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 Desdick, 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.
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.

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 ARTS

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

Bachelor of Arts Requirements ......................... 0-6
Intermediate proficiency in ONE foreign language

Required Support ........................................... 17
PSYC 166 General Psychology** ........................ 3
ENG 238 Introduction to Linguistics ................. 3
PSYC 332 Child Development OR .................... 3
PSYC 377 Developmental Psychology OR .......... 3
ED 230 Early Childhood Growth & Development .... 3
HLTH 192 Microcomputer Applications OR ........ 3
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 REQUIREMENTS ................................. 34
CMDS 101 Clinical Observation I ...................... 0.5
CMDS 200 Introduction to Communication Disorders3
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 Practice .......................... 1.5
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 Disorders ...................... 3
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 GPA 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 Disorders3
SOPHOMORE YEAR—FALL
CMDS 261 Phonetics ........................................... 3

SOPHOMORE YEAR—SPRING
CMDS 460 Language Development .......................... 3
Prerequisites: CMDS 200, 261

JUNIOR YEAR—FALL
CMDS 301 Clinical Observation II ............................ 0.5
CMDS 470 The Speech Mechanism ........................ 3
Prerequisites: CMDS 200, 261, 460
CMDS 472 Audiology ........................................... 3
Prerequisites: CMDS 200, 261, 460

JUNIOR YEAR—SPRING
CMDS 380 Principles of Clinical Management ............ 3
Prerequisites: CMDS 200, 261, 380, 460, 470, 472. Majors only.
CMDS 473 Aural Rehabilitation ............................... 3
Prerequisites: CMDS 200, 261, 460, 470, 472
CMDS 477 Articulation and Phonology ..................... 3
Prerequisites: CMDS 200, 261, 470, 472

SENIOR YEAR—FALL
CMDS 474 Speech and Hearing Science .................... 3
Prerequisites: CMDS 200, 261, 380, 460, 470, 472, 473, 477
CMDS 490 Organization and Administration of Speech Pathology Services .................... 4
Prerequisites: CMDS 200, 261, 380, 460, 470, 472, 473, 477. Majors only.
OPTION 1
CMDS 480 Clinical Practice ................................... 1.5
Prerequisites: CMDS 200, 261, 380, 460, 470, 472, 473, 477. Majors only.

SENIOR YEAR—SPRING
OPTION 1
CMDS 480 Clinical Practice ................................... 1.5
Prerequisites: CMDS 200, 261, 380, 460, 470, 472, 473, 477. Majors only.
CMDS 489 Culminating Experience in Communication Disorders ........................................... 3
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

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, 380, 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, respiration, and articulation. Prerequisites: CMDS 200, 261, and 460. CMDS majors only.
CMDS 476 — Advanced Speech Pathology

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 566 — 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-

HUMAN POTENTIAL AND PERFORMANCE
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 Exercise Sciences 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
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-medication 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**

<table>
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<tr>
<th>Hours</th>
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<tbody>
<tr>
<td>Liberal Studies Program Requirements</td>
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<td>Missouri Statute Requirement</td>
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<tr>
<th>Bachelor of Science Requirements</th>
<th>8</th>
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<tbody>
<tr>
<td>BiOL 365 Human Anatomy</td>
<td>3</td>
</tr>
<tr>
<td>BiOL 365 Human Anatomy Lab</td>
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**Required Support**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Hours</th>
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<tr>
<td>BiOL 107 Introductory Biology **</td>
<td>4</td>
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<tr>
<td>ES 192 Microcomputer Applications</td>
<td>2</td>
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<tr>
<td>ES 344 Lifespan Motor Development</td>
<td>4</td>
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<tr>
<td>HLTH 150 Nutrition in Health and Wellness</td>
<td>3</td>
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<tr>
<td>HLTH 195 Lifetime Health and Fitness **</td>
<td>15</td>
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<tr>
<td>HLTH 196 Lifetime Physical Activities ** OR Varisty Sport Participation</td>
<td>0.5-1.0</td>
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<tr>
<td>MATH 192 Essentials of Calculus ** OR MATH 194 LAS Calculus **</td>
<td></td>
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<tr>
<td>MATH 198 Analytic Geometry and Calculus I **</td>
<td>3-5</td>
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<tr>
<td>PSYC 166 General Psychology **</td>
<td>3</td>
</tr>
<tr>
<td>SOAN 190 Sociological Inquiry **</td>
<td>3</td>
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<tr>
<td>SOAN 191 Anthropological Inquiry **</td>
<td>3</td>
</tr>
<tr>
<td>STAT 190 Basic Statistics **</td>
<td>3</td>
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**MAJOR REQUIREMENTS**

