Hearing Clinic. The Clinic has individual and group therapy rooms, observation facilities, and modern closed-circuit TV and videotaping capabilities to facilitate supervision and observation by student clinicians and client family members. An audiological testing suite is available for complete hearing

evaluations. The Kenneth M. McGuire Clinical Media Center houses the Clinic's extensive collection of diagnostic and therapy materials and is used by student clinicians as they prepare for therapy and complete other case management tasks. Student clinicians make use of the Clinical Computing Lab to explore and prepare clinical applications of computers for direct use with clients. Additional multimedia technologies readily available for use include interactive videodisc, CD-ROM, as well as both sound and video digitizing. A component of the Clinic is the Truman State University Rite Care Early Literacy Lab.

The Clinic is open throughout the academic year and summer semesters, serving a local and regional population of all ages. Members of the university community including students, faculty, staff and their families are also served by the Clinic. All Clinic services are provided under the supervision of faculty who are licensed by the Missouri State Board of Registration for the Healing Arts and certified by the American Speech-Language-Hearing Association.

General Information

The Bachelor's degree in Communication Disorders can serve as strong preparation for a number of careers which require specialized graduate level study, including speech-language pathology, audiology, special education, and others in health, education, or communication-related fields. It is considered a pre-professional degree by the American Speech-Language-Hearing Association. Undergraduate majors are encouraged to consider graduate education alternatives, and assisted in making plans to do so. Master's level work is required in order to obtain professional credentials such as certification by the American Speech-Language-Hearing Association, Missouri State Teaching Certification, and the state license from the Missouri State Board of Registration for the Healing Arts.

Courses designated as Required Support for the major in Communication Disorders are chosen to help students meet a variety of certification requirements. Substitutions should be considered only after consultation with an academic advisor who is well-informed about the details of the curriculum.

All student majors must observe a minimum of 25 clock hours of evaluation and/or intervention services as approved by the Truman Communication Disorders faculty. These observations normally take place in the Truman Speech and Hearing Clinic. Note that observations must be completed as a prerequisite to enrolling for either undergraduate or graduate level clinical practicum (CMDS 480, CMDS 681).

**COMMUNICATION DISORDERS
BACHELOR OF SCIENCE**

	Semester Hours
Liberal Studies Program Requirements	32-57
Missouri Statute Requirement	1-3
Bachelor of Science Requirements . . . . .	.6
Complete 6 hours from the following (with approval of advisor):	
BIOL 214 Anatomy and Physiology . . . . .	.4
BIOL 325 Human Physiology . . . . .	.4
BIOL 365 Human Anatomy . . . . .	.4
ENG 406 Language and Learning . . . . .	.3

ENG	413	Advanced Linguistics	3	
ENG	414	Language and the Mind	3	
HPP	200	Medical Terminology	1	
PHRE	383	Philosophy of Language	3	
PSYC	266	Experimental Psychology	3	
Any 300-400-level psychology course				3
SOAN	215	Sociology of Social Problems	3	
SOAN	253	Comparative Cultures	3	
SOAN	331	Linguistic Anthropology	3	
SOAN	367	Social Psychology	3	

Required Support17

PSYC	166	General Psychology**	3
ENG	238	Introduction to Linguistics	3
PSYC	332	Child Development	OR
PSYC	377	Developmental Psychology	OR
ED	230	Early Childhood Growth & Development	3
HLTH	192	Microcomputer Applications	OR
ES	192	Microcomputer Applications	2
SED	535	Counseling, Collaboration, and Consultation with Parents and Families	3

One course from the Historical Mode of Inquiry**3
 **May be used to fulfill Liberal Studies Program Requirements.

MAJOR REQUIREMENTS34

CMDS	101	Clinical Observation I	0.5
CMDS	200	Introduction to Communication Disorders	3
CMDS	261	Phonetics	3
CMDS	301	Clinical Observation II	0.5
CMDS	380	Principles of Clinical Management	3
CMDS	460	Language Development	3
CMDS	470	The Speech Mechanism	3
CMDS	472	Audiology	3
CMDS	473	Aural Rehabilitation	3
CMDS	474	Speech and Hearing Science	3
CMDS	477	Articulation and Phonology	3
CMDS	490	Organization and Administration of Speech Pathology Services	4

Capstone Experience:
 OPTION 1 (Clinical)
 CMDS 480 Clinical Practice1.5
Course taken twice. (See course description for CMDS 480. A prerequisite 3.0 GPA overall AND in all CMDS courses is required.) Students majoring in Communication Disorders must demonstrate clinically appropriate speech/language/hearing skills prior to enrollment in clinical practicum.

OPTION 2 (Non-Clinical)
 CMDS 489 Culminating Experience in Communication Disorders3

Certification also requires two science courses with lab components; AGSC 100 does **not** meet certification requirements.

Electives to Total 128

NOTE: Communication Disorders majors must have a 2.50 cumulative G.P.A. and a 2.50 in the major in order to graduate.

**COMMUNICATION DISORDERS
 BACHELOR OF ARTS**

	Semester	
	Hours	
Liberal Studies Program Requirements		32-57
Missouri Statute Requirement		1-3

Bachelor of Arts Requirements0-6
 Intermediate proficiency in ONE foreign language

Required Support17

PSYC	166	General Psychology**	3
ENG	238	Introduction to Linguistics	3
PSYC	332	Child Development	OR
PSYC	377	Developmental Psychology	OR
ED	230	Early Childhood Growth & Development	3
HLTH	192	Microcomputer Applications	OR
ES	192	Microcomputer Applications	2
SED	535	Counseling, Collaboration, and Consultation with Parents and Families	3

One course from the Historical Mode of Inquiry**3
 **May be used to fulfill Liberal Studies Program Requirements.

MAJOR REQUIREMENTS34

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CMDS	200	Introduction to Communication Disorders	3
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CMDS	301	Clinical Observation II	0.5
CMDS	380	Principles of Clinical Management	3
CMDS	460	Language Development	3
CMDS	470	The Speech Mechanism	3
CMDS	472	Audiology	3
CMDS	473	Aural Rehabilitation	3
CMDS	474	Speech and Hearing Science	3
CMDS	477	Articulation and Phonology	3
CMDS	490	Organization and Administration of Speech Pathology Services	4

Capstone Experience:
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 CMDS 480 Clinical Practice1.5
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 CMDS 489 Culminating Experience in Communication Disorders3

Certification also requires two science courses with lab components; AGSC 100 does **not** meet certification requirements.

Electives to Total128

Note: Communication Disorders majors must have a 2.50 cumulative G.P.A. and a 2.50 in the major in order to graduate.

**CMDS COURSE SEQUENCE (MAJOR REQUIREMENTS)
 FRESHMAN YEAR—FALL OR SPRING**

CMDS	101	Clinical Observation I	0.5
CMDS	200	Introduction to Communication Disorders	3

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SOPHOMORE YEAR—FALL
CMDS 261 Phonetics3

SOPHOMORE YEAR—SPRING
CMDS 460 Language Development3
Prerequisites: CMDS 200, 261

JUNIOR YEAR—FALL
CMDS 301 Clinical Observation II0.5
CMDS 470 The Speech Mechanism3
Prerequisites: CMDS 200, 261, 460
CMDS 472 Audiology3
Prerequisites: CMDS 200, 261, 460

JUNIOR YEAR—SPRING
CMDS 380 Principles of Clinical Management3
Prerequisites: CMDS 200, 261, 460, 470, 472. Majors only.
CMDS 473 Aural Rehabilitation3
Prerequisites: CMDS 200, 261, 460, 470, 472
CMDS 477 Articulation and Phonology3
Prerequisites: CMDS 200, 261, 470, 472

SENIOR YEAR—FALL
CMDS 474 Speech and Hearing Science3
Prerequisites: CMDS 200, 261, 380, 460, 470, 472, 473, 477
CMDS 490 Organization and Administration of Speech
Pathology Services4
Prerequisites: CMDS 200, 261, 380, 460, 470, 472, 473,
477. Majors only.

OPTION 1
CMDS 480 Clinical Practice1.5
Prerequisites: CMDS 200, 261, 380, 460, 470, 472, 473,
477. Majors only.

SENIOR YEAR—SPRING
OPTION 1
CMDS 480 Clinical Practice1.5
Prerequisites: CMDS 200, 261, 380, 460, 470, 472, 473,
477. Majors only.

OPTION 2
CMDS 489 Culminating Experience in Communication
Disorders3
Prerequisites: CMDS 200, 261, 380, 460, 470, 472, 473,
477, 490. Majors only.

COURSE DESCRIPTIONS

Students who do not meet prerequisites for a course can request permission to take a course by meeting with the faculty member teaching the course, who in turn will recommend to the Program Director that the student be enrolled in the class if appropriate.

CMDS 101 – Clinical Observation I
0.5 hours
Observation of speech, language, and hearing screening, evaluation, and therapy conducted in the Truman State University Speech & Hearing Clinic. Course completion requires fifteen (15) hours of observation. Pass/Fail grading will be used. Normally taken first semester of freshman year. Students who discontinue the CMDS major will be given a comparable assignment. Prerequisite: CMDS major. Co-requisite: CMDS 200.

CMDS 200 – Introduction to Communication Disorders
3 hours
Review of normal speech, language, and hearing development and acquired disorders of speech and language in children and adults. Theories of etiology and examples of traditional intervention strategies. Potential impact of speech or language impairment on the social, emotional, and vocational aspects of a person's life. Co-requisite: CMDS 101.

CMDS 260 – Voice and Articulation
3 hours
Fundamentals of spoken communication with emphasis on voice and diction. Oral class presentations are required and students learn to make use of self evaluation and peer critique. Participants learn optimal use of their own voice and articulation for effective oral communication. This course is open to non-CMDS majors as well as majors.

CMDS 261 – Phonetics
3 hours
Study of the speech sounds of language with emphasis on American English. Participants practice broad and narrow transcription of speech using the International Phonetic Alphabet. Comparisons of Standard American English pronunciation with regional and social dialects.

CMDS 301 – Clinical Observation II
0.5 hours
Observation of speech, language, and hearing screening, evaluation, and therapy conducted in the Truman State University Speech & Hearing Clinic. Course completion requires ten (10) hours of observation. Pass/Fail grading will be used. Normally taken first semester of junior year. Students who discontinue the CMDS major will be given a comparable assignment. Prerequisites: CMDS 101 and CMDS major.

CMDS 380 – Principles of Clinical Management
3 hours
Introduction to assessing human communication behavior and planning intervention for improving speech and language abilities. Introduction to principles of professional and ethical conduct. Participants observe persons with communication disorders and intervention techniques in the Truman State University Speech and Hearing Clinic. Prerequisites: CMDS 200, 261, 460, 470, and 472. CMDS majors only.

CMDS 460 – Language Development
3 hours
Study of typical language development in children from birth to adolescence. Theories of language development and placing language in the context of motor, cognitive, and social development. Language observation and linguistic analysis techniques; comparison of Standard American English to major social dialects. Relationship between language development and literacy. Prerequisites: CMDS 200 and 261. CMDS majors only.

CMDS 470 – The Speech Mechanism
3 hours
Study of anatomy, neuroanatomy, and physiology of the human speech mechanism. Coverage includes upper body skeletal, muscular, respiratory, and nervous systems. Focus on respiration, phonation, resonance, and articulation. Prerequisites: CMDS 200, 261, and 460. CMDS majors only.

CMDS 472 – Audiology

3 hours

Introduction to the anatomy and physiology of the human ear and the process of hearing. Basic principles of hearing assessment and characteristics of hearing disorders. Participants develop familiarity with the procedures and instrumentation used to measure human hearing and speech perception. Prerequisites: CMDS 200, 261, and 460. CMDS majors only.

CMDS 473 – Aural Rehabilitation

3 hours

Approaches to assisting persons with hearing impairment to maximize their communication with other people. Includes strategies such as speech-reading, speech conversation, and auditory training. Characteristics of deaf culture and current issues in hearing impairment intervention. Prerequisites: CMDS 200, 261, 460, 470, and 472. CMDS majors only.

CMDS 474 – Speech and Hearing Science

3 hours

Study and measurement of the acoustic characteristics of speech. Includes introduction to the physics of sound, review of speech production, and historical perspectives on the study of sound and scientific instrumentation. Lab assignments require instrumental analysis of speech signals. Prerequisites: CMDS 200, 261, 380, 460, 470, 472, 473, and 477. CMDS majors only.

CMDS 475 – Sign Language

3 hours

An introduction to the comprehension and use of sign language (signs, fingerspelling, and numbers). Participants will obtain a basic sign vocabulary and learn about the structure of American Sign Language. Open to any regular student currently enrolled at the University.

CMDS 477 – Articulation and Phonology

3 hours

This course serves as an introduction to articulation and phonology. This course aims to provide students with a scientific understanding of the nature of both phonological and articulatory disorders as well as assist them in applying this knowledge to clinical situations. Prerequisites: CMDS 200, 261, 470, and 472. CMDS majors only.

CMDS 480 – Clinical Practice

1.5 hours

This course, when completed twice, comprises Option 1 for the Capstone Integrating Experience in Communication Disorders. The student will obtain direct clinical experience with clients who exhibit a variety of communication disorders. Students' responsibilities include: writing lesson plans; conferring with clinical supervisor and parents; utilizing clinical materials, equipment and computer programs; and writing reports. Taken by consent of instructor. May be repeated. Initial registration is limited to one and one half (1.5) hours. Registration for summer is for all ten weeks. Prerequisites: Observation of 25 hours of evaluation and management and a 3.0 grade point average overall and in all CMDS courses; CMDS 200, 261, 380, 460, 470, 472, 473, and 477. CMDS majors only.

CMDS 488 – Independent Studies

1-3 hours

Special problems and research in language, communication disorders, audiology, special population, and related areas. Prerequisites: Advanced arrangement with instructor is required.

CMDS 489 – Culminating Experience in Communication Disorders

3 hours

This course comprises Option 2 for the Capstone Integrating Experience in Communication Disorders. The course is designed to allow students to integrate their knowledge of speech/language pathology with skills in professional writing. To this end, students will write weekly papers summarizing topic presentations given by professionals or viewed from videos. Topics may range from Alzheimer's disease to deafness. Students will refine their writing by demonstrating weekly improvements in the areas of content, grammar, and punctuation. In addition, students will log instructor's comments and corrections onto a weekly recording form. Implications that these topics have for society, people needing services, and service providers will be addressed. Prerequisites: CMDS 200, 261, 380, 460, 470, 472, 473, 477, and 490. CMDS majors only.

CMDS 490 – Organization and Administration of Speech Pathology Services

4 hours

Organizational structures and administrative practices related to the provision of services to persons with communication disorders. Characteristics of professional practice in a variety of settings, with emphasis on relevant legal statutes and guidelines. History of the development of communication disorders as an interdisciplinary field of research and professional practice; current professional issues. Prerequisites: CMDS 200, 261, 380, 460, 470, 472, 473, and 477. CMDS majors only.

CMDS 560 – Professional Writing Seminar

1-3 hours

This seminar will provide the student in Communication Disorders with intensive instruction in clinical writing in preparation for the clinical experience as well as future employment. The following areas of writing will be addressed: format of scientific writing, diagnostic reports, treatment plans, SOAP notes, professional correspondence, Individual Education Plans (IEP), and ethical issues in report writing. Prerequisite: CMDS 380. CMDS majors only.

CMDS 561 – Advanced Speech Pathology

3 hours

This course examines communication problems resulting from disorders of voice and fluency and from orofacial/craniofacial anomalies. Etiology, types, defining characteristics and associated problems will be examined within each area. Assessment and treatment options for each area will be discussed and implemented. Prerequisite: Completion of or concurrent enrollment in CMDS 474. CMDS majors only.

CMDS 562 – High Risk Infants

3 hours

Familiarizes students with the concept of high risk as it applies to infants. Factors which contribute to a high-risk label being applied to an infant will be discussed. The developmental outcome of high-risk infants during the pre-

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school and school age years will be presented. Assessment and intervention strategies, as well as available materials, will be outlined. Parental and family concerns will also be discussed relative to the special adjustments and needs of the high-risk infant. CMDS majors only.

CMDS 564 – Voice Disorders

3 hours

Theories of voice production, emphasizing voice defects, related pathologies, and therapeutic procedures.
Prerequisite: CMDS 561 or CMDS 561G. CMDS majors only.

CMDS 566 – Diagnosis of Communication Disorders

3 hours

Etiologies of communication disorders, emphasizing diagnostic procedures, interviews, history techniques, parental counseling, report writing, and referral. Prerequisite: eligibility for CMDS 480, Clinical Practice. CMDS majors only.

