

Movement Science Cognate Courses

The Movement Science Major requires that a minimum of eleven credit hours of cognate elective courses be completed outside of Movement Science. In addition, six of the eleven credit hours must be earned outside of School of Kinesiology courses.

The Movement Science department maintains a list of currently approved Movement Science Cognate Elective Courses (see below). Credit hours are listed in parentheses. Courses fulfilling University distribution requirements are indicated by HU, NS, and SS. Students are encouraged to choose cognate courses that may fulfill graduate or professional school requirements.

If a course does not appear on the list, students may petition for approval by completing a Program Petition Form available from the Kinesiology Office of Undergraduate Student Affairs or on the Kinesiology website: http://www.kines.umich.edu/sites/default/files/program_petition.pdf.

The petition should be as detailed as possible and the petition statement needs to explain how the proposed cognate relates to Movement Science. Courses that do not have specific distribution designation may also be petitioned for distribution. Again, students are encouraged to include as much detail as possible.

PLEASE NOTE: This list is subject to change.

Afroamerican & African Studies

AAS 355/ANTHRCUL 355/ HISTORY 355: Health and Illness in African Worlds (4; 3 in half-term)

Anthropology, Biological

ANTHRBIO 161: Introduction to Biological Anthropology (4) **NS**

ANTRHBIO 297: Topics in Biological Anthropology (4) **NS**

ANTHRBIO 364: Nutrition and Evolution (4; 3 in half-term) **NS**

Anthropology, Cultural

ANTHRCUL 258: Honors Seminar in Anthropology – Culture and Medicine (3) (*Only this section*)

ANTHRCUL 344: Medical Anthropology (4) **SS**

ANTHRCUL 355 /AAS 355/ HISTORY 355: Health and Illness in African Worlds (4; 3 in half-term)

ANTHRCUL 416: Global Health: Anthropological Perspectives(3)

Biological Chemistry

BIOLCHEM 212: Descriptive Biological Chemistry (4) (*Nursing*)

BIOLCHEM 415: Introductory Biochemistry Lecture (3)

BIOLCHEM 451/CHEM 451: Advanced Biochemistry I (4)

Biology

BIOLOGY 101: Energy, Food and the Environment (4) **NS**

BIOLOGY 118: AIDS and Other Health Crises (3) **NS**

BIOLOGY 205: Developmental Biology (3) (*Formerly BIOLOGY 208: Embryology*)

BIOLOGY 207: Microbiology, Combined Lecture & Lab (4) **NS**

Movement Science Cognate Courses

BIOLOGY 222: From Message to Mind: An Introduction to Neurobiology (3) (*No longer offered*)
BIOLOGY 225: Principles of Animal Physiology and Neurobiology: Lecture (3) NS

BIOLOGY 226: Animal Physiology Laboratory (2) NS
BIOLOGY 252: Chordate Anatomy and Phylogeny, Combined Lecture & Lab (4)
BIOLOGY 305: Genetics Lecture (3) (See MCDB 306 for Genetics Lab)

Biomedical Engineering

BIOMEDE 295: Biomedical Engineering Seminar (1)
BIOMEDE 417: Electrical Biophysics (4)
BIOMEDE 456/MECHENG 456: Modeling in Biosolid Mechanics (3)

Biophysics

BIOPHYS 520 /CHEM 520: Biophysical Chemistry I (3)

Civil and Environmental Engineering

CEE 211: Statics and Dynamics (4) (*Note: Physics 140 is a prerequisite for this course.*)