<table>
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<tr>
<th>Complete each of the following:</th>
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<tbody>
<tr>
<td>ES 190 Foundations of Exercise Science</td>
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<tr>
<td>ES 205 First Aid and CPR OR</td>
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<tr>
<td>ES 207 First Aid &amp; CPR Recertification</td>
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<tr>
<td>ES 232 Sport Management OR</td>
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<tr>
<td>ES 345 Athletic Training Room Management</td>
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<tr>
<td>ES 247 Data Interpretation in Exercise Science</td>
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<tr>
<td>ES 270 Research Methods in Exercise Science</td>
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<tr>
<td>ES 280 Principles of Athletic Training (3) OR</td>
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<tr>
<td>ES 431 Injury Care of Active People (2)</td>
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<tr>
<td>ES 334 Physiological Assessment</td>
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<tr>
<td>ES 342 Concepts of Biomechanics</td>
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<td>ES 343 Motor Learning and Control</td>
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<tr>
<td>ES 343 Motor Learning and Control Lab</td>
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<tr>
<td>ES 345 Introduction to Exercise Physiology</td>
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<tr>
<td>ES 502 Social Problems in Sport OR</td>
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<tr>
<td>ES 503 Exercise and Sport Psychology</td>
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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 28-36 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 majors. Admission to the ATEP is competitive, and students who have completed the pre-athletic training requirements are not assured admission into the athletic training program. 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 prerequisite courses, completion of a signed Technical Standards form, a signed athletic training room management. The ATEP is accredited by CAAHEP.

EXERCISE SCIENCE PATTERNS

where the staff is identified with these specialties, 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).

1. An overall cumulative 2.0 GPA
2. A 2.5 GPA in all courses completed at Truman
3. A 2.5 GPA in select major, required support and BS requirements (see major GPA-calculator)
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
9. Assisted flying must be completed by the Office of the Registrar and approval of the ATEP. Admission decisions are announced by November 20. 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 Office.

HUMAN POTENTIAL AND PERFORMANCE

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
ES 159 Social & Country/Western Dance
ES 211 Folk and Social Dance

B. Swimming (select a minimum of one course)
ES 130 Beginning Swimming
ES 131 Intermediate Swimming
ES 132 Lifeguard Training
ES 134 Lifeguard Training Instructor
ES 135 Water Safety Instructor
ES 172 Analysis of Swimming

C. Team Sports (select a minimum of one course)
ES 173 Analysis of Football
ES 174 Analysis of Basketball
ES 176 Analysis of Volleyball
ES 177 Analysis of Softball
ES 178 Analysis of Soccer
ES 179 Outdoor Activities

D. Individual Activities (select a minimum of one course)
ES 170 Analysis of Gymnastics
ES 180 Analysis of Tennis
ES 181 Analysis of Badminton
ES 183 Analysis of Fencing
ES 184 Analysis of Golf
ES 185 Analysis of Weight Training
ES 186 Outdoor Venture Activities
ES 187 Analysis of Wrestling
ES 188 Analysis of Racquetball
ES 189 Analysis of Track and Field

E. Aerobic Activity
ES 200 Techniques of Aerobic Dance

F. Dance
ES 156 Beginning Tap Dancing
ES 157 Beginning Jazz Dance
ES 212 Modern Dance
ES 214 Elementary Ballet
ES 215 Intermediate Ballet
ES 212 Modern Dance
ES 236 Creative Dance for Children
ES 215 Intermediate Ballet
ES 214 Elementary Ballet
ES 212 Modern Dance
ES 215 Intermediate Ballet

Capstone Experience
ES 150 Senior Seminar
Patterns approved by advisor
Electives to total minimum of

Graduation Requirements

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

TRUMAN STATE UNIVERSITY

Page 104
Physical Education/Health/Coaching (34-35 Hours)

The Athletic Training Education Program is divided into six levels (semesters). Each level contains level-specific objectives, specific academic coursework, ACES 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 better 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](http://hes.truman.edu/atmaj).