CMDS 568 – Phonological Disorders

3 hours

An overview of phonological theory, evaluation, and treatment methods for disorders of phonology enabling the student to effectively design a therapeutic program.
Prerequisites: CMDS 561 or CMDS 561G. CMDS majors only.

CMDS 578 – Clinical Applications of Computers in Communication Disorders

3 hours

This course presents an overview of the computer applications available to clinicians for diagnosis and remediation of persons who have communication disorders. Emphasis will be placed on applications which are used directly with clients in speech and language intervention. Prerequisites: Permission of the Program Director, and prior experience with special populations such as CMDS 480 Clinical Practice or CMDS 681G Advanced Clinical Practice.

FACULTY CREDENTIALS

Note: Date in parentheses indicates year of employment at Truman. *Indicates graduate faculty.

Paula S. Cochran

Professor of Communication Disorders*
BA, College of Wooster; MA, Ohio University; PhD,
University of Virginia. (1987)

Carlton O. DeFosse

Associate Professor of Communication Disorders*
BS, Western Illinois University; MA, Western Illinois
University; PhD, University of Toledo. (2001)

Sheila J. Garlock

Clinical Supervisor in Communication Disorders
BSE, Northeast Missouri State University; MA, Northeast
Missouri State University. (1996)

Janet L. Gooch

Associate Professor and Director of Communication
Disorders*
BA, University of Kansas; MA, Kent State University; PhD,
Case Western Reserve University. (1995)

Melissa Passe

Clinic Director, Speech and Hearing Clinic
BS, MA, Northeast Missouri State University. (1992)

Amy F. Wilson

Assistant Professor of Communication Disorders*
BM, Florida State University; PhD, University of South
Alabama. (2003)

HEALTH AND EXERCISE SCIENCES

MISSION OF THE PROGRAM

The mission of the Health and Exercise Sciences Program is to attract students of strong academic ability and character, and to empower them with knowledge, skills, and the ability to facilitate improvement in the human condition and greater society. Consistent with Truman's mission, the Health and Exercise Sciences Program is committed to providing its students with exemplary undergraduate education grounded in the liberal arts and sciences. Further, Health and Exercise Sciences students will grow to embrace a commitment to life-long learning and will become effective ambassadors of health, human movement, and personal well-being.

PROGRAM PHILOSOPHY

The Health and Exercise Sciences faculty and staff are dedicated to providing students with a first-class education facilitated through a stimulating and supportive environment. This student-centered philosophy creates a community of learners in which faculty and students work collaboratively to pursue knowledge and its application. Problem-based learning, practical experience and scholarly research promote a learning environment that greatly enhances student development.

Students who have questions about majoring in Health Science or Exercise Science should contact the Health and Exercise Sciences Program at (660) 785-4456 or by e-mail (hes@truman.edu).

DEPARTMENTAL HONORS PROGRAM

PURPOSES

1. To address the special needs of outstanding students by providing a focus for formulating personal goals, developing self-esteem, and increasing the desire for self-directed learning
2. To contribute to the general advancement of learning by encouraging the active pursuit of academic goals, as exemplified by research, scholarly activity, and creative endeavor.

ELIGIBILITY

Any Health Science or Exercise Science major who attains the following will receive Departmental Honors. Student must take application to the Health and Exercises Program Office, PB 212, during graduating semester. Applications will be mailed out each semester to degree candidates who qualify for the overall GPA requirement.

1. Major GPA of 3.5 or higher.
2. Overall GPA of 3.5 or higher.
3. Complete a research project.
4. *Present at Truman Student Research Conference, present at a professional conference, or publish a paper (a paper that has been submitted or accepted for publication would qualify).
5. Obtain combined verbal and quantitative assessment score of 1100 or higher on GRE, or 27 or higher on the

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MCAT, or pass a national, major-specific certification exam (ACSM, NATA, CHES, NSCA). Personal training and aerobic certifications do not apply.

6. Receive concurrence from majority of HES faculty.

*“Present” means that the individual was a major contributor to the research paper (assisted in the data collection, assisted in the data reduction and analysis, and assisted in preparation of manuscript, poster or oral presentation). A major contributor is one who participates meaningfully in all parts of the project, not a person who simply assisted with data collection. The faculty mentor is responsible for verifying level of participation.

EXERCISE SCIENCE MAJOR

The Bachelor of Science degree in Exercise Science is grounded in a strong Liberal Arts and Sciences foundation. Courses within the discipline are rooted in the basic sciences of physics, biology, chemistry, and psychology. Exercise Science majors engage in the study of all aspects of human movement including motor skill development and acquisition, movement production and efficiency, energy systems and metabolism, anatomical structures (cadaver anatomy lab), and psycho-sociological influences. Students also engage in the advanced study of a selected concentration area (pattern) in the human movement or allied health professions. The major culminates in a four-credit, 200-hour required summer internship in which students apply classroom knowledge to real-world settings and gain important practical experience directly related to their career interests.

Assessment is a core institutional value and is a substantive component of the Exercise Science Program. Faculty members evaluate teaching effectiveness through pre/post assessment and student evaluations. Many faculty employ additional modes of assessment to garner information regarding specific aspects of their courses or teaching style. The Graduate Record Examination (GRE) serves as the senior test for all Exercise Science majors. Specific pattern courses are designed to prepare students for certifying exams for the athletic trainer (BOC), strength and conditioning specialist (NSCA), and exercise specialist (ACSM). The pre-medicine pattern also prepares students for the Medical College Admission Test (MCAT). A significant feature of the Exercise Science Program is the use of scholarly research to facilitate learning. Students are provided numerous in-class opportunities to conduct research on a variety of self-selected topics. The Program’s Human Performance Laboratory and Biomechanics/Motor Learning and Control Laboratory represent important resources for the facilitation of student research. Interested students are also provided substantial opportunity to conduct independent research under the guidance of faculty mentors. These projects are often presented at the local, state, and national levels and provide students with excellent opportunities for professional and personal growth.

Outcome Statements of the Exercise Science Major

The primary objective of the Exercise Science Program is to assist students in preparing themselves for success in graduate study or to be competent practitioners in the allied health or other human movement related professions. Graduates of the Exercise Science program should:

1. Gain experiences and training based on a Liberal Arts and Sciences background that supports specialized study in Exercise Science encompassing exercise physiology, biomechanics, nutrition, motor control, anatomy,

- physiology, psychology, sociology, injury prevention and care, management, and leadership;
- 2. Develop the ability to assimilate, synthesize, and apply information from multiple sources and disciplines;
- 3. Become critical thinkers, consumers, and competent practitioners of research design and statistical analysis;
- 4. Analyze, assess, and learn human movement in a variety of developmentally appropriate levels and contexts;
- 5. Act as a resource person and recognize the mechanisms underlying behavior change and to facilitate the integration of positive behaviors in society;
- 6. Demonstrate the skills to plan, implement, and evaluate effective exercise- or health-related intervention programs;
- 7. Demonstrate knowledge of Exercise Science principles in laboratory and internship experiences.

**EXERCISE SCIENCE
BACHELOR OF SCIENCE**

	Semester Hours
Liberal Studies Program Requirements	32-57
Missouri Statute Requirement	1-3
Bachelor of Science Requirements	8
BIOL 325 Human Physiology	4
BIOL 365 Human Anatomy	3
BIOL 365 Human Anatomy Lab	1

Required Support	8-28
BIOL 107 Introductory Biology I**	4
ES 192 Microcomputer Applications	2
ES 344 Lifespan Motor Development	3
HLTH 150 Nutrition in Health and Wellness	3
HLTH 195 Lifetime Health and Fitness**	1.5
HLTH 196 Lifetime Physical Activities** OR Varsity Sport Participation	0.5-1.0
MATH 192 Essentials of Calculus** OR	
MATH 194 LAS Calculus** OR	
MATH 198 Analytic Geometry and Calculus I**	3-5
PSYC 166 General Psychology**	3
SOAN 190 Sociological Inquiry** OR	
SOAN 191 Anthropological Inquiry**	3
STAT 190 Basic Statistics**	3

**May be used to fulfill LSP requirements.

MAJOR REQUIREMENTS33-37.5

Complete each of the following:

ES 190 Foundations of Exercise Science	3
ES 205 First Aid and CPR OR	2
ES 207 First Aid & CPR Recertification	1
ES 232 Sport Management OR	
ES 435 Athletic Training Room Management	3
ES 247 Data Interpretation in Exercise Science	2
ES 270 Research Methods in Exercise Science	2
ES 280 Principles of Athletic Training (3) OR	
ES 431 Injury Care of Active People (2)	2-3
ES 334 Physiological Assessment	3
ES 342 Concepts of Biomechanics	3
ES 343 Motor Learning and Control	2
ES 343 Motor Learning and Control Lab	1
ES 345 Introduction to Exercise Physiology	3
ES 502 Social Problems in Sport OR	
ES 503 Exercise and Sport Psychology	3

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Activities (4.0-6.5 hours)

(Select one (1) course from each of Areas A, B, C, and D; then select any additional course(s) from any area below (A-F) to equal 1 additional hour.)

A. Recreational Dance (select a minimum of one course)

ES	154	Ballroom Dancing	.....1
ES	159	Social & Country/Western Dance	.....1
ES	211	Folk and Social Dance	.....1

B. Swimming (select a minimum of one course)

ES	130	Beginning Swimming	.....1
ES	131	Intermediate Swimming	.....1
ES	133	Lifeguard Training	.....2
ES	134	Lifeguard Training Instructor	.....2
ES	135	Water Safety Instructor	.....2
ES	172	Analysis of Swimming	.....1

C. Team Sports (select a minimum of one course)

ES	173	Analysis of Football	.....1/2
ES	174	Analysis of Basketball	.....1/2
ES	176	Analysis of Volleyball	.....1/2
ES	177	Analysis of Softball	.....1/2
ES	178	Analysis of Soccer	.....1/2
ES	179	Outdoor Activities	.....1/2

D. Individual Activities (select a minimum of one course)

ES	170	Analysis of Gymnastics	.....1
ES	180	Analysis of Tennis	.....1/2
ES	181	Analysis of Badminton	.....1/2
ES	183	Analysis of Fencing	.....1/2
ES	184	Analysis of Golf	.....1/2
ES	185	Analysis of Weight Training	.....1/2
ES	186	Outdoor Venture Activities	.....1/2
ES	187	Analysis of Wrestling	.....1/2
ES	188	Analysis of Racquetball	.....1/2
ES	189	Analysis of Track and Field1/2

E. Aerobic Activity

ES	200	Techniques of Aerobic Dance1
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F. Dance

ES	156	Beginning Tap Dancing1
ES	157	Beginning Jazz Dance1
ES	212	Modern Dance1
ES	214	Elementary Ballet	.....1
ES	215	Intermediate Ballet	.....1
ES	236	Creative Dance for Children	.....1
ES	256	Intermediate Tap Dancing	.....1
ES	257	Intermediate Jazz Dancing	.....1

Capstone Experience1

ES	450	Senior Seminar	.....1
Patterns approved by advisor♦			.....20-36
Electives to total minimum of			.....124

Graduation Requirements

1. An overall cumulative 2.0 GPA
2. A 2.0 GPA in all courses completed at Truman
3. A 2.5 GPA in select major, required support and BS requirements (see major GPA calculation)
4. 40 hours of 300-400-500-level courses
5. 63 hours of liberal arts and sciences coursework
6. Minimum 124 total hours of undergraduate coursework
7. Assessment, residency, and all other requirements as outlined in the General Catalog
8. Grade of "D" or higher must be achieved in all required support, BS requirements, major and pattern requirements

EXERCISE SCIENCE PATTERNS

♦ To provide the opportunity for students to explore and develop more specialized interests, the Exercise Science curriculum allows the selection of one career pattern ranging from 20-36 hours. Courses comprising the program patterns are based upon the recommendations of faculty members whose expertise is identified with these specialties. Individualized patterns may also be designed to meet personal goals. A list of specific courses for each pattern may be obtained from the Health and Exercise Sciences program office or online at <http://hes.truman.edu>.

Athletic Training (28 Hours): The Athletic Training Education Program (ATEP) is designed to prepare students to successfully pass the BOC (Board of Certification) exam and enter the field of athletic training as a certified athletic trainer. Students will spend approximately 20 hours per week in a program of progressive clinical experiences gaining the skills necessary to perform the duties of a certified athletic trainer. In addition to the exercise science requirements, such as anatomy, physiology, nutrition, biomechanics, and exercise physiology, students will complete the athletic training pattern courses including: basic and advanced athletic training, athletic injury evaluation, rehabilitation of athletic injuries, therapeutic modalities, and athletic training room management. The ATEP is accredited by CAAHEP (Committee for Accreditation of Allied Health Education Programs).

The Athletic Training Education Program does not directly admit students. Students who select Athletic Training as their pattern are admitted to Exercise Science as Pre-Athletic Training. Admission to the ATEP is competitive, and students who have completed the pre-athletic training requirements are not assured admission into the athletic training pattern. Pre-Athletic training majors apply for admission in November (during the first semester of their freshman year). The admission into the Athletic Training pattern is contingent upon the applicant fulfilling all of the following requirements: completion of the application, performance in the prerequisite courses, completion of a meeting with the Clinical Coordinator, completion of a physical examination per a physician or nurse practitioner, submission of a signed Technical Standards form, a signed Athletic Training Progression Description, completion of bloodborne pathogen training, two evaluations by the Clinical Instructor, and expression of the personality traits considered by the staff to be necessary for successful completion of the program. Personality traits are evaluated through ACI evaluations and feedback on recommendation forms. These traits include: confidence, dedication, cooperation, initiative, intellectual curiosity, maturity, reliability, leadership, ambition, motivation, ingenuity, enthusiasm, dependability, interpersonal skills, oral expression, and time management skills. Transfer students may apply, but must follow the same application procedure as all current Truman students. Transfer credit generally will not be granted in athletic training courses. All transfer credit will be determined by the Office of the Registrar and approval of the ATEP. Admission decisions are announced by November 21. Students not admitted may re-apply the following year or are counseled to select another pattern for which they might be better suited. For an application packet and more details on the program or the application process, please contact the Director of the Athletic Training

Education Program, Michelle Boyd (mboyd@truman.edu) or refer to the Athletic Training Education Program website at <http://hes.truman.edu/atmaj>.

The Athletic Training Education Program is divided into six levels (semesters). Each level contains level-specific objectives, specific academic coursework, ACI evaluations, and an Athletic Training Practicum course. Students in the Athletic Training Education Program must satisfactorily meet the requirements of each level in order to progress to the next. Level-specific requirements include a grade of C or higher in dictated courses, completion of all Practicum competencies with a grade of 3 or higher, and a score of 3/5 on each level-dependent skill listed on the student evaluation. A detailed list of the requirements for successful completion of each level can be found on the Athletic Training Education Program website at <http://hes.truman.edu/atmaj/progression.htm> and in the application packet. Graduation requires completion of all level requirements and successful completion of all required coursework. Coursework requirements for graduation are listed in this Catalog and on the Program worksheet (available at <http://hes.truman.edu> or in the HES office.

Biomechanics (20-24 Hours): The Biomechanics pattern is designed to prepare students for graduate school or an entry-level position in a biomechanics-related lab or personal training setting. Students in this pattern are interested in understanding anatomical and mechanical characteristics of human movement. Those completing this pattern will be prepared for analyzing the techniques of movement and have knowledge of how those processes relate to the movement product. Students within this pattern develop extensive knowledge of the muscular, kinematic, and kinetic nature of human movement, and use this information to analyze motion for the characteristics reflecting effective motion as well as those characteristics relating to injury risk. The pattern relies on a research-based approach to investigating biomechanical characteristics using commonly available tools including video-based motion analysis, electromyography, and force transduction. (Students must complete MATH 198 Analytic Geometry & Calculus I to fulfill the Mathematical Mode of Inquiry/Required Support. PHYS 195 Physics with Calculus I must be taken to fulfill the Physical Science Mode of Inquiry.)

Exercise Physiology (24-26 Hours): The Exercise Physiology pattern is designed to prepare students for graduate school or an entry-level position in clinical exercise physiology. The pattern develops extensive knowledge of the body under the adaptive stress of exercise including the study of body composition, energy metabolism, cardiovascular function, muscular strength and development, neuromuscular integration, and thermal regulation. An emphasis is placed on development of a research-based approach to investigating physiological phenomena. Students who wish to enter clinical exercise physiology (cardiac rehabilitation) have the option to specialize their exercise physiology studies with advanced studies in biomechanics, cardiac pathophysiology, pharmacology, and behavior modification. (Students must complete CHEM 120 Chemical Principles I to fulfill the Physical Science Mode of Inquiry requirement.)