Chemistry

CHEM 120: First Year Seminar in Chemistry (3) NS
CHEM 125/126: General Chemistry Laboratory I and II (2) NS
CHEM 210: Structure and Reactivity I (4) NS
CHEM 211: Investigations in Chemistry (1) NS
CHEM 215: Structure and Reactivity II (3) NS
CHEM 216: Synthesis and Characterization of Organic Compounds (2) NS
CHEM 230: Physical Chemical Principles and Applications (3) NS (*Lecture only*)
CHEM 260: Chemical Principles (3) NS (*Lecture only*)
CHEM 261: Introduction to Quantum Chemistry (1)
CHEM 302: Inorganic Chemistry: Principles of Structure, Reactivity, and Function (3) NS
CHEM 351: Fundamentals of Biochemistry (4) NS
CHEM 398: Undergraduate Research in Biochemistry (1-4)
CHEM 451/BIOLCHEM 451: Advanced Biochemistry I (4)
CHEM 482: Synthesis and Characterization (2) (*formerly CHEM 312*)
CHEM 467/AOSS 467/EARTH 465/ENSCEN 467/ENVIRON 467: Biogeochemical Cycles (3)
CHEM 520/ BIOPHYS 520: Biophysical Chemistry I (3)

Complex Systems

CMPLXSYS 541/PHYSICS 413: Introduction to Nonlinear Dynamics and the Physics of Complexity (3)

Comprehensive Studies Program (CSP)

CSP 210/UC 210: Perspectives on Careers in Medicine and Health Care (4)

Ecology & Evolutionary Biology

EEB 341: Parasitology, Combined Lecture & Lab (4) NS

Movement Science Cognate Courses

Electrical Engineering & Computer Science

EECS 280: Programming and Introductory Data Structures (4)
EECS 281: Data Structures and Algorithms (4) (*formerly EECS 380*)
EECS 285: A Programming Language or Computer System (2)
EECS 370: Introduction to Computer Organization (4)
EECS 478: Logic Circuit Synthesis and Optimization (4)

Engineering

ENGR 371/MATH 371: Numerical Methods for Engineers and Scientists (3) (*NS for Kinesiology only*)

History

HISTORY 284: History of Health and Sickness (3-4; 3 in half-term) **SS**
HISTORY 355/AAS 355/ANTHR/CUL 355: Health and Illness in African Worlds (4; 3 in half-term)
HISTORY 376: Epidemics Plagues and Cultures from the Black Death to the Present (4) **SS**
HISTORY 427: Magic, Religion, and Science in Early Modern England (3)

Industrial & Operations Engineering

IOE 333: Ergonomics (3)
IOE 334: Ergonomics Lab (1)
IOE 474: Automotive Human Factors (3)

LS&A Honors

HONORS 493: College Honors Seminar – Complexity and Emergence (3) (*Only this section*)

Mathematics

MATH 116: Calculus II (4) (*NS for Kinesiology only*)
MATH 214: Linear Algebra and Differential Equations (4) (*NS for Kinesiology only*)
MATH 215: Calculus III (4) (*NS for Kinesiology only*)
MATH 216: Introduction to Differential Equations (4) (*NS for Kinesiology only*)
MATH 371/ ENGR 371: Numerical Methods for Engineers and Scientists (3) (*NS for Kinesiology only*)

Mechanical Engineering

MECHENG 211: Introduction to Solid Mechanics (4)
MECHENG 240: Introduction to Dynamics and Vibrations (4)
MECHENG 456/BIOMEDE 456: Modeling in Biosolid Mechanics (3)

Medical School

See Biological Chemistry, Microbiology, Physiology

Microbiology

MICRBIOL 301: Intro to Microbiol (3)
MICRBIOL 350: Intro Lab - Med Micro (1)

Movement Science Cognate Courses

Molecular, Cellular, and Developmental Biology (MCDB)

MCDB 308: Developmental Biology Laboratory (3)
MCDB 310: Introductory Biochemistry (4)
MCDB 411: Protein Structure and Function (3)
MCDB 418: Endocrinology (3)
MCDB 423: Introduction to Research in Cellular and Molecular Neurobiology (3)
MCDB 427: Molecular Biology Lecture (4)
MCDB 428: Cell Biology Lecture (4)
MCDB 429: Laboratory in Cell and Molecular Biology (3)
MCDB 436: Introductory Immunology (3)