Biomechanics (24-24 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 kinesthetic 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 (24-24 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 (MAE) 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 190 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 MAE 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
Performance Potential Human and 2005–2007 Truman State University

Science and enable students to pursue graduate degrees in Exercise Science supplemented by business and specialized courses, participation. The curriculum, with a foundation in the sciences, leadership of broad-based programs that seek to maximize careers in recreation focus on the variety of positions that help direct competitive sport Individuals with careers in sport management maintain a leadership positions in the fields of sport and recreation. The curriculum is designed to prepare Exercise Science majors for Sport and Recreation Management Physical Science Mode of Inquiry requirement. MATH 198 Analytic Geometry & Calculus I is strongly recommended to fulfill the Physical Science Mode of Inquiry requirement.

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 2,000+ 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 psycho-social 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 Health 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
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:
1. Based on a Liberal Arts and Sciences background, demonstrate proficiency in the responsibilities and competencies of the Certified Health Education Specialists (CHES)
   a. Assess community and individual needs
   b. Plan effective health education programs
   c. Implement health education programs
   d. Evaluate effectiveness of programs
   e. Coordinate provisions of programs
   f. Act as a resource person
   g. Communicate needs, concerns, and resources
2. Utilize CHES competencies in the performance of the Core public Health functions
   a. Assessment
   b. Community mobilization
   c. Policy development and action plan
   d. Assurance
   e. Social marketing
   f. Media creation
   g. Communicate needs, concerns, and resources
3. Apply appropriate research principles and methods in Health Science
4. Apply CHES competencies through field experiences and community involvement
5. Articulate the historical and philosophical basis of Health Science

HEALTH SCIENCE BACHELOR OF SCIENCE
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
1. An overall cumulative 2.0 GPA
2. A 2.0 GPA in all courses completed at Truman
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 be responsible for a facility that remains open 24 hours per day. 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 management 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, preventive 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.)
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 pedi-
atriic settings, under the supervision of a physician. In addition
to coursework in biology, chemistry, physics, and psychol-
ogy, the student must plan to gain experience in a med-
ical-related setting throughout the college experience.

Physician Assistant graduate programs are now requiring
2000+ hours of experience in health settings prior to admis-
sion. 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 pat-
tern 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 dis-
eases 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 collect-
ing 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 comple-
tion 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 oppor-
tunities include teaching, research, data collection, and data
analyses. Public Health requires a strong background in the
sciences, health sciences, and social sciences. Employer
expectations of graduates are to identify, recommend, edu-
cate, 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, corpo-
ratiom, or federal agency. The environment is somewhat dif-
f erent 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, implementa-
tion and evaluation of illness and injury prevention pro-
gams. 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 opportuni-
ties 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 promo-
tion 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 rele-
vant 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 individ-
ualized 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 com-
plete 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 gradu-
ate M.A.E. program in Health Education. For additional
requirements, please see the M.A.E. Admission require-
ments in the Graduate section of the catalog or contact the
Division of Education at (660) 785-4383.
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. (Men and Women)
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 136 — 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 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. Consequently, this 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 intent of this course is to provide exercise science majors with learning experiences enabling 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) (fall 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, historical 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 theoretical 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 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, historical 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 theoretical 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 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 233 — 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 aide, 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. Prerequisite: 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 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 kinesic 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 344 — 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 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 346 — 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 selecting and 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. Prerequisites: 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 430 — Senior Seminar
1 hour (Exercise Science majors only)
Class is designed to allow students to gain valuable knowledge and information relative to interview procedures, resume 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.
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 (Therapeutic 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 on 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 principles 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 the 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, correlation analysis, 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: positive 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, Health Promotion 2010 objectives for environmental health, and the sources/etiologies, 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 2.5 major GPA are required. See Program Office or http://hes.truman.edu/fieldexp.sthml 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 (CSPs), design a program for a CSP, 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.