Physical Education/Health/Coaching (34-35 Hours): Students who select this pattern are interested in teaching

Physical Education, Health Education, and/or coaching within the public or private school system, grades K-12. By completing this pattern, students will fulfill all course requirements necessary to be eligible to apply for the Master of Arts in Education (M.A.E.) Program in Exercise Science leading to certification to teach Physical Education and/or Health Education in the public/private school system. Required coursework includes substance abuse prevention, human sexuality, mental and community health, school health programs, outdoor activities, gymnastics, physical activities/creative movement for children, adapted physical education, principles of coaching, and three foundational education courses. This pattern requires the student to complete specific coursework to fulfill LSP and certification requirements. (Because of the background required, it is strongly recommended that SOAN 190 Sociological Inquiry, as well as POL 161 American National Government to meet the Missouri Statute requirement, are taken. Completion of ES 179 Outdoor Activities and ES 186 Outdoor Venture Activities to fulfill Exercise Science activity requirements in the major must also occur.) Please see the TEACHING CERTIFICATION section for more information on the M.A.E. Program.

Pre-Medicine (33-36 Hours): The Pre-Medicine pattern is designed to prepare a student to take the Medical College Admission Test (MCAT), which is required for admission to medical school. The pre-medicine pattern within the exercise science program is viewed as a viable choice for those who are interested in the orthopedic/sports medicine aspect of physician care. The required courses in biomechanics, kinetics, exercise physiology, motor learning and exercise and sport psychology or sport sociology provide a solid foundation for the sports medicine/team physician. To be a viable candidate for admission to a graduate program in medicine, a student should maintain a cumulative GPA of 3.25 or higher. (Students following this pattern are not required to complete the ES 232/ES 435 Exercise Science major requirement. MATH 198 Analytic Geometry & Calculus I must be taken to fulfill the Mathematical Mode of Inquiry/Required Support. CHEM 120 Chemical Principles I must be taken to fulfill the Physical Science Mode of Inquiry requirement. ES 505 Advanced Biomechanical Analyses is strongly recommended for students interested in Orthopedics, but not required.)

Pre-Physical Therapy (32-33 Hours): This pattern is designed to prepare the student for admission into a graduate-level program in physical therapy. Physical therapy is a health profession that applies scientific principles to correct and prevent problems in human movement. Physical therapists work to restore function and movement through direct treatment, education, consultation, and management of rehabilitation resources. They examine, diagnose, and treat immediate problems, then teach clients how to take care of themselves by demonstrating exercises and how to use their bodies properly to gain strength and mobility and prevent recurring injury. Coursework includes human anatomy, therapeutic modalities, physical rehabilitation and evaluation, as well as physics and psychology. To be a viable candidate for admission to a graduate program in physical therapy, a student should maintain a cumulative GPA of 3.25 or higher. Students following this pattern are specifically prepared for coursework necessary to fulfill the prerequisites of articulation/cooperative education agreements currently in place with several top Doctor of

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Physical Therapy (D.P.T.) programs. More information can be obtained online at <http://hes.truman.edu/articulation.shtml>. (Students must complete CHEM 120 Chemical Principles I to fulfill the Physical Science Mode of Inquiry requirement. MATH 198 Analytic Geometry & Calculus I is strongly recommended to fulfill the Mathematical Mode of Inquiry/Required Support).

Pre-Physician's Assistant (26-29 Hours): The Pre-Physician's Assistant pattern is designed to prepare students for entry into an advanced degree program that would lead to certification as a Physician's Assistant. Physician Assistant (PA) programs prepare the student to operate as a mid-level practitioner in family practice, preventative medicine, or orthopedic settings (sports medicine) under the supervision of a physician. In addition to coursework in biology, chemistry, physics, and psychology, the student must plan to gain experience in a medical-related setting throughout the college experience. Physician Assistant graduate programs often require 2000+ hours of experience in health settings prior to admission. It is strongly advised that the student start to develop a related work dossier upon entry to the university to be able to complete the required hours for admission into graduate schools. To be a viable candidate for admission to a physician's assistance graduate program, a student should maintain a cumulative GPA of 3.00 or higher. (Students must complete CHEM 120 Chemical Principles I to fulfill the Physical Science Mode of Inquiry requirement.)

Psycho-Social Aspect of Sport (28 Hours): The psychosocial aspect of sport pattern is designed to prepare students for entry into graduate training in sport and exercise psychology, sport sociology, or counseling. This pattern employs an interdisciplinary approach requiring courses from exercise science, psychology, and sociology based upon the Association for the Advancement of Applied Sport Psychology's (AAASP) certification model. Students will explore, through coursework, the basic content of areas of social and psychological theory and specific content areas of applied sport psychology. This coursework will lead to a minor in psychology. This pattern prepares students to enter into graduate programs that emphasize teaching and conducting scholarly research in psychology/sociology of sport or counseling. (Students must complete both ES 502 Social Problems in Sport and ES 503 Exercise and Sport Psychology to fulfill specific Exercise Science major and pattern requirements. SOAN 190 Sociological Inquiry must be taken to fulfill the Intercultural Perspective/Required Support.)

Sport and Recreation Management (25 Hours): This pattern is designed to prepare Exercise Science majors for leadership positions in the fields of sport and recreation. Individuals with careers in sport management maintain a variety of positions that help direct competitive sport organizations such as high school, intercollegiate or professional athletic programs. Recreation is a broad field that encompasses diverse organizations (YMCA/YWCA, Parks & Recreation departments) and highly specialized settings (i.e., golf/ski resorts). Careers in recreation focus on the leadership of broad-based programs that seek to maximize participation. The curriculum, with a foundation in the sciences supplemented by business and specialized courses, will foster an interdisciplinary perspective on Exercise Science and enable students to pursue graduate degrees in sport and recreation management. Students must be

accepted into the Business Administration minor before enrolling in any BSAD or ACCT course. A minor in Business Administration will be awarded to students who complete this pattern and satisfy all other requirements for the minor. Students must maintain a minimum GPA of 2.5 to remain in the pattern. (Students must complete ES 502 Social Problems in Sport to fulfill Exercise Science major requirements. ES 179 Outdoor Activities, ES 186 Outdoor Venture Activities, ES 200 Techniques of Aerobic Dance, and ES 236 Creative Dance for Children are strongly recommended to fulfill specific activity requirements of the major.)

Individualized: The individualized pattern is designed to support the development of special support areas not available from the normal selection. This pattern must be relevant to the career goals of the student and must be one that would logically follow from the courses included with the major. This pattern is not a "catch-all" for courses taken that do not fit the published degree requirements. Individualized patterns must be submitted to the Program Director by the academic advisor for approval. The individualized pattern should be agreed upon early to facilitate course sequence planning and must be equal or greater in credit hours than the Exercise Science pattern above with the lowest number of credits listed.

TEACHING CERTIFICATION FOR EXERCISE SCIENCE MAJORS

At Truman State University, the professional degree is the Master of Arts in Education (M.A.E.), built upon a strong Liberal Arts and Sciences undergraduate degree. Students who wish to become teachers should consult with their academic advisors as early as possible. The professional preparation component of the Master's degree program is administered in the Division of Education. Undergraduate preparatory procedures are available online on the Division of Education website (<http://education.truman.edu>).

Students who successfully complete the **Physical Education/Health/Coaching** pattern within the Exercise Science major, including three Education courses (ED 389, ED 393, and ED 593), as well as SOAN 190, ES 179, and ES 186, will partially fulfill the undergraduate requirements for admission into the graduate M.A.E. program in Exercise Science. For additional information, please see the M.A.E. Admission requirements in the Graduate Section of this Catalog or contact the Division of Education at (660) 785-4383.

Exercise Science MAE Requirements:

ED	601G Measurement and Evaluation	3
ED	603G Learning Strategies for Print Discourse	2
ED	605G Psychology of Exceptional Children	3
ED	607G Applied Educational Psychology	3
ED	609G Teaching Internship in Exercise Science	8
ED	681G Research Study in Education	0
ES	502G Social Problems in Sport AND/OR	
ES	503G Exercise and Sport Psychology	3
ES	608G Management of Instruction	3
ES	649G Research Methods in Health and Exercise Sciences	3
ES	650G Individual Study in Helath and Exercise Sciences	3

Select one of the following:

ES	501G Advanced Exercise Physiology	3
ES	505G Advanced Biomechanical Analyses	3
ES	506G Advanced Sport Management	3

ES	515G	Exercise Testing and Prescription	3
ES	532G	Cardiac Pathophysiology	3
ES	545G	Exercise Physiology Seminar	3
ES	647G	Analysis and Interpretation of Data	3

HEALTH SCIENCE MAJOR

The Bachelor of Science degree in Health Science is enhanced by a broad liberal arts and sciences background in English, mathematics, biological and physical sciences, social sciences, and humanities, together with the specialized courses that comprise the depth of the Health Science major.

The Health Science curriculum is designed to prepare students to promote health in educational or clinical settings in school, community, or public health environments. The undergraduate degree provides training for entry-level positions in municipal, county, state and national health departments, voluntary health agencies and HMOs (health maintenance organizations) as well as the curricular background necessary for graduate work in public health, health administration, occupational therapy, medicine, or physician's assistant (PA) programs. The major requires a four-credit, 200-hour summer internship in which students gain important practical experience directly related to their career interests.

One of the unique features of the Truman Health Science undergraduate experience is the opportunity to actively engage in research. A significant number of Health Science majors present their findings at international, national, state or local professional conferences, or publish their work nationally.

Another unique feature of the Health Science program is its focus on accountability. In addition to the comprehensive testing program of the University, all required Health Science courses incorporate pre/post testing to determine achievement of educational objectives. The Health Science graduate will also demonstrate a high level of health knowledge as well as skills based on the Seven Responsibilities of a Certified Health Education Specialist (CHES), as assessed by a senior exit examination. Health Science faculty and the University have selected and approved the CHES examination as the measure of this competency. This feature affords our students to obtain validation of their education through a nationally recognized examination in their specialized field of study. Truman is among only a handful of institutions in the country to provide this opportunity for their Health Science graduates.

Outcome Statements for the Health Science Major:

- Based on a Liberal Arts and Sciences background, demonstrate proficiency in the responsibilities and competencies of the Certified Health Education Specialists (CHES)
 - Assess community and individual needs
 - Plan effective health education programs
 - Implement health education programs
 - Evaluate effectiveness of programs
 - Coordinate provisions of programs
 - Act as a resource person
 - Communicate needs, concerns, and resources
- Utilize CHES competencies in the performance of the Core public Health functions
 - Assessment
 - Community mobilization
 - Policy development and action plan

- Assurance
- Apply appropriate research principles and methods in Health Science
- Apply CHES competencies through field experiences and community involvement
- Articulate the historical and philosophical basis of Health Science

HEALTH SCIENCE BACHELOR OF SCIENCE

Semester
Hours

Liberal Studies Program Requirements	32-57
Missouri Statute Requirement	1-3

Bachelor of Science Requirements .13

Complete each of the following:

BIOL	304	Microbiology	4
HLTH	150	Nutrition in Health & Wellness	3
HLTH	410	Methods for Health Educators	3
PSYC	369	Behavior Modification	3

Required Support .11-32

Complete each of the following:

BIOL	107	Introductory Biology I**	4
BIOL	108	Introductory Biology II (4) OR	
BIOL	353	Pathophysiology (3)	3-4
BIOL	325	Human Physiology	4
BIOL	365	Human Anatomy	3
BIOL	365	Human Anatomy Lab	1
HLTH	195	Lifetime Health and Fitness**	1.5
HLTH	196	Lifetime Physical Activities** OR Varsity Sport Participation	0.5-1
MATH	192	Essentials of Calculus** OR	
MATH	194	LAS Calculus** OR	
MATH	198	Analytic Geometry and Calculus I**	3-5
PSYC	166	General Psychology**	3
SOAN	190	Sociological Inquiry** OR	
SOAN	191	Anthropological Inquiry**	3
STAT	190	Basic Statistics**	3

**May be used to fulfill LSP requirements

MAJOR REQUIREMENTS .33-34

Complete each of the following:

HLTH	190	Foundations of Health Science	3
HLTH	192	Microcomputer Applications	2
HLTH	245	Substance Abuse Prevention	3
HLTH	260	Human Sexuality	3
HLTH	270	Consumer Health	3
HLTH	334	Physiological Assessment	3
HLTH	361	Mental Health	3
HLTH	362	Environmental Health	3
HLTH	366	Community Health	3
HLTH	440	Program Planning and Evaluation	3
HLTH	467	Introduction to Epidemiology	3
ES	205	First Aid and CPR OR	
ES	207	First Aid and CPR Recertification	1-2

Capstone Experience

HLTH	450	Senior Seminar	1
Pattern approved by advisor ♦			19-33
Electives to total minimum of			124

Graduation Requirements

- An overall cumulative 2.0 GPA
- A 2.0 GPA in all courses completed at Truman

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3. A 2.5 GPA in select major, required support, and BS requirements (see major GPA calculation)
4. 40 hours of 300-400-500-level courses
5. 63 hours of liberal arts and sciences coursework
6. Minimum 124 total hours of undergraduate coursework
7. Assessment, residency, and all other requirements as outlined in the General Catalog
8. Grade of "D" or higher must be achieved in all required support, BS requirements, major and pattern requirements

HEALTH SCIENCE PATTERNS

◆ To provide the opportunity for students to explore and develop more specialized interests, the Health Science curriculum allows the selection of one career pattern ranging from 19-33 hours. Courses comprising the program patterns are based upon the recommendations of faculty members whose expertise is identified with these specialties. Individualized patterns may also be designed to meet personal goals. A list of specific courses required for each pattern may be obtained from the Health and Exercise Sciences program office or online at <http://hes.truman.edu>.

Community Health (19 Hours): The Community Health Educator may be employed as a disease prevention/health promotion specialist in voluntary agencies (Red Cross, American Lung Association, Women's Health Clinics, etc.), local agencies (private companies, HMOs, PPOs, hospitals, etc.), county or state agencies (health departments), or federal agencies (CDC, U.S. Department of Health, etc.). The specific job may be a one-on-one approach (HIV/AIDS Educator) or it may involve an entire state, as in the case of coalition building. Leadership, ability to work independently, health knowledge, and a vast resource library are the principal ingredients that make up the Community Health Educator. It is not unlikely that a person in this position would be responsible for grant proposals or alternative sources of funding, especially when employed with voluntary agencies. In addition, the health educator may have some research and writing responsibilities. Therefore, this individual should have excellent writing and oral communication skills. The expectation of most employers is to minimize or eliminate illness and injury through the assessment, planning, implementation, and evaluation of quality health education/health promotion programs.

Health Administration (19 Hours): The individual interested in Health Administration must be able to effectively serve as a supervisor or leader while at the same time answering to the organization or governing body of the particular health facility or voluntary health agency. Managers and supervisors in health administration positions may be called upon any time of the day or week to solve problems; therefore, the individual must be willing to be responsible for a facility that remains open 24 hours per day/7 days per week. This graduate will be prepared to manage a facility/organization/agency that employs a number of the community members from the higher socioeconomic groups (physicians, nurse managers, pharmacists, etc.). These are autonomous people working as a team to provide care for the sick, injured, and debilitated. Considering these facts, the legal concerns that come with the management of such facilities rival any other form of management with regard to liability. The individual should be a highly motivated self-starter to resolve the daily man-

agement concerns associated with the health care industry. Additional qualities include a self-paced individual who stays in control under stress, one who possesses excellent communication skills, and has a good general knowledge of health facilities. Some of these qualities can be developed with time and education. Employment opportunities are found in voluntary agencies, health departments, hospitals, state agencies, and federal agencies. Refer to the descriptions above for specific employment opportunities. Entry-level positions may be found in some aspect of personnel management or as an assistant administrator. To be successful, the graduate must have a solid background in human resources, legal aspects of health care, marketing, and health services. Expectations of the employer are to hire an individual who can lead a health care organization in a competent and professional manner. Students must be accepted into the Business Administration Minor before enrolling in any BSAD or ACCT course. A minor in Business Administration will be awarded to students who complete this pattern and satisfy all other requirements for the minor. Students must maintain a minimum cumulative GPA of 2.5 to remain in the pattern.