Nursing

NURSING 220/ WOMENSTD 220: Perspectives in Women's Health (3) **SS**

Philosophy

PHIL 232: Problems of Philosophy (4; 2 in half-term) **HU**
PHIL 340: Minds and Machines (4; 2 in the half-term) **HU**
PHIL 356: Issues in Bioethics (4; 3 in the half-term) **HU**
PHIL 383: Knowledge and Reality (4; 3 in the half-term) **HU**
PHIL 420: Philosophy of Science (3)

Physical Education

PHYSED 373: Issues in Health and Wellness (3)
PHYSED 475: HIV/AIDS, Communicable Diseases, and Reproductive Health (3)

Physics

PHYSICS 126: General Physics: Electricity and Light (4) **NS** (*No longer offered, now by transfer credit*)
PHYSICS 127: Physics I Lab (1) **NS** (*No longer offered, now by transfer credit*)
PHYSICS 128: Electricity and Light Lab (1) **NS** (*No longer offered, now by transfer credit*)
PHYSICS 136: Physics for the Life Sciences Laboratory I (1) **NS**
PHYSICS 235: Physics for the Life Sciences II (4) **NS**
PHYSICS 236: Physics for the Life Sciences Laboratory II (1) **NS**
PHYSICS 141: Elementary Laboratory I (1) **NS**
PHYSICS 204: Great Books in Physics (4) **NS**
PHYSICS 240: General Physics II (4) **NS**
PHYSICS 241: Elementary Laboratory II (1) **NS**
PHYSICS 401: Intermediate Mechanics (3)
PHYSICS 413/CMPLXSYS 541/: Introduction to Nonlinear Dynamics and the Physics of Complexity (3)

Physiology

PHYSIOL 404: Human Physiology-Laboratory (2)
PHYSIOL 502: Human Physiology Lecture (4)
PHYSIOL 541: Mammalian Reproductive Endocrinology Lecture (4)

Movement Science Cognate Courses

Public Health

PUBHLTH 200: Health and Society: Introduction to Public Health (4) **SS**

PUBHLTH 300: Behavioral and Social Foundations for the Health Professions (4)

PUBHLTH 350: Global Public Health: Challenges & Transformations (4)

Psychology

PSYCH 211: Project Outreach (3)

PSYCH 230: Introduction to Biopsychology (4) **NS**

PSYCH 240: Introduction to Cognitive Psychology (4) **NS**

PSYCH 250: Introduction to Developmental Psychology (4) **SS**

PSYCH 270: Introduction to Psychopathology (4) **SS**

PSYCH 280: Introduction to Social Psychology (4) **SS**

PSYCH 290: Introduction to the Psychology of Personality (4) **SS**

PSYCH 335: Introduction to Animal Behavior (4) **NS**

PSYCH 345: Human Neuropsychology (4) **NS**

PSYCH 351: Advanced Laboratory in Developmental Psychology (3)

PSYCH 355: Cognitive Development (3) **NS**

PSYCH 359: Psychology of Aging (3) **SS**

PSYCH 401: Special Problems in Psychology as a Social Science (1-4)

PSYCH 442: Perception, Science, and Reality (3)

Sport Management

SM 434: Sport Ethics (3)

SM 437: Psychological Aspects of Sport & Exercise (3)

Sociology

SOC 475: Introduction to Medical Sociology (3)

University Courses

UC 105: HSSP – Perspectives on Health and Health Care (2) (*SS for Kinesiology only*)

UC 106: HSSP – Perspectives on Health Care (2) (*SS for Kinesiology only*)

UC 210/CSP 210: Perspectives on Careers in Medicine and Health Care (4)

Women's Studies

WOMENSTD 220/NURSING 220: Perspectives in Women's Health (3) **SS**

WOMENSTD 300: Men's Health (3)

WOMENSTD 400: Women's Reproductive Health (3)