HUMAN POTENTIAL AND PERFORMANCE

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 the 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
BS, 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)
Human Potential and Performance

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)

Robert 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 University. (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)
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. Committed 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.

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 the 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

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liberal Studies Program Requirements</td>
<td>32-57</td>
</tr>
<tr>
<td>Missouri Statute Requirement**</td>
<td>1-3</td>
</tr>
<tr>
<td>Required Support</td>
<td>28-29</td>
</tr>
<tr>
<td>BIOL 100 Biology** OR</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 107 Introductory Biology I**</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 214 Anatomy and Physiology I</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 215 Anatomy and Physiology II</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 100 Chemistry for Contemporary Living** OR</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 120 Chemical Principles I**</td>
<td>5</td>
</tr>
<tr>
<td>ED 250 Life Span Development OR</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 377 Developmental Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PHRE 188 Ethics**</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 166 General Psychology**</td>
<td>3</td>
</tr>
<tr>
<td>STAT 190 Basic Statistics**</td>
<td>3</td>
</tr>
<tr>
<td>**May be used to fulfill LSP requirements</td>
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</table>

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 |
### Performance Potential and 2005-2007

#### 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
- HEITH 196 Lifetime Physical Activities* 0.5

#### Elective 3

**Total 16**

### 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

**Semester Hours 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

**Total 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

**Total 15-16**

#### Progression Policies

1. **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.
     - The student must complete one of the following Nursing major courses (NU 310, 355, 365, 375, 385, 410, 425, 445, 470, 475, 485, 498) (See policy on Readmission.) Upon successful completion of the major at least one Fall or Spring semester. (See policy for Readmission to the Nursing Program.)

#### 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, a student fails below 2.75, the student will be withdrawn from the Program. At the end of the sophomore year, and every semester thereafter, a student fails below 2.75, 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 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 335.046, 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
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 nurses 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

<table>
<thead>
<tr>
<th>Exam</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NU 325 Physiological Processes</td>
<td>5</td>
</tr>
<tr>
<td>NU 310 Pharmacotherapeutics</td>
<td>3</td>
</tr>
<tr>
<td>NU 375 Maternal/Neonatal Nursing</td>
<td>4</td>
</tr>
<tr>
<td>NU 385 Child/Family Nursing</td>
<td>4</td>
</tr>
<tr>
<td>NU 425 Community Mental Health</td>
<td>5</td>
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<tr>
<td>Total credit possible by examination</td>
<td>21</td>
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Credit by portfolio

<table>
<thead>
<tr>
<th>Exam</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>NU 180 Introduction to Human Care Nursing</td>
<td>2</td>
</tr>
<tr>
<td>NU 240 Nursing Therapeutics I</td>
<td>3</td>
</tr>
<tr>
<td>NU 280 Nursing Therapeutics II</td>
<td>3</td>
</tr>
<tr>
<td>Total credit possible by portfolio</td>
<td>8</td>
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</table>

Total credit possible by validation process 29

Nursing Credits to take at Truman

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NU 221 Nursing Informatics</td>
<td>1</td>
</tr>
<tr>
<td>NU 410 Introduction to Nursing Research</td>
<td>3</td>
</tr>
<tr>
<td>NU 470 Care Coordination</td>
<td>2</td>
</tr>
<tr>
<td>NU 485 Rural Public Health Nursing</td>
<td>5</td>
</tr>
<tr>
<td>Select from the following to total 21 credits:</td>
<td></td>
</tr>
<tr>
<td>NU 355 Gerontology</td>
<td>2</td>
</tr>
<tr>
<td>NU 365 Chronic Illness</td>
<td>2</td>
</tr>
<tr>
<td>NU 445 Clinical Elective</td>
<td>2</td>
</tr>
<tr>
<td>NU 475 Critical Care Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NU 498 Professional Socialization</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Nursing credits 21

Liberal Studies 77

Elective 1

Missouri Statute 1

Total Credit Hours for BSN Degree 128

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 400 — 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. The focus will be 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.
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 McElhanahan  
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 State University. (2003)