Pre-Medicine (33 Hours): The pre-medicine pattern is designed to prepare a student to take the Medical College Admission Test (MCAT), which is required for admission to medical school. The pre-medicine pattern is a viable option for those who are interested in family practice, preventative medicine, or pediatrics. Students are required to take class work in biology, chemistry, and physics in addition to the program focus required of a health science major. The solid Health Science background, with its emphasis on disease prevention and health promotion, is excellent for a physician who will be working in a rural area as a general practitioner. To be a viable candidate for admission to a graduate program in medicine, a student should maintain a cumulative GPA of 3.25 or higher. (Students must also complete CHEM 120 Chemical Principles I to fulfill the Physical Science Mode of Inquiry requirement. MATH 198 Analytic Geometry & Calculus I must be taken to fulfill the Mathematical Mode of Inquiry/Required Support. Students in this pattern will complete both BIOL 108 Introductory Biology II and BIOL 353 Pathophysiology to fulfill Required Support and pattern requirements.)

Pre-Occupational Therapy (20-23 Hours): This pattern is designed to prepare a student for admission into a graduate program in Occupational Therapy. Through the required Health Science summer internship experience, students are required to complete a 200-hour clinical experience practicum. Coursework includes human anatomy, courses in manual manipulation, kinesiology, and psychology. To be a viable candidate for admission to a graduate program in occupational therapy a student should maintain a cumulative GPA of 3.25 or higher. Graduate admission is generally granted to students with a 3.5 GPA or higher. Students following this pattern are specifically prepared for coursework necessary to fulfill the prerequisites of an articulation agreement currently in place with a top occupational therapy graduate program. More information can be obtained online at <http://hes.truman.edu/articulation/shtml>. (SOAN 190 Sociological Inquiry must also be completed to fulfill Intercultural Perspective/Required Support. MATH 198 Analytic Geometry & Calculus I is strongly recommended to fulfill the Mathematical Mode of Inquiry/Required Support.)

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Pre-Physician's Assistant (27-29 Hours): The Pre-Physician's Assistant pattern is designed to prepare students for entry into an advanced degree program that would lead to certification as a Physician's Assistant. Physician Assistant (PA) programs prepare the student to operate as a mid-level practitioner in family practice, preventive medicine, or pediatric settings, under the supervision of a physician. In addition to coursework in biology, chemistry, physics, and psychology, the student must plan to gain experience in a medical-related setting throughout the college experience.

Physician Assistant graduate programs are now requiring 2000+ hours of experience in health settings prior to admission. It is strongly advised that the student start to develop a related work dossier upon entry to the university to be able to complete the required hours for admission into graduate schools. To be a viable candidate for admission to a physician's assistant graduate program, a student should maintain a cumulative GPA of 3.0 or higher. (CHEM 120 Chemical Principles I must be taken to fulfill the Physical Science Mode of Inquiry requirement. Students in this pattern will complete both BIOL 108 Introductory Biology II and BIOL 353 Pathophysiology to fulfill Required Support and pattern requirements.)

Public Health/Epidemiology (19 Hours): Public Health is where many professionals relate the origins of the other Health Education Programs. In many instances, some treat Public Health and Community Health in the same domain. In our case, we will treat Public Health separately from Worksite or Community Health. The Public Health pattern at this university is offered for those who are interested in research and an epidemiological approach to controlling and educating about chronic as well as communicable diseases and their associated health problems. It is expected that most who complete this program will continue on with a Masters in Public Health (MPH) program. However, there are several positions that might be considered by an individual with a Public Health emphasis at the Bachelors level. Local, state and federal agencies interested in collecting and compiling health data are continually looking for qualified individuals to function in entry-level positions. In these positions, the graduate will most likely be responsible for some aspect of a research study as assigned. This does not preclude obtaining a position as a Community Health Educator, given that the same core of requirements is expected of all graduates in Health Science. With the completion of an MPH, the graduate will be qualified for many upper-level research and management tasks in Public Health. The U.S. Department of Health, Centers for Disease Control, state health departments, and universities all seek candidates with this credential. Specific employment opportunities include teaching, research, data collection, and data analysis. Public Health requires a strong background in the sciences, health sciences, and social sciences. Employer expectations of graduates are to identify, recommend, educate, and promote quality health care in the defined area of employment.

Worksite Health (19 Hours): The Worksite Health Educator may be employed in a business, company, corporation, or federal agency. The environment is somewhat different than that of the Community Health Educator in that the environment for the Worksite Health Educator is, to a large extent, contained within the facility of hire. However, this may involve many community outreach programs and health personnel outside of the agency. Therefore, the

Worksite Health Educator must have expertise in health content, exercise science, and program planning. Employers expect that the Worksite Health Educator will reduce the cost of company health expenses, absenteeism, and overtime through assessment, planning, implementation and evaluation of illness and injury prevention programs. With these expectations, the graduate must have a wide background in the sciences, health content areas, social sciences, and exercise programming. They are expected to work independently and in a professional manner. The opportunities in this field have been steadily growing over the past decade and vary significantly from business to businesses. For example, some companies expect the health educator to emphasize fitness programs while others expect a total commitment to health content and skill development. However, there are many opportunities found in between these two extremes. The expectation of most employers is to minimize or eliminate illness and injury through the assessment, planning, implementation, and evaluation of quality health education/health promotion programs.

Individualized: The individualized pattern is designed to support the development of special support areas not available from the normal selection. This pattern must be relevant to the career goals of the student and must be one that would logically follow from the courses included with the major. This pattern is not a "catch-all" for courses taken that do not fit the published degree requirements. Individualized patterns must be submitted to the Program Director by the academic advisor for approval. The individualized pattern should be agreed upon early to facilitate course sequence planning and must be equal or greater in credit hours than the Health Science pattern above with the lowest number of credits listed.

TEACHING CERTIFICATION FOR HEALTH SCIENCE MAJORS

At Truman State University, the professional degree is the Master of Arts in Education (M.A.E.), built upon a strong Liberal Arts and Sciences undergraduate degree. Students who wish to become teachers should consult with their academic advisors as early as possible. The professional preparation component of the Master's degree program is administered in the Division of Education. Undergraduate preparatory procedures are available online at the Division of Education's website (<http://education.truman.edu>).

Students interested in becoming Health Education teachers within the public or private school system should complete the Community Health pattern in addition to the following three Education courses: ED 389 Foundations of Education, ED 393 Clinical Experiences in Teaching, and ED 593 Psychological Foundations of Education. Health Science students completing any other pattern must complete one additional course, HLTH 455 School Health Programs, in addition to the three indicated Education classes. Because of the background required, it is strongly recommended that SOAN 190 be taken for the Required Support/Intercultural Perspective requirement. Successful completion of the above classes would partially fulfill the undergraduate requirements for admission into the graduate M.A.E. program in Health Education. For additional requirements, please see the M.A.E. Admission requirements in the Graduate section of the catalog or contact the Division of Education at (660) 785-4383.

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HEALTH EDUCATION MAE REQUIREMENTS

ED	601G	Measurement and Evaluation	3
ED	603G	Learning Strategies for Print Discourse . . .	2
ED	605G	Psychology of Exceptional Children	3
ED	607G	Applied Educational Psychology	3
ED	609G	Teaching Internship in Health Education .	8
ED	681G	Research Study in Education	0
ES	649G	Research Methods in Hlth & Exercise Science	3
ES	650G	Individual Study in Health & Exercise Science	3
HLTH	608G	Management of Instruction	3
6 hours of electives as determined by Health Advisor . . .			6

**COURSE
DESCRIPTIONS**

EXERCISE SCIENCE

Students who do not meet prerequisites for a course can request permission to take a course by meeting with the faculty member teaching the course, who in turn will recommend to the Program Director that the student be enrolled in the class if appropriate.

INTERCOLLEGIATE PARTICIPATION

Maximum 1 hour credit in each sport toward graduation.

- ES 102 Varsity Football Participation.
- ES 103 Varsity Basketball Participation.
(Men and Women)
- ES 104 Varsity Track Participation.
(Men and Women)
- ES 105 Varsity Tennis Participation.
(Men and Women)
- ES 106 Varsity Golf Participation.
(Men and Women)
- ES 107 Varsity Cross Country Participation.
(Men and Women)
- ES 108 Varsity Wrestling Participation.
- ES 109 Varsity Baseball Participation.
- ES 111 Varsity Softball Participation.
- ES 112 Varsity Volleyball Participation.
- ES 113 Varsity Swimming Participation. (Men
and Women)
- ES 114 Varsity Soccer Participation.
(Men and Women)

ELECTIVE COURSES

ES 120 – Volleyball

1 hour
Basic skills of power volleyball.

ES 130 – Beginning Swimming

1 hour
Basic water skills for non-swimmers to develop safety and confidence in water activities.

ES 131 – Intermediate Swimming

1 hour
Development of proficiency in various swimming strokes and forms of rescue and surface diving. Recommended prerequisite: ES 130. Instructor reserves the right to remove persons with insufficient skill level.

ES 132 – Basic Swimming for Senior Citizens

0 credit
Basic water skills for senior citizens to gain safety and confidence in water activities.

ES 133 – Lifeguard Training

2 hours (offered spring only)
Course is designed to teach lifeguards the skills and knowledge needed to prevent and respond to aquatic emergencies. Course continuation requirement: (1) minimum age of 15, (2) swim 500 yards (200 yards front crawl with rhythmic breathing and stabilizing kick, 100 yards breaststroke, and 200 yards either front crawl with rhythmic breathing and stabilizing kick or breaststroke), and (3) 20 yards front crawl or breaststroke; dive to bottom of pool with retrieval of 10 pound object; swim 10 pound object 20 yards return holding with both hands. Successful completion of all critical course skills and passing required exams with a score of 80% or better could result in American Red Cross certification.

ES 134 – Lifeguard Training Instructor

2 hours (fall only)
Course is designed to train instructor candidates to teach Lifeguard Training (including first aid and CPR for the professional rescuer, Community Water Safety, and Lifeguarding Instructor Aide). Course continuation requirements: minimum age of 17, evidence of having completed Fundamentals of Instructor Training course, and successful completion of lifeguard training skills, CPR for the Professional Rescuer Skills, and Lifeguard Training knowledge exam with a grade of 80% or better. Successful completion of the instructor course requirements can result in certification as an ARC Lifeguarding Instructor.

ES 135 – Water Safety Instructor

2 hours (offered spring only)
This course is designed to train candidates to teach Infant and Preschool Aquatics Program, the seven levels of the Learn to Swim Program, Community Water Safety, and Water Safety Instructor Aide courses. Course continuation requirements: (1) minimum age of 17, (2) evidence of having completed Fundamentals of Instructor Training Course, (3) successful completion of tests of water safety and swimming skills and knowledge with a minimum grade of 80%.

ES 143 – Beginning Tennis

1 hour
Fundamental tennis skills, rules, and mechanical principles.

ES 144 – Intermediate Tennis

1 hour (fall only)
Instruction in intermediate strokes and strategy applied to singles and doubles play. Recommended prerequisite: ES 143. Instructor reserves the right to remove persons with insufficient skill level.

ES 146 – Beginning Racquetball

1 hour
Rules, techniques, and strategy of four-wall racquetball.

ES 149 – Mountain Biking

0.5 hours
This course is designed to introduce the student to mountain biking. Aspects of mountain biking for safely climbing, descending, and general trail riding on single track and

fire roads will be incorporated. Effective power generation, anaerobic endurance, and aerobic endurance will be discussed. Techniques for special trail condition riding such as traversing fallen trees and climbing or descending over trail obstacles will be experienced. Other topics will include training programs for in-season and off-season (both on the bike and off of the bike), bike upgrades and replacements, and bike maintenance. Student must provide his/her own mountain bike. Instructor reserves the right to request disenrollment if, in his/her opinion, the bike is viewed as being unsafe.

ES 151 – Irish Ceili Dance

1 hour

Activity oriented course providing instruction in Irish dance history, culture, music, and basic dance skills. Fundamental steps and regional styles provide the foundation for various popular “ceile” (party) dances. Safe warm-up/cool-down practice, cardiovascular fitness, and flexibility are emphasized.

ES 154 – Ballroom Dancing

1 hour

Activity oriented course providing basic instruction in techniques, terminology, and stylization of ballroom dances. Dances regularly included are swing, waltz, cha-cha, foxtrot, and tango.

ES 156 – Beginning Tap Dancing

1 hour

Activity-oriented course providing basic instruction in tap technique, terminology, and choreography at a beginning skill level. Clogging will also be included.

ES 157 – Beginning Jazz Dance

1 hour

Activity oriented course providing basic instruction in fundamental jazz dance techniques, terminology, and combinations. Several jazz styles will be experienced.

ES 158 – Aerobic Dancing

1 hour

Incorporates muscle toning and the development of cardiovascular fitness through the medium of dance. Participants receive instruction concerning flexibility, warm-up, aerobic dance, and cool down routines.

ES 159 – Social and Country-Western Dance

1 hour

Activity oriented course providing basic instruction in techniques, stylization, and terminology of country-western dance. In addition to line and couple dances, social dance forms of swing, waltz, and Texas two-step are included.

ES 167 – Weight Training-Free Weights

1 hour

Scientifically founded isotonic weight training programs; development of muscular strength, endurance, and flexibility.

ES 168 – Weight Training–Nautilus

1 hour

Scientifically founded isotonic weight training programs; development of muscular strength, endurance, and flexibility utilizing Nautilus equipment.

PROFESSIONAL PREPARATION COURSES

Note: Analysis courses primarily are designed for Exercise Science majors. Other students **must have** consent of program director **before** enrolling in Analysis courses.

ES 170 – Analysis of Gymnastics-Men and Women

1 hour (Exercise Science majors only)

The course is designed to prepare exercise science majors to teach as well as perform basic gymnastic skills and routines. Emphasis is on understanding, performing, and analyzing basic moves and skills.

ES 172–Analysis of Swimming

1 hour (Exercise Science majors only)

The purpose of this course is to provide the exercise science student with the necessary knowledge and skill to analyze and interpret the necessary skills associated with swimming. Consequent to this the student will obtain the necessary skills to teach basic swimming to children grades K-12 within a safe and positive environment.

ES 173 – Analysis of Football

1/2 hour (Exercise Science majors only)

The intent of this course is to provide exercise science majors with learning experiences enabling them to develop the necessary pedagogical competencies required to teach and/or coach football. Emphasis is on understanding, performing, and analyzing the various football skills by position.

ES 174 – Analysis of Basketball

1/2 hour (Exercise Science majors only)

The purpose of this course is to provide students with learning experiences allowing them to develop the necessary skills required for teaching basketball. Emphasis is placed on understanding, performing, and analyzing the basic fundamentals.

ES 176 – Analysis of Volleyball

1/2 hour (Exercise Science majors only)

Introductory course providing instruction in volleyball history, technique, terminology, teaching, and analysis.

ES 177 – Analysis of Softball

1/2 hour (Exercise Science majors only)

(fall only)

Development of softball skills necessary for analyzing and demonstrating purposes in teaching-coaching. Emphasis is on fundamental mechanics and teaching progressions.

ES 178 – Analysis of Soccer

1/2 hour (Exercise Science majors only)

The intent of this course is to provide the student with the necessary skills and strategies required for teaching soccer. Emphasis is on understanding, performing and analyzing several basic soccer techniques, then applying these skills to match related situations.

ES 179 – Outdoor Activities

1/2 hour (Exercise Science majors only) (Fall only)

Course is designed to introduce the teaching and supervision of outdoor adventure programming, particularly for children and adolescents. Activities include canoeing, outdoor cooking, and emergency situation management. Some Saturday activities are required. Special course fee applies.

ES 180 – Analysis of Tennis**1/2 hour (Exercise Science majors only)**

Course designed for the development of tennis knowledge beyond the beginning level. Emphasis is on stroke mechanics and analysis as well as performance, terminology, history, rules, and scoring.

ES 181 – Analysis of Badminton**1/2 hour (Exercise Science majors only)**

Development of badminton skills necessary for analyzing and demonstrating purposes in teaching-coaching. Emphasis is on stroke mechanics and teaching progressions.

ES 183 – Analysis of Fencing**1/2 hour (Exercise Science majors only) (fall only)**

The purpose of this introductory course is to provide theoretic and practical experience in foil fencing. Students will be instructed in techniques for teaching and evaluating the fundamentals of foil fencing.

ES 184 – Analysis of Golf**1/2 hour (Exercise Science majors only)**

The intent of this course is to provide exercise science majors with learning experiences enabling them to develop the necessary pedagogical competencies required for teaching golf. Emphasis is on understanding, performing, and analyzing the basic golf shots.

ES 185 – Analysis of Weight Training**1/2 hour (Exercise Science majors only)**

The intent of this course is to provide exercise science majors with learning experiences enabling them to develop the necessary pedagogical competencies required to teach weight training.

ES 186 – Outdoor Venture Activities**1/2 hour (Exercise Science majors only)**

This course is designed to introduce low to medium risk outdoor venture activities that challenge the student's abilities in a non-traditional setting. Activities can include ropes course work, climbing, rappelling, and orienteering. Saturday labs are generally required. Course fee applies.

ES 187 – Analysis of Wrestling**1/2 hour (Exercise Science majors only)**

The intent of this course is to provide the students with learning experiences enabling them to learn the basics of wrestling. Skill performance, analysis, and mechanics will be emphasized in helping the student develop a better understanding of wrestling.

ES 188 – Analysis of Racquetball**1/2 hour (Exercise Science majors only)**

This course is designed to develop racquetball skills necessary for analyzing and demonstrating purposes in teaching. Emphasis is on stroke mechanics and teaching progressions.

ES 189 – Analysis of Track and Field**1/2 hour (Exercise Science majors only)**

This course is designed to develop track and field skills necessary for analyzing and demonstrating purposes in teaching/coaching. Emphasis is on fundamental mechanics and teaching progressions.

ES 190 – Foundations of Exercise Science (Exercise Science majors only)**3 hours**

This course investigates the nature, scope and philosophy of exercise science, as well as historical influences on the field. Also examined are biological, physiological, psychological and sociological interpretations of exercise science. Career opportunities and the corresponding professional responsibilities related to exercise science are also explored.

ES 192 – Microcomputer Applications**2 hours (Exercise Science or Communication Disorders majors only)**

The course will guide students through practical, computer-related tasks including database searches, internet sources, advanced word processing, spreadsheets, presentation software, web authoring software, and database software applications. The main goal of this course is to allow students to use computers with greater proficiency in other coursework as well as their daily life.

ES 200 – Techniques of Aerobic Dance**1 hour**

Provides instruction designed to develop aerobic dance competencies and related health and exercise concepts necessary for analyzing and teaching aerobic dance. Emphasis is on learning through practical teaching experiences.

ES 205 – First Aid and CPR**2 hours**

Course designed to teach American Red Cross First Aid, Cardiopulmonary Resuscitation, Preventing Disease Transmission, and using an Automated External Defibrillator.

ES 207 – First Aid and CPR Recertification**1 hour**

The purpose of this course is to provide individuals currently certified in Basic Life Support (Adult CPR with AED, Child/Infant CPR) and First Aid a means to renew their certifications. Upon successful completion of the class, students will receive American Red Cross certificates for Adult CPR with AED, Child/Infant CPR, First Aid and Preventing Disease Transmission.

ES 211 – Folk and Social Dance**1 hour**

Instruction in beginning and intermediate folk and social dance techniques, stylization and terminology. The unique cultural heritage of a variety of nations will be understood and appreciated.

ES 212 – Modern Dance**1 hour**

Introduction in beginning modern dance techniques, elements of composition and philosophy. Basic movement concepts and approaches to creative expression will be studied.

ES 214 – Elementary Ballet**1 hour**

Introduction to basic ballet techniques, creative composition, and style of ballet.

ES 215 – Intermediate Ballet

1 hour
Intermediate course to further develop ballet technique, terminology and choreography attained in elementary ballet. Recommended prerequisite: ES 214. Instructor reserves the right to remove persons with insufficient skill level.

ES 232 – Sport Management
3 hours (Exercise Science majors only)

This class provides a foundation for the management of sport organizations. General management skills such as philosophy development, leadership, decision-making, motivation, evaluation, marketing, public relations and risk management are taught. In addition, the class covers legal concerns in the field of exercise science. Special attention is given to writing and the communication process throughout the class.

ES 235 – Physical Activity for the Young Child
2 hours

Organization, planning, and administration of physical education programs for the elementary schools. Teaching methods, identification of growth and development patterns and their effect on behavior and movements, motivation techniques, and safety in conducting elementary school physical education.

ES 236 – Creative Dance for Children
1 hour

Introduction to and analysis of developmental movement patterns and activities, creative movement concepts, dance elements, and their interrelationships.

ES 247 – Data Interpretation in Exercise Science
2 hours (Exercise Science majors only)

The application of fundamental statistical processes as they apply to the collection, analysis, and interpretation of exercise science data are discussed. Emphasis is placed on the practical application of statistical procedures for research purposes. (ES 247 replaces ES 447.) Prerequisites: STAT 190.

ES 250 – Practicum I
1-3 hours

Clinical experience in a physical education or coaching related activity. Desirable options are serving as a teacher aid, assisting in the training room or Human Performance Laboratory, supervisory roles in intramurals, assisting in city recreation programs, coaching youth sports, volunteer assistance in public or private schools, church programs, or summer camps. Junior or senior status and consent of academic advisor and program director required. Prerequisite: ES 190.

ES 256 – Intermediate Tap Dancing
1 hour

Activity course providing instruction in intermediate tap technique, terminology, shorthand tap notation, and choreography. Funk tap and Irish step dancing will be explored. Recommended prerequisite: ES 156. Instructor reserves the right to remove persons with insufficient skill level.

ES 257 – Intermediate Jazz Dance
1 hour

Activity course providing instruction in intermediate jazz technique, terminology, and choreography. Additional jazz styles covered include funk, lyrical, Afro-Haitian and Broadway/musical comedy. Recommended prerequisite: ES

157. Instructor reserves the right to remove persons with insufficient skill level.

ES 261 – Applied Sport Psychology in Human Performance

2 hours (spring only, even calendar years)
This course will examine various psychological principles that affect human performance. Students will learn psychological theories and techniques that have been used to effectively enhance the performance and personal growth of participants from all levels of sport and physical activity. The course will maintain an applied perspective with an emphasis of major psychological barriers including anxiety, confidence, motivation, and burnout. Prerequisites: ES 190, D or higher; PSYC 166, D or higher.

ES 270 – Research Methods in Exercise Science
(Exercise Science majors only)

2 hours
The purpose of this course is to help students gain a basic understanding of the research process, become critical consumers of published work, and to be competent in the application of basic research methodology in a variety of exercise science settings.

ES 280 – Principles of Athletic Training
3 hours (Exercise Science majors only) (spring only)

This course is an introduction to the profession of Athletic Training. Emergency procedures, protective equipment, environmental hazards, substance abuse, and injury classification and mechanisms will be discussed. Skill acquisition will focus on equipment fitting, emergency procedures, splinting, taping, and basic injury evaluation. Emphasis is placed on the evaluation of skills as defined by the clinical proficiencies delineated and published by the Education Council of the National Athletic Trainers' Association. Pre- or co-requisite: BIOL 365.

ES 290 – Athletic Training Practicum I
1 hour (Exercise Science Majors only) (offered fall only)

This course is designed to introduce students to the field of athletic training. Students will be instructed in the basic skills and theories used in the profession of athletic training. This course will provide students with the opportunity to obtain directed clinical experience in an athletic setting. This experience will take place before, during, and after practices and games of various Truman State University athletic teams. Students will practice their skills relating to taping, wrapping, emergency procedures, and vital signs. Emphasis is placed on the evaluation of skills as defined by the clinical proficiencies delineated and published by the Education Council of the National Athletic Trainers' Association.

ES 291 – Athletic Training Practicum II
1 hour (Exercise Science majors only)

(offered spring only)
This course is designed to give students the opportunity to utilize their classroom knowledge in a practical setting. This course is designed to be taken following ES 290 (Athletic Training Practicum I) and following or in conjunction with ES 205 (First Aid and CPR). This course will provide students with the opportunity to apply the skills learned in ES 290 in both lab and clinical settings. The experience will take place before, during, and after practices and games of the various Truman State University sports teams. Students will demonstrate their skills related to taping, emergency procedures, and equipment. Emphasis is placed on the evaluation

of skills defined by the clinical proficiencies delineated and published by the Education Council of the National Athletic Trainers' Association. Prerequisites: ES 290 and ES 205 (ES 205 may be taken as a co-requisite).

ES 301 – Theory of Coaching Football
1 hour (spring only, odd calendar years)

This course is designed to provide a methodology for those students interested in coaching football to organize and implement the total program. Emphasis is on job selection, location, coordination of medical staff and coaches, offensive and defensive schemes, and the kicking game.

ES 302 – Theory of Coaching Basketball
1 hour (fall only, even calendar years)

Course provides instruction in coaching techniques of basketball, basketball terminology, history, and on the floor instruction in offense and defense.

ES 304 – Theory of Coaching Track and Field
1 hour (spring only, even calendar years)

Investigates the history of track and field, coaching and leadership, training theories and their application, meet management, practice planning and organization, event rules, technique, training, and athlete selection.

ES 307 – Theory of Coaching Volleyball
1 hour (spring only, even calendar years)

Offensive and defensive strategies, practice organization, team drills, scouting, and player management.

ES 308 – Theory of Coaching Softball
1 hour (spring only, odd calendar years)

Offensive and defensive strategies, practice organization, team drills, and player management.

ES 311 – Theory of Coaching Soccer
1 hour (spring only, even calendar years)

Theory and practice in coaching soccer; offensive and defensive skills and strategies; organization and administration.

ES 334 – Physiological Assessment
3 hours (Exercise Science majors only)

This course is designed to introduce students to the functional assessment of human fitness and performance. Students will be actively involved in the measurement and evaluation of components of body composition, cardiorespiratory, musculoskeletal, and skill-related fitness. Prerequisites: ES 190 and STAT 190.

ES 342 – Concepts of Biomechanics
3 hours (Exercise Science or Health Science majors only)

Concepts of Biomechanics investigates the anatomical and mechanical bases of human movement. The anatomical component focuses on the skeletal, articular, and neuromuscular systems as they affect movement. The mechanical component focuses on kinematic and kinetic principles and their relationship to human movement. Prerequisites: ES 190 or HLTH 190, and Elementary Functions Essential Skills requirement.

ES 343 – Motor Learning and Control
2 hours (Exercise Science majors only)

Investigates the neuropsychological principles and factors affecting the acquisition and retention of motor skills, teaching styles, and the inter-relationship of teaching styles and motor skill acquisition and retention. Course also

introduces the student to basic research principles and the problems inherent to data collection and interpretation. NOTE: Must be concurrently enrolled in lab. Prerequisites: ES 190, ES 247, ES 270.

ES 343 – Motor Learning and Control Lab
1 hour (Exercise Science majors only)

This class is designed to allow the student to have hands-on experience with research equipment associated with Motor Learning. Students are expected to engage in a mini-research project related to reaction/movement time, anticipation time, kinesthesia, gross body stability, fine motor coordination, tracking, optical impression, multiple-choice reaction time and proprioception. NOTE: Must be concurrently enrolled in lecture. Prerequisites: ES 190, ES 247, ES 270.

ES 344 – Lifespan Motor Development
3 hours (Exercise Science majors only)

This course surveys motor development across the lifespan with emphasis on the change in physiological systems with age. Discussions will focus on growth and development of muscle, bone, and nerve and how nutrition, exercise, and medicine influence each of those systems. (Recommended: ES 334.) Prerequisites: ES 247, ES 270.

ES 345 – Introduction to Exercise Physiology with Lab
3 hours (Exercise Science or Health Science majors only)

The purpose of this course is to survey the acute and chronic responses and adaptations of the human body to exercise stress. Emphasis is placed on the practical application of theoretical findings from the research literature. Recommended: BIOL 107, BIOL 108, ES 334. Prerequisites: ES 247, ES 270.

ES 348 – Adapted Physical Education
3 hours (offered spring only, odd calendar years)

Philosophy and role of physical education for individuals with disabilities. Etiology and its implications for setting up various programs for the exceptional along with specific teaching activities and aids are emphasized. Prerequisite: ES 235.

ES 350 – Practicum II
1-3 hours

Clinical experience in a physical education or coaching related activity. Extension of options included in ES 250. Consent of academic advisor and program director required. Prerequisite: ES 250.

ES 370 – Field Experience in Exercise Science
4 hours (Exercise Science majors only)
(offered summer only)

This course is designed to provide Exercise Science majors with the opportunity to apply career-oriented skills in an off-campus internship setting for a minimum of 200 contact hours. The student must follow the procedures in the application process before enrolling. The student may not be enrolled in more than one additional class during the field experience. Mandatory attendance at two informal sessions, junior or senior status, consent of advisor and Program Director, minimum 2.0 cumulative GPA, and minimum 2.5 major GPA required. See Program Office or <http://hes.truman.edu/fieldexp.shtml> for complete enrollment procedures.

ES 375 – Independent Studies in Exercise Science
1-4 hours (Exercise Science majors only)
 Individualized study in specialized areas of Exercise Science. Consent of academic advisor and Program Director required. Prerequisite: ES 190.

ES 390 – Athletic Training Practicum III
1 hour (Exercise Science majors only) (offered fall only)
 This course is designed to give students the opportunity to utilize their classroom knowledge in a practical setting. This course is designed to emphasize the competencies and proficiencies taught in ES 280 (Principles of Athletic Training). This course will provide students with the opportunity to obtain directed experiences involving emergency procedures and care, basic taping, and protective equipment. This experience will take place before, during, and after practices and games of the Truman State University athletic teams. Emphasis is placed on the evaluation of skills as defined by the clinical proficiencies delineated and published by the Education Council of the National Athletic Trainers' Association. Prerequisites: ES 291 and ES 280.

ES 391 – Athletic Training Practicum IV
1 hour (Exercise Science majors only) (offered spring only)
 This course is designed to give students the opportunity to utilize their classroom knowledge in a practical setting. This course is designed to be taken following ES 436 (Athletic Injury Evaluation) and ES 433 (Therapeutic Modalities). This course will provide students with the opportunity to obtain directed experience involving injury evaluation and administration while in an athletic setting. Students will become more proficient in injury evaluation, discrimination of appropriate special tests, and interpretation of evaluation results. This experience will take place before, during, and after practices and games of the Truman State University athletic teams (in a sport which emphasizes either upper or lower extremity). Emphasis is placed on the evaluation of skills as defined by the clinical proficiencies delineated and published by the Education Council of the National Athletic Trainers' Association. Prerequisite: ES 390, ES 433, and ES 436.

ES 430 – Principles of Coaching
2 hours (Exercise Science majors only) (offered fall only, odd calendar years)
 The intent of this course is to develop students' knowledge and skills for coaching sports. The course is designed to reflect and incorporate several humanistic and social values. Although theory-based, the course is task-oriented for practical application.

ES 431 – Injury Care of Active People
2 hours (Exercise Science majors only)
 This course is designed to introduce students to the mechanisms, underlying prevention, and care of various injuries and illnesses associated with an active lifestyle. Topics include emergency procedures, sports nutrition, legal concerns, and injury prevention and care. Lab portions will teach the students how to perform protective taping, splinting, and applying of protective equipment. Prerequisite: BIOL 365 (or concurrent enrollment), and ES 190.

ES 433 – Therapeutic Modalities
3 hours (Exercise Science majors only) (offered fall only)
 This course provides students with the knowledge and skills to utilize a variety of therapeutic modalities. Students will acquire a detailed understanding of the psychological and physiological processes of pain and healing. Students will use a problem-based approach to apply theories, principles, and techniques of thermal, electrical, mechanical, light, and alternative therapies. A laboratory portion will address proficiency in the application of these modalities. Prerequisites: ES 280 or ES 431.

ES 434 – Physical Rehabilitation for Athletic Injuries
3 hours (Exercise Science majors only) (offered spring only)
 This course involves the study in the appropriate use of therapeutic rehabilitation for athletic injuries. Students will acquire a scientific and physiological rationale, selection criteria, indications and contraindications of exercise, and return to activity guidelines. Techniques and skills provided to both classroom and laboratory experiences will address range of motion, strengthening, proprioception, cardiovascular fitness, and joint-specific protocols. Prerequisites: ES 280 OR ES 431.

ES 435 – Athletic Training Room Management
3 hours (Exercise Science majors only) (spring only)
 This course provides students the knowledge and skills necessary for the administration of an athletic training program. Course content will include administrative components of athletic training, physical exams, legal issues, emergency planning, record keeping, athletic training room management, and administrative/leadership skills will be emphasized. Professional development and the role and structure of the National Athletic Trainers' Association (NATA) are also discussed. Prerequisite: ES 280.

ES 436 – Athletic Injury Evaluation
3 hours (Exercise Science majors only) (fall only)
 The purpose of this course is to instruct students on the proper methods of orthopedic injury evaluation. Students will learn the mechanical and physiological basis of injury and injury evaluation techniques. They will be instructed on the proper methods of documentation, patient interview and history, observation, palpation, strength testing, and special tests. Students will acquire skills in the testing of joint laxity and neurological evaluation. Assessment will take place in the form of written examinations and lab practical/injury scenarios. Emphasis is placed on the evaluation of skills as defined by the clinical proficiencies delineated and published by the Education Council of the National Athletic Trainers' Association. Prerequisite: ES 280.

ES 450 – Senior Seminar
1 hour (Exercise Science majors only)
 Class is designed to allow students to gain valuable knowledge and information relative to interview procedures, résumé construction, statement of career goals, types of application letters, and portfolio development. Budget planning, tax calculation, credit card risk, and various forms of insurances will also be covered. Junior or senior status required; application for graduation must be filed. Must obtain permission from Program Office before enrolling.

HUMAN
POTENTIAL
AND
PERFORMANCE

ES 465 – Special Topics in Exercise Science
1-4 hours (Exercise Science majors only)

This course allows a student to pursue an area of academic study that may not be reflected in normal curricular offerings. Specific subject matter and evaluation should be negotiated between the student, academic advisor, and potential instructor. Course content and evaluation must be approved by the program director. Course requirements are at the discretion of the instructor. Must obtain permission from Program Office before enrolling.

ES 470 – Research in Exercise Science
1-4 hours (Exercise Science majors only)

Directed student research in Exercise Science. Consent of academic advisor, research mentor, and Program Director is required. Prerequisites: STAT 190, ES 247, ES 270.

ES 474 – Athletic Training Practicum V
1 hour (Exercise Science majors only) (offered fall only)

This course is designed to give students the opportunity to utilize their classroom knowledge in a practical setting. This course is designed to be taken following ES 434 (Rehabilitation of Athletic Injuries) and ES 433 (Theraqueutic Modalities). This course will provide students with the opportunity to obtain directed experience involving injury rehabilitation while in an athletic setting. This experience will take place in a lab and clinical settings. The clinical experience will take place before, during, and after practices and games of the Truman State University athletic teams. Emphasis is placed on the evaluation of skills as defined by the clinical proficiencies delineated and published by the Education Council of the National Athletic Trainers' Association. Prerequisites: ES 391 and ES 434.

ES 475 – Athletic Training Practicum VI
1 hour (Exercise Science majors only)
(offered spring only)

This course is designed to give students the opportunity to utilize their classroom knowledge in a practical setting. This course is designed to emphasize the competencies and proficiencies taught in ES 509 (Advanced Athletic Training). This course will provide students with the opportunity to obtain directed experience involving general medical and pharmacological issues. This experience will take place at the Student Health Center and before, during, and after practices and games of the Truman State University athletic teams. Emphasis is placed on the evaluation of skills as defined by the clinical proficiencies delineated and published by the Education Council of the National Athletic Trainers' Association. Prerequisites: ES 474 and ES 509.

ES 501 – Advanced Exercise Physiology
3 hours (Exercise Science majors only) (spring only)

Fundamental physiological processes resulting from acute and chronic exercise stress. Emphasis is on integrating systems and organs into a functional whole. Laboratories provide experience in evaluating exercise stress by modern methods and equipment. Prerequisite: Either BIOL 315 or BIOL 325; ES 345.

ES 502 – Social Problems in Sport
3 hours (Exercise Science majors only)

The purpose of this course is to critically examine several problems that exist in contemporary American sport. Particular emphasis will be placed on using sociological theory as a lens in which to examine the various social

problems identified. Topics covered reflect student interest but typically include race, gender equity, violence, and youth sport. This course will also emphasize the development of writing and presentation skills. The student will be expected to research selected topics and make both written and oral presentations on the researched material. Prerequisites: ES 247 and ES 270.

ES 503 – Exercise and Sport Psychology
3 hours (Exercise Science majors only)

The purpose of this course is to develop a basic understanding of sport and exercise psychology. Particular emphasis will be placed on the psychology of exercise including determinants, meaning, adherence, injury rehabilitation, mood state fluctuations, and pathology. Students will develop a thorough understanding of the role of psychology in the exercise context and be exposed to a variety of techniques designed to facilitate the exercise experience in a broad range of physically active populations. This course will also emphasize the development of technical writing and presentation skills. The student will be expected to research selected topics and make both written and oral presentations of the researched material. Prerequisites: ES 247 and ES 270.

ES 505 – Advanced Biomechanical Analyses
3 hours (Exercise Science majors only)

Students are introduced to the mechanical analysis principle of sport activities. Students will be taught a scientific and applied approach to analysis of human movement. Prerequisites: BIOL 365, ES 342, and ES 270.

ES 506 – Advanced Sport Management
3 hours (Exercise Science majors only)
(spring only, odd calendar years)

This course is designed to facilitate interdisciplinary learning in the fields of sport and recreation management through the use of applied methods. Students are expected to bring knowledge of marketing, law, organizational behavior and finance to the class. Students will have the opportunity to synthesize their knowledge with advanced concepts in the field of sport management. These concepts will focus on problem analysis, problem solving, risk management, facility management, advertising, leadership and event management. Prerequisite: ES 232.

ES 509 – Advanced Athletic Training
3 hours (Exercise Science majors only)
(offered fall only)

This course addresses general medical and pharmacological issues generally found in the field of athletic training. Students will be exposed to topics including dermatology, neurological disorders, pulmonary disease, respiratory infections, viral infections, autoimmune disorders, oncology, gastrointestinal conditions, and sexually transmitted infections. A significant portion of the course is also dedicated to pharmacology and various medications used to treat preceding medical conditions. A laboratory portion will address proficiency with various diagnostic instruments, including an ophthalmoscope, otoscope, and stethoscope. Emphasis is placed on the evaluation of skills as defined by the clinical proficiencies delineated and published by the Education Council of the National Athletic Trainers' Association. Prerequisites: ES 433, ES 434, and ES 436.

ES 515 – Exercise Testing and Prescription
3 hours (Exercise Science or Health Science majors only) (offered spring only)

This course is designed to train exercise scientists in the skills of assessment, planning, implementation, and evaluation relevant to the development of individualized exercise prescriptions. Prerequisite: ES 345.

ES 532 – Cardiac Pathophysiology
3 hours (Exercise Science majors only) (offered fall only)

An advanced course in cardiac physiology and the mechanisms of cardiac, pulmonary, and some metabolic disease. Includes extensive work on electrocardiogram interpretation, cardiac pharmacology, and disease intervention programs. Prerequisites: ES 345 and BIOL 325.

ES 545 – Exercise Physiology Seminar
3 hours (Exercise Science majors only) (spring only)

Emphasis will be placed on reviewing and integrating information from current literature in exercise physiology, biomechanics, sports psychology, cardiac rehabilitation, athletic injuries, and exercise biochemistry.

(Recommended: ES 501 and ES 515.) Prerequisites: ES 334, ES 344, and ES 345.

ES 608G – Management of Instruction
3 hours (Exercise Science/MAE majors only) (offered spring only)

Management of Instruction investigates the techniques of effective teaching and relationships between teacher and learner. The course is designed to allow the teaching internship in the Master of Arts in Education to gain practical experience necessary for becoming an effective instructor of physical education. The purpose is to provide students with a systematic understanding of how to structure knowledge in physical education. Prerequisites: ED 389, ED 393, and ED 593 or concurrent enrollment.

ES 647G – Analysis and Interpretation of Data
3 hours (Exercise Science/MAE majors only)

The methods of data analysis employed in health and physical education research such as t-tests, chi-square, correlations, analysis of variance and multiple regression analysis are examined.

ES 649G – Research Methods in Health and Exercise Science

3 hours (Exercise Science Pre-Education or Health Science or MAE majors only)

The course focuses upon research procedures utilized in experimental, descriptive, historical and other methodologies as they apply to health.

ES 650G – Individual Study in Health and Exercise Science

1-3 hours (Exercise Science Pre-Education or Health Science Pre-Education Majors only)

Written investigation of a problem within Health, Physical Education, Recreation, or Coaching under the supervision of a faculty advisor. The course is repeatable for up to four credit hours.

HEALTH SCIENCE

HLTH 150 – Nutrition in Health and Wellness
3 hours (Health Science or Exercise Science majors only)

Interdependence of human nutrition and food in the health and behavior of consumers. Diet analysis, controversies, and issues.

HLTH 190 – Foundations of Health Science
3 hours (Health Science majors only)

This course will aid in the development of a basic foundation of awareness, knowledge, and skills from which to apply subsequent health education and health promotion principles. The course is based on the Seven Responsibilities of a Health Educator, which include assessing needs; planning, implementing, and evaluating health programs; coordinating provisions of services; acting as a resource person; and communicating health education needs.

HLTH 192 – Microcomputer Applications
2 hours (Health Science or Communication Disorders majors only)

The course will guide students through practical, computer-related tasks including database searches, Internet sources, advanced word processing, spreadsheets, presentation software, web authoring software, and database software applications. The main goal of this course is to allow students to use computers with greater proficiency in other coursework as well as their daily life.

HLTH 195 – Lifetime Health & Fitness

1.5 hours

The purpose of this course is to integrate material from human physiology, psychology, sociology, and nutrition to present an interdisciplinary framework for disease prevention and health promotion. The course focus is to promote a behavioral lifestyle change in which students integrate into their lives patterns of physical activity, health, and well-being. NOTE: This course in conjunction with HLTH 196 fulfills the Personal Well-Being requirement of the Liberal Studies Program. Concurrent enrollment with HLTH 196 required.

HLTH 196 – Lifetime Physical Activities

0.5 hours

This course is designed to introduce the student to a pattern of lifetime fitness and physical activity through a variety of activity modes. Regardless of activity mode, concepts of aerobic and anaerobic conditioning techniques will be explored. Where appropriate, issues of safety, equipment, theory, technique and other factors will be introduced. NOTE: This course in conjunction with HLTH 195 fulfills the Personal Well-Being requirement of the Liberal Studies Program. Concurrent enrollment with HLTH 195 required.

HLTH 245 – Substance Abuse Prevention
3 hours (Health Science or Exercise Science-Physical Education/Health/Coaching Majors only)

This course is designed primarily for health science and exercise science pre-MAE majors to convey the impact of drug use and/or abuse on the lives of ordinary people. It

will assist students in gaining a realistic perspective of drug-related problems in our society. Topics explored will include the history of drugs; how and why drug abuse occurs; how drug abuse relates to each profession; and drug abuse prevention.

HLTH 250 – Practicum I

1-3 hours

Course is designed to allow students to obtain practical experience in an area related to their major or pattern. Students may engage in an investigation, work in an allied field, or a combination of the two. Student is expected to complete a daily log and submit a written report detailing their experience as it relates to the major or pattern. Consent of academic advisor and Program Director required. Prerequisite: HLTH 190.

HLTH 260 – Human Sexuality

3 hours (Health Science or Exercise Science-Physical Education/Health/ Coaching Majors only)

Course discussions include anatomy/physiology, decision-making skills, disease outcomes, relationships, parenting, birth control, and sexual expression.

HLTH 270 – Consumer Health

3 hours (Health Science majors only)

This course meets the major requirements for the BS degree in Health Science. The course provides an overview of the complex health marketplace in order to assist consumers in selecting health products and services intelligently. Topics explored include fraud/quackery, fact/fiction, self-care, advertising, cancer, healthcare facilities, insurance, aging/death and dying consumer issues and more.

HLTH 325 – Health Promotion Management and Marketing

3 hours (Health Science majors only) (fall only)

Introduction to the skills and principles necessary for marketing, strategic planning and leadership/ management of successful health promotion programs. Prerequisites: HLTH 190, STAT 190.

HLTH 334 – Physiological Assessment

3 hours (Health Science majors only)

This course is designed to introduce students to the functional assessment of human fitness and performance. Students will be actively involved in the measurement and evaluation of components of body composition, cardiorespiratory, musculoskeletal, and skill-related fitness. Prerequisites: HLTH 190 and STAT 190.

HLTH 350 – Practicum II

1-3 hours

Practical experience in an area related to major or pattern. Extension of options included in HLTH 250. Consent of academic advisor and Program Director required. Prerequisite: HLTH 250.

HLTH 361 – Mental Health

3 hours (Health Science or Exercise Science-Physical Education/Health/ Coaching Majors only)

In this course, we will draw the parameters of mental health, examine Healthy People 2010 and the Surgeon General's Report of Mental Health, explore current schools of thought that dominate the field, and determine the role that positive mental health plays in the achievement of optimal health and wellness. Selected topics include: posi-

tive mental health, self-esteem, emotional health, non-violent conflict resolution/peer mediation, stress and stress management, problems of everyday living, community-based mental health services, and health counseling skills. Prerequisite: HLTH 190 or ES 190.

HLTH 362 – Environmental Health

3 hours (Health Science majors only)

The course actively involves the student in the determination of environmental health concerns. We will examine the impact of the environment on individual and population health, Healthy People 2010 objectives for environmental health, and the sources/etiology, effects, and control measures for selected environmental and personal safety hazards. Prerequisite: HLTH 190.

HLTH 366 – Community Health

3 hours (Health Science or Exercise Science-Physical Education/Health/Coaching Majors only)

In addition to an overview of the theories and models of community health/individual and population health, the course will explore issues pertinent to the community health educator: core public health functions (assessment, policy development, assurance), community health assessment/mobilization/ promotion, culturally competent health promotion, health education programming in the community setting, and legislative advocacy/grant writing for health education issues. Prerequisites: HLTH 190, HLTH 245, HLTH 260, HLTH 270.

HLTH 370 – Field Experience in Health Science

4 hours (Health Science majors only) (offered summer only)

This course is designed to provide Health Science majors with the opportunity to apply career-oriented skills in an off-campus internship setting for a minimum of 200 contact hours. The student must follow the procedures in the application process before enrolling. The student may not be enrolled in more than one additional class during the field experience. Mandatory attendance at two informational sessions, junior or senior status, consent of academic advisor and Program Director, minimum 2.0 cumulative GPA, and minimum 2.5 major GPA are required. See Program Office or <http://hes.truman.edu/fieldexp.shtml> for complete enrollment procedures.

HLTH 374 – Independent Study in Health Science

1-4 hours (Health Science majors only)

Individualized study in specialized areas of health science. Consent of academic advisor and Program Director required. Prerequisite: HLTH 190.

HLTH 405 – Global Public Health

3 hours (Health Science majors only) (spring only)

Course explores disease prevention and health promotion in the global community. Current global health issues will be addressed. Prerequisite: HLTH 366.

HLTH 410 – Methods for Health Educators

3 hours (Health Science majors only)

The course actively involves the student in the development and selection of materials, methods, and techniques for communicating health and health education information to individuals and populations. Students will select a health education agency/organization and a health topic/issue to communicate a mass media/multi-media persuasive health communication message/campaign to a targeted population

in a community. The student will demonstrate proficiency in communicating this health information/targeted message via multiple media methods. Prerequisites: HLTH 346 and HLTH 366.

HLTH 440 – Program Planning and Evaluation in Health

3 hours (Health Science Majors only)
This course is designed to develop a more complete understanding of the skills and abilities needed by health educators/promoters for program planning, implementation, and evaluation. The student will be exposed to a wide variety of learning activities and discussions that focus on the core competencies for entry level health educators. In addition, topics will be presented that further the concept of planning, implementation, evaluation, and replanning as a cyclic event. Prerequisite: HLTH 366.

HLTH 450 – Senior Seminar

1 hour (Health Science majors only)
Class is designed to allow students to gain valuable knowledge and information relative to interview procedures, résumé construction, statement of career goals, types of application letters, and portfolio development. Budget planning, tax calculation, credit card risk, and various forms of insurance will also be covered. Junior or senior status; required application for graduation must be filed. Must obtain permission from Program Office before enrolling.

HLTH 455 – School Health Programs

3 hours (Health Science majors only)
In this course, we conduct advocacy for Coordinated School Health Programs (CSHPs), design a program for a CSHP, prepare a lesson project for Comprehensive School Health Education, review the MO School Assessment Program, and evaluate health education curriculum and materials. Prerequisite: HLTH 366.

HLTH 467 – Introduction to Epidemiology

3 hours (Health Science majors only)
Increasing an understanding of epidemiological concepts, practices, and methods is a primary focus. Topics covered during the course are history of epidemiology, disease etiology, measures of morbidity and mortality, descriptive means of epidemiology, data uses in the field, study designs, measures of effect, data interpretation issues, screening guidelines, and epidemiological aspects of infectious diseases, work and the environment. A separate focus will be placed on the practice of analyzing data in epidemiological investigations. Prerequisites: HLTH 366 and STAT 190.

HLTH 470 – Research in Health Science

1-4 hours (Health Science majors only)
Directed student research in Health Science. Consent of academic advisor, research mentor, and Program Director is required. Prerequisite: STAT 190.

HLTH 480 – Worksite Health

3 hours (Health Science majors only) (offered spring only)
The course will examine worksite health promotion and health protection on the educational, organizational, and environmental levels. The student will design, implement, and evaluate a comprehensive worksite health promotion

program and occupational safety and health program; provide a rationale for worksite health promotion and safety programs, and create a comprehensive occupational safety and health manual and corresponding training program. Prerequisite: HLTH 366.

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HPP 200 – Medical Terminology

1 hour
Medical Terminology allows the student to develop mastery with terminology that is used in Allied Health occupations. In the process of developing mastery with medical terminology, a student will have the opportunity to preview or review the fundamentals of anatomy, evaluate a medical brief, and learn proper pronunciation of medical terms. The course is designed as a programmed learning and self-paced approach by body systems.

FACULTY CREDENTIALS

Note: Date in parentheses indicates year of employment at Truman. *Indicates graduate faculty.

Jeffrey Arabas

Director of Aquatics, Instructor in Health and Exercise Sciences
BS, Central Connecticut State University; MA, Northern Arizona University. (1999)

Evonne Bird

Instructor in Health and Exercise Sciences
BS, Eastern Montana College; MS, Texas Tech University. (1995)

Michael Bird

Associate Professor of Exercise Science*
BA, MS, Purdue University; PhD, University of North Carolina-Greensboro. (1995)

Michelle Boyd

Head Athletic Trainer; Instructor in Exercise Science
BS, University of Illinois-Urbana; MS, University of Pittsburgh. (1994)

Mike Cannon

Head Women’s Soccer Coach; Instructor in Health and Exercise Sciences
BA, Northeast Missouri State University. (1993)

Adam Cline

Assistant Athletic Trainer; Instructor in Health & Exercise Sciences
BS, Southwest Missouri State University; ME, Valdosta State University. (2004)

John Cochrane

Head Women’s Cross-Country and Track Coach; Instructor in Health and Exercise Sciences
BS, Iowa State University; MA, Northeast Missouri State University. (1986)

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Carolyn Cox

Associate Professor of Health
BS, Slippery Rock University of Pennsylvania; MEd
Shippensburg University of Pennsylvania; PhD, The
Pennsylvania State University. (1994)

Shannon Currier

Head Football Coach; Instructor in Health & Exercise
Sciences
BA, Hamline University; MS Bemidji University. (2004)

Timothy Deidrick

Assistant Men's Basketball Coach, Instructor in Health and
Exercise Sciences
BS, MAE, Truman State University. (2000)

Roberta Donahue

Assistant Professor in Health & Exercise Sciences
BA, The College of William and Mary; MEd, Northwestern
State University; PhD, The University of Alabama. (2004)

Elizabeth Economon

Assistant Softball Coach; Instructor in Health & Exercise
Sciences
BS, Truman State University. (2004)

Joseph Fanthorp

Assistant Swim Coach; Instructor in Health and Exercise
Sciences
BS, University of Kentucky. (2002)

Marne Fauser

Assistant Women's Basketball Coach, Instructor in Health
and Exercise Sciences
BS, Truman State University. (2000)

Charles Flohr

Assistant Football Coach; Instructor in Health & Exercise
Sciences
BS, Dakota State University; MS, Northwest Missouri State
University. (2004)

Jennifer Eldridge Houser

Assistant Professor of Health
BS, University of Iowa; MS, Nebraska Methodist College of
Nursing and Allied Health. (2002)

Jeremy Houser

Assistant Professor in Health and Exercise Sciences
BS, University of Iowa; MS, University of Nebraska-Omaha.
(2002)

Melody Jennings

Instructor in Health and Exercise Sciences
BSE, MA, Northeast Missouri State University. (1984)

Elizabeth Jorn

Instructor in Health and Exercise Sciences
BS, MAE, Truman State University. (2000)

Pete Kendall

Head Men's and Women's Tennis Coach, U.S.P.T.A.;
Instructor in Health and Exercise Sciences
BA, William Penn College; MA, Ball State University. (1992)

Alexander Koch

Associate Professor of Exercise Science
BS, MS, Appalachian State University; PhD, University of
Kansas. (2000)

Christopher Lantz

Associate Professor of Exercise Science; Director of Health
and Exercise Sciences*
BA, West Virginia Wesleyan College; MA, University of
Northern Carolina-Chapel Hill; PhD, West Virginia
University. (1995)

Carrie Lundy

Assistant Volleyball Coach; Instructor in Health and
Exercise Sciences
BS, Lincoln Memorial University; MSE, Northwest Missouri
State University. (2003)

Jerry Mayhew

Professor of Exercise Science*
BS, Appalachian State University; MS, PhD, University of
Illinois. (1975)

James Padfield

Associate Professor of Exercise Science
BS, MS, University of Utah; PhD, University of Missouri-
Columbia (1996).

Aaron Rasset

Assistant Football Coach; Instructor in Health and Exercise
Sciences
BS, University of Minnesota-Crookston; MS, Bemidji State
University. (2004)

Daric Riley

Assistant Football Coach; Instructor in Health and Exercise
Sciences
BA, Charleston Southern Univeristy. (2004)

Lacey Schanz

Head Softball Coach; Instructor in Health and Exercise
Sciences
BS, Georgia Institute of Technology. (2002)

Edward Schneider

Head Men's Track and Cross Country Coach; Instructor in
Health and Exercise Sciences
BSE, MA, Northeast Missouri State University. (1974)

Jack Schrader

Head Men's Basketball Coach; Instructor in Health and
Exercise Sciences
BA, Arizona State University; MA, Northeast Missouri State
University. (1994)

David Schutter

Head Wrestling Coach; Instructor in Health and Exercise
Sciences
BS, Indiana State University. (1991)

Larry Scully

Head Baseball Coach, Instructor in Health and Exercise
Sciences
BA, Western Kentucky University; MSS, United States
Sports Academy. (2000)

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John Sloop, IV
Head Women's Basketball Coach; Instructor in Health and Exercise Sciences
BS, Maryville University; Graduate Study, St. Louis University. (1995)

Scott Strohmeier
Assistant Football Coach; Instructor in Health and Exercise Sciences
BS, University of Minnesota-Crookston; MAE, Concordia University. (2004)

Qi Wang
Head Volleyball Coach; Instructor in Health and Exercise Science.
BEd, Beijing University of Physical Education of China; MA, Eastern New Mexico University (1997).

Janice Young
Assistant Professor in Health and Exercise Sciences
BA, William Penn College; MS, Iowa State University; EdD, The University of Kansas. (2004)

NURSING

The curriculum is designed to prepare beginning practitioners of professional nursing who will provide safe, effective nursing care to patients and clients of all ages in a variety of health care settings—hospital, home, community. It is characterized by a liberal education foundation at the lower level on which the upper division Nursing major is built. Lower division courses are foundational and are drawn from the sciences and humanities disciplines. The upper division courses provide knowledge of the theory and practice of Nursing. Concomitant to them are opportunities for courses which enhance the Nursing component, add depth and scope to the core curriculum, and/or promote a global-minded individual. The baccalaureate nursing graduate is prepared to function as a generalist in beginning positions in all areas of nursing practice, including maternal, child, mental, adult, and community health nursing. The curriculum provides a foundation for graduate study in Nursing. Graduates who meet the requirements of section 335.066 of the State of Missouri Nursing Practice Act are eligible to apply for the registered nurse licensing examination. The Nursing Program is approved by the Missouri State Board of Nursing. The baccalaureate degree Nursing Program is accredited by the Commission on Collegiate Nursing Education.

MISSION STATEMENT

The mission of the Truman State University Nursing Program is to offer an exemplary community-based baccalaureate nursing education grounded in the liberal arts and sciences to support and prepare caring nurse scholars to practice in a diverse and rapidly changing healthcare environment.

VISION STATEMENT

The vision of the Truman State University Nursing Program is to be an exemplary baccalaureate nursing program in a public liberal arts and sciences environment.

ADMISSION TO NURSING

Only a limited number of Nursing Program applicants are accepted into the program. The Nursing Admissions Committee seeks to select the most qualified applicants for admission.

Applicants to the Nursing Program must be accepted by Nursing in addition to being accepted to the University. A special "Application to Nursing" and a summary of career goals must be completed and sent directly to the Nursing Program. The application deadline for admission to the Nursing major is January 31 of each year.

Transfer or change of major students must meet current Program of Nursing academic requirements as part of the admission process (minimum 2.75 cumulative GPA). Qualified students may petition for advancement on a space-available basis.

In addition to acceptance to the University, applicants to the Nursing major must be accepted by the Nursing Program. A special application for admission to Nursing is available from the Nursing Program Office, the Admission Office, and/or online. The completed application and a summary of career goals should be sent directly to Nursing Student Affairs Committee. As a part of the admissions process, the Nursing Student Affairs Committee reviews transcripts and test scores, and places applicants at the appropriate level in the program based on the student's qualifications and space availability. See the most recent Nursing Student Handbook for current policies and the suggested program; see <http://nursing.truman.edu>.

NURSING

BACHELOR OF SCIENCE IN NURSING

	Semester	Hours
Liberal Studies Program Requirements	32-57
Missouri Statute Requirement	1-3
Required Support	28-29
BIOL 100 Biology** OR	4
BIOL 107 Introductory Biology I**	4
BIOL 214 Anatomy and Physiology I	4
BIOL 215 Anatomy and Physiology II	4
CHEM 100 Chemistry for Contemporary Living** OR	4
CHEM 120 Chemical Principles I**	5
ED 250 Life Span Development OR	3
PSYC 377 Developmental Psychology	3
PHRE 188 Ethics**	3
PSYC 166 General Psychology**	3
STAT 190 Basic Statistics**	3
**May be used to fulfill LSP requirements.		
Bachelor of Science Requirements	9
BIOL 204 Introductory Microbiology	3
BIOL 353 Pathophysiology	3
NU 311 Human Nutrition	3

NURSING MAJOR REQUIREMENTS **50**

NU 180 Introduction to Human Care Nursing	.....	2
NU 221 Nursing Informatics	.....	1
NU 240 Nursing Therapeutics I	.....	3
NU 280 Nursing Therapeutics II	.....	3
NU 310 Pharmacotherapeutics	.....	3
NU 325 Physiological Processes	.....	5
NU 355 Gerontological Nursing	.....	2
NU 365 Chronic Illness	.....	2
NU 375 Maternal/Neonatal Nursing	.....	4
NU 385 Child/Family Nursing	.....	4
NU 410 Introduction to Nursing Research	.....	3
NU 425 Community Mental Health Nursing	5
NU 445 Clinical Elective	2
NU 470 Care Coordination	2

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NU 475	Critical Care Nursing	3
NU 485	Rural Public Health Nursing	5
Capstone Experience		
NU 498	Professional Socialization	1

Electives to Total128

SUGGESTED PROGRAM
(Courses in **BOLD** are major requirements.)

Semester
Hours

FRESHMAN YEAR-FALL SEMESTER

Truman Week		1
BIOL 100	Biology	4
CHEM 100	Chemistry for Contemporary Living	4
PSYC 166	General Psychology	3
MATH 186	Elementary Functions	3
NU 221	Nursing Informatics	1
		16

SPRING SEMESTER

NU 180	Introduction to Human Care Nursing	2
BIOL 214	Anatomy and Physiology	4
ENG 190	Writing as Critical Thinking*	3
COMM 170	Public Speaking*	3
HLTH 195	Lifetime Health and Fitness*	1.5
HLTH 196	Lifetime Physical Activities*	0.5
Elective		1
		15

SOPHOMORE YEAR-FALL SEMESTER

NU 240	Nursing Therapeutics I	3
PHRE 188	Ethics	3
BIOL 215	Anatomy and Physiology II	4
ED 250	Life Span Development	3
Foreign Language Requirement*		3-4
		16-17

SPRING SEMESTER

NU 280	Nursing Therapeutics II	3
NU 311	Human Nutrition	3
BIOL 204	Introductory Microbiology	3
BIOL 353	Pathophysiology	3
Foreign Language Requirement*		3-4
		15-16

All the following courses must be completed before entering the junior level nursing courses: BIOL 100, BIOL 214, BIOL 215, BIOL 204, BIOL 353, CHEM 100, NU 311, ED 250, NU 180, NU 240, NU 280, PSYCH 166, and Elementary Functions Mathematics requirement.

JUNIOR YEAR-FALL SEMESTER

NU 310	Pharmacotherapeutics	3
NU 325	Physiological Processes	5
NU 355	Gerontological Nursing	2
HIST 298	American Institutional History*	1
Junior Interdisciplinary Writing Enhanced Seminar*		3
MATH 194	LAS Calculus	3
		17

SPRING SEMESTER

NU 365	Chronic Illness	2
NU 375	Maternal/Neonatal Nursing	4
NU 385	Child/Family Nursing	4
STAT 190	Basic Statistics*	3
Aesthetic: Fine Arts Mode of Inquiry*		3
		16

SENIOR YEAR-FALL SEMESTER

NU 410	Introduction to Nursing Research	3
NU 425	Community Mental Health Nursing	5

NU 445	Clinical Elective	2
NU 498	Professional Socialization	1
Aesthetic: Literature Mode of Inquiry*		3
Elective		3
		17

SPRING SEMESTER

NU 470	Care Coordination	2
NU 475	Critical Care Nursing	3
NU 485	Rural Public Health Nursing	5
Intercultural Perspective*		3
Historical Mode of Inquiry*		3
		16

*LSP Courses. These are just suggestions. Course choice is up to student and scheduling needs/interest.

NURSING ACADEMIC REQUIREMENTS

Cumulative and Nursing Major GPA:

In order to remain in the Nursing Program and progress within the Nursing major, the student must have a cumulative grade point average (GPA) of 2.75 or above at the END OF THE FRESHMAN YEAR and EVERY SEMESTER THEREAFTER. (See Nursing Student Handbook.)

At the END OF THE SOPHOMORE YEAR and EVERY SUCCESSIVE END OF THE SEMESTER, the student:

1. MUST have a Nursing major course cumulative grade point average of 2.50 or above (Nursing major course cumulative GPA is computed using all courses completed with NU prefixes EXCEPT NU 491 Independent Study).
2. By May of sophomore year achieve a "C" or better in the following prerequisite courses: BIOL 100, BIOL 204, BIOL 214 (Class of '06), BIOL 215 (Class of '06), BIOL 303 (Class of '03, '04, '05), BIOL 353, CHEM 100, ED 250, MATH Essential Skills, NU 180, NU 221, NU 240, NU 280, NU 311, PHYS 100 (Class of '03, '04, '05), PSYC 166.

Progression Policies

Policy Regarding Required Grade Point Average

Progression is defined as the student's movement through the required sequence of courses for the Nursing major. At the end of the freshman year, and every semester thereafter, if a Nursing student's cumulative GPA falls below 2.75, the student will be withdrawn from the Program. At the end of the sophomore year, and every semester thereafter, if the Nursing major course cumulative GPA falls below 2.50, the student will be withdrawn from the Program. A student with a cumulative GPA lower than 2.75 must raise his/her GPA prior to application for readmission. A student who has been withdrawn from the Nursing Program because of a Nursing major GPA less than 2.50 may request readmission to the Program after being out of the major at least one Fall or Spring semester. (See policy for Readmission to the Nursing Program.)

Policy Regarding Withdrawal or Failure of Nursing Major Courses

Any student who fails, withdraws from, or does not complete one of the following Nursing major courses (NU 310, 325, 355, 365, 375, 385, 410, 425, 445, 470, 475, 485, 498) may remain in the Program and retake the course a second time during the next semester that the course is offered, depending upon space availability. Students achieving less than a "C" grade in NU courses taken in the sophomore year will be withdrawn from the Program and may reapply. (See policy on Readmission.) Upon successful completion

of the previously failed course (or course from which the student withdrew), the student may resume the usual progression of courses. No more than 2 (two) different Nursing courses may be repeated. If the student fails or withdraws from a repeated course, the student will be withdrawn from the Program at the end of that semester. Any student withdrawn from the Program as a result of this policy may request readmission after being out of the major at least one Fall or Spring semester. (See policy for Readmission to the Nursing Program.) The policy regarding the required grade point average will supercede the policy regarding withdrawal from or failure of Nursing major courses. The student should be aware that repeating courses will usually delay graduation and may result in a change of class status within the Nursing major. (See University Policy for Repeat Courses.) A request to repeat a course should be directed to the Nursing Program Student Affairs Committee.

Comprehensive Examinations

Junior Level Exam: Students will take the junior level mid-curricular and must achieve at a predetermined score. Students not achieving at the predetermined score would be required to complete a remediation program and retest as part of the student's major clinical course requirements before the end of the student's first semester of senior year Nursing courses. Students will be given an IC grade in the student's major clinical course until remediation and retesting is completed.

Senior Level Exam: Students will take the senior level exam and must score at a predetermined level. Students not achieving at the predetermined score would be required to complete a remediation program and retest as part of the student's major clinical course requirements before the end of the student's second semester of senior year Nursing courses. Graduating students not scoring at the predetermined score will be given an IC grade in the major clinical course until a passing score is achieved. (See Nursing Student Handbook.)

Graduation

- a. Must have a nursing major requirements cumulative grade point average of 2.50 or above.
- b. Must have a total cumulative grade point average of 2.50 or above.
- c. Must have a "C" or better in all Nursing courses.

Special Circumstances

An exception to the policy on Cumulative GPA requirements would be students admitted to the Nursing Program with prior college work and a cumulative GPA of less than 2.75. These students' GPAs would be based on courses currently being taken for a BSN degree and these students must maintain at least a 2.75 semester GPA.

Occasionally circumstances alter a student's ability to achieve goals within a specified timeframe. If a problem should occur, the student is to contact his/her advisor in order to explore the student's options. A student should submit a written document to explain his/her special circumstances, and to request special consideration. Each student's situation is considered on an individual basis. Students should meet with their advisor for assistance in directing their requests to the Student Affairs Committee or the Curriculum Committee.

Students who, for any reason, wish to move between graduating classes within the Nursing major are advised that space availability and each student's pattern of achievement are major factors in the approval of such a change. Competition for space in each graduating class mandates that, as spaces become available, they are filled with those most qualified.

Request for Readmission

Requests for readmission could occur for several reasons, such as withdrawal from the Program due to grade point average, health reasons, etc. A student who requests to be readmitted to the Nursing Program should see the Nursing Student Handbook for the process of applying for admission.

Special Equipment

Nursing students will be expected to have the following equipment: stethoscope, sphygmomanometer, complete professional attire, watch with capability for measuring seconds, bandage scissors, pen light, and access to an automobile (beginning with the fall semester of the junior year). (See syllabi and Nursing Student Handbook.)

Health Policy

Prior to initial entry into clinical courses, students are required to demonstrate compliance with nursing program health policies as outlined in the Nursing Student Handbook. Students absent from the program for more than one (1) year are required to submit updated evidence of health status. All students in clinical courses are instructed in the use of procedures for the prevention of transmission of infectious diseases.

Missouri State Board of Nursing Licensure Information

According to Section 335.066, Missouri Statutes, completion of Nursing Program requirements does not guarantee eligibility to write the licensure examination (for the complete provisions see Chapter 335, RSMo, the Nursing Practice Act). Applicants for Registered Nurse licensure in Missouri must "be of good moral character and have completed at least the high school course of study, or the equivalent thereof as determined by the state board of education, and have successfully completed the basic professional curriculum in an accredited or approved school of nursing." (See Section 355.046, Missouri Statute). In compliance with the Missouri Nurse Practice Act (Chapter 335 of the Missouri Statutes, section 335.066), nursing program applicants should be aware that the Missouri State Board of Nursing may refuse to issue a license for specific reasons related to moral turpitude, intemperate use of alcohol or drugs, or conviction of a crime.

Additional Expenses (may include but are not limited to)

- Clinical Course fees
- Community Health travel expense
- Drug and alcohol testing
- Field trip travel
- Nursing Student Association participation
- Physical Exam fees
- Remediation costs
- School Pin, upon graduation
- Testing fees
- Licensure, following graduation

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Additional Requirements

Agencies where students are assigned for clinical experiences will have additional requirements of students, including completion of a criminal background check and drug screening. Students must meet Missouri State Board of Nursing requirements for functional abilities. (See Nursing Student Handbook.)

Registered Nurse Application

Registered Nurse applicants should initiate the university admissions process as outlined for all students. Registered nurse students are required to do the following:

1. Meet the academic policies of the program.
2. Provide evidence of current RN licensure in Missouri
3. Complete University Liberal Studies Program requirements.*
4. Complete required support courses, BS degree requirements, and nursing major required courses.*
5. Be formally admitted to the Nursing Program before applying to take validation examinations.
6. Applications for validation exams are due by March 1 of each year.
7. Contract for dates of validation examinations and graduation.

*Transfer of credit policy is applicable

Placement into the Program is determined on the basis of available space and review of applicants' materials.

Registered Nurses have the option of seeking advanced standing through validation examinations and submission of a portfolio. Through this process, the registered nurse may demonstrate competency in some of the instructional areas included in freshman, sophomore and/or junior level nursing courses of the curriculum.

All Nursing course validation examinations are given through the Nursing Program and students pay a set fee for each examination. Students must have completed discipline-directed and BS degree liberal arts and sciences courses prior to applying for validation examinations of junior level courses.

Validation examinations must be completed in sequence with a minimum score at a pre-established level. A clinical exam may be required for Registered Nurses who have not practiced nursing in the past four years.

Course syllabi and study guides are available to students at a minimal charge.

BSN PROGRAM FOR REGISTERED NURSES AT TRUMAN

Credit possible through the validation process

NLN Mobility Profile II Examinations

	Credit Hours
NU 325 Physiological Processes . . . . .	.5
NU 310 Pharmacotherapeutics . . . . .	.3
NU 375 Maternal/Neonatal Nursing . . . . .	.4
NU 385 Child/Family Nursing . . . . .	.4
NU 425 Community Mental Health . . . . .	.5
Total credit possible by examination . . . . .	.21
Credit by portfolio	
NU 180 Introduction to Human Care Nursing . . . . .	.2
NU 240 Nursing Therapeutics I . . . . .	.3
NU 280 Nursing Therapeutics II . . . . .	.3
Total Credit possible by portfolio . . . . .	.8
Total credit possible by validation process . . . . .	.29

Nursing Credits to take at Truman		
NU 221	Nursing Informatics . . . . .	.1
NU 410	Introduction to Nursing Research . . . . .	.3
NU 470	Care Coordination . . . . .	.2
NU 485	Rural Public Health Nursing . . . . .	.5
Select from the following to total 21 credits:		
NU 355	Gerontology . . . . .	.2
NU 365	Chronic Illness . . . . .	.2
NU 445	Clinical Elective . . . . .	.2
NU 475	Critical Care Nursing . . . . .	.3
NU 498	Professional Socialization . . . . .	.1

Total Nursing credits . . . . .	.21
Liberal Studies . . . . .	.77
Elective . . . . .	.1
Missouri Statute . . . . .	.1

Total Credit Hours for BSN Degree128

DEPARTMENTAL HONORS IN NURSING

Eligibility:

1. Maintain a cumulative GPA and a nursing GPA of 3.50.
2. Produce a scholarly paper or project to be presented in a public seminar.
3. Achieve above the 50th percentile on the program comprehensive examination.
4. Receive approval of a majority of the nursing faculty.

COURSE
DESCRIPTIONS

Students who do not meet prerequisites for a course can request permission to take a course by meeting with the faculty member teaching the course, who in turn will recommend to the Program Director that the student be enrolled in the class if appropriate.

**NU 180 – Introduction to Human Care Nursing
2 hours (offered fall, spring)**

Content focuses on increasing students' knowledge concerning the historical evolution of nursing and definition, scope and uniqueness of nursing practice and nursing as a profession. The structure and reform of the health care system and health care issues confronting nurses will be examined. Concepts presented are considered within the context of nursing as a human science, with human care nursing as the central focus of the course. Critical analysis of caring and curing as opposing or complementary aspects of the health care system is emphasized.

**NU 221 – Nursing Informatics
1 hour (offered spring semester)**

Students will be given the opportunity to explore present and potential impact of informatics on the discipline and practice of nursing, the health care delivery system, and the client. In laboratory settings, students will explore various methods of electronic communication, information retrieval and analysis, and presentation using technologies such as data management and the Internet. Health information systems for the management of health care data will be examined.

**NU 240 – Nursing Therapeutics I
3 hours (offered fall semester)**

Nursing Therapeutics I introduces holistic caring strategies through integration of concepts of communication, client

assessment, and nursing therapeutics. Emphasis is placed on transpersonal interactions between the nurse and client. Students will utilize the nursing process and the Science of Human Care Nursing to apply didactic material through clinical simulation. Prerequisite: NU 180 (can be taken concurrently).

NU 280 – Nursing Therapeutics II
3 hours (offered spring semester)

Nursing Therapeutics II is a continuation of the concepts taught in Nursing Therapeutics I. The focus is on increasingly complex therapeutic strategies utilizing experiential learning opportunities through clinical simulation. Prerequisites: NU 180 and NU 240.

NU 310 – Pharmacotherapeutics
3 hours (offered fall only)

Students are introduced to physiological and biochemical principles concerned with the actions of pharmacological agents. Therapeutically important classes of drugs are discussed in detail. Implications of drug therapy for nursing and health care are emphasized. Application of pharmacological principles is integrated with individualized caring strategies through simulated NCCA experiences. Prerequisite: Junior status in the Nursing Program.

NU 311 – Human Nutrition
3 hours (offered spring only)

Application of nutrition fundamentals essential to health from a physiological point of view; nutrient requirements, food sources and adequate diet selection. Prerequisites: CHEM 100 or CHEM 120.

NU 325 – Physiological Processes
5 hours (offered fall, spring)

Students will utilize the Science of Human Care Nursing in the provision of care for clients, families, and aggregates with actual or potential physiological alterations in acute care and community setting. Concepts of illness, illness prevention, and health promotion throughout the lifespan will be presented in the context of healing and caring nursing practice. Prerequisite: Junior status in the Nursing Program.

NU 355 – Gerontological Nursing
2 hours (offered fall, spring)

Students are introduced to the care of older clients experiencing the aging process and to the health care needs related to aging. The Science of Human Care Nursing is applied in regard to needs of older adults as survivors. Vulnerable aggregates among this population, such as the old-old and the frail elderly will be explored. Prerequisite: Junior status in the Nursing Program.

NU 365 – Chronic Illness
2 hours (offered spring)

This course will explore the impact of chronic conditions on clients, families, and communities. The Science of Human Care Nursing will be utilized to examine physiological and psychosocial concerns as related to chronic illness. Students will have opportunities to relate didactic concepts to lived human experiences. Prerequisite: Junior status in the Nursing Program.

NU 375 – Maternal/Neonatal Nursing
4 hours (offered fall, spring)

Concepts of human development and family-centered care are integrated in the nursing care of obstetrical, neonatal,

and gynecological clients. Factors impacting the birth experience, maternal, neonatal and women's reproductive health will be explored. Students will utilize the nursing process and the Science of Human Care Nursing to apply didactic material throughout clinical learning opportunities. Prerequisite: Junior status in the Nursing Program.

NU 385 – Child/Family Nursing
4 hours (offered fall, spring)

Concepts of the Science of Human Care Nursing, family, and child development are integrated with the nursing care of well and ill children and adolescents. Factors impacting the health of the child and family will be explored. Students will utilize the nursing process and the Science of Human Care Nursing to apply didactic material throughout clinical learning opportunities. Prerequisite: Junior status in the Nursing Program.

NU 410 – Introduction to Nursing Research
3 hours (offered fall, spring)

Building upon critical thinking skills and the problem-solving approach utilized in earlier courses, this course focuses on the research process applied to nursing, on the development and writing of a research proposal. Students will use writing as a method of communicating research information to an audience of research consumers. The relationships among nursing theory, research and practice are discussed and analyzed. Nursing theory, research and practice are evaluated within a framework of the fundamental patterns of knowing in nursing. Writing assignments emphasize critical evaluation of research, and understanding of research methods. Prerequisite: STAT 190.

NU 425 – Community Mental Health Nursing
5 hours (offered fall, spring)

This course will provide integration of the science of human care nursing, caring communication, and the framework of psychiatric/mental health nursing. The focus will be illness, illness prevention and health promotion for individuals, families, groups and aggregates experiencing actual or potential alterations in mental health. The process of caring communication will be analyzed and practiced through the development of therapeutic relationships with individuals, families and groups in community-based clinical settings. Strategies of primary, secondary and tertiary prevention will be explored for vulnerable populations such as the homeless, substance abusers, and the persistently mentally ill.

NU 440 – NCLEX-RN Review
1 hour (offered spring)

An elective course offered to senior nursing majors to prepare for national licensure exams (NCLEX-RN). Independent organization of learning activities to accomplish objectives mutually agreed upon by student and instructor. Prerequisites: senior status in the Nursing program and instructor's approval.

NU 445 – Clinical Elective
2 hours (offered fall, spring)

This course will provide applications of the science of human caring through comprehensive practice in the discipline of nursing. The focus will be illness, illness prevention and/or health promotion for individuals, families, groups, and communities through selected clinical experiences in a variety of settings in collaboration with a faculty mentor. Prerequisite: Senior status in the Nursing Program.

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NU 470 – Care Coordination

2 hours (offered spring)

This course presents principles of organizations, leadership and management as related to the Science of Human Care Nursing. Emphasis is on coordination of care for client aggregates and health care personnel. Students will have the opportunity to apply a variety of management methodologies. Prerequisite: Senior status in the Nursing Program.

NU 475 – Critical Care Nursing

3 hours (offered fall, spring)

Students will utilize the Science of Human Care Nursing in the provision of nursing care for clients experiencing life threatening situations. Emphasis is placed on the development of knowledge and skills required for rapid and continuous assessments, and the appropriate interventions and evaluations throughout critical client and family episodes to promote healing and/or support resolution toward a peaceful death. Prerequisite: Senior status in the Nursing Program.

NU 485 – Rural Public Health Nursing

5 hours (offered fall, spring)

The course will provide integration of the Science of Human Care Nursing and public health concepts with a focus on the rural community as client. Emphasis will be placed on health promotion, levels of prevention, principles of epidemiology, population-focused practice, culture, vulnerable populations and community crisis. The rural health care system and problems of access to health care services unique to the rural community will be explored. Prerequisite: Senior status in the Nursing Program.

NU 491 – Directed Studies in Nursing

1-3 hours (offered fall, spring)

Independent organization of learning activities related to Nursing interest area in order to accomplish objectives mutually agreed upon by student and instructor. This course requires the instructor's approval.

NU 498 – Professional Socialization

1 hour (offered fall)

A senior seminar planned to aid the individual in role transition from student to professional practitioner. Discussion centers around current issues and their potential impact on nursing practice, preparation of a professional profile, and methods of socialization. Prerequisite: Senior status in the Nursing Program.

FACULTY
CREDENTIALS

Note: Date in parentheses indicates year of employment at Truman.

Sarah Phelps Delaware

Assistant Professor of Nursing
BSN, University of Iowa; MSN, University of Arizona.
(1980)

Pam Gardner

Assistant Professor of Nursing
BSN, Fitchburg State College; MSN, University of
Missouri-Columbia. (2000)

Mariquit Hadwiger

Assistant Professor of Nursing
BSN, Central Philippines University; MSN, Texas Women's
University. (1994)

Stephen Hadwiger

Associate Professor of Nursing
BSN, Northwestern Oklahoma State University; MSN,
University of Oklahoma; Ph.D., University of Missouri-
Columbia. (1993)

Melissa Holcomb

Assistant Professor of Nursing
BSN, Truman State University; MSN, University of
Missouri-Columbia. (2005)

Rebecca McClanahan

Assistant Professor of Nursing
BS, Northeast Missouri State University; MSN, University
of Missouri-Columbia; Graduate Study, University of
Kansas. (1975)

Sharon Ann McGahan

Assistant Professor of Nursing
BSN, University of Missouri-Columbia; MSN, University of
Texas-Austin; EdS, Northeast Missouri State University;
Graduate Study, University of Missouri-Kansas City. (1977)

Teak Nelson

Lecturer in Nursing
BSN, University of Missouri-Columbia; MSN, University of
Michigan; Graduate study, University of Missouri-
Columbia. (2002)

Stephanie Powelson

Nursing Program Director; Associate Professor of Nursing
BSN, University of Tennessee Center for Health Sciences;
M.P.H., University of North Carolina-Chapel Hill; EDD,
Spalding University. (1996)

Sheri Simmons

Lecturer in Nursing
BSN, Truman State University; MSN, University of
Missouri-Columbia (2003)

Brenda Wheeler

Assistant Professor of Nursing
BSN, University of Kansas; MSN, University of Missouri-
Columbia. (2000)

Corrie Willis

Instructor in Nursing
BSN, Northeast Missouri State University; MSN, Wichita
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