Texas A&M University
Departmental Request for a Change in Course
Undergraduate • Graduate • Professional

1. This request is submitted by the Department of Health and Kinesiology

2. Course prefix, number and complete title of course: KINE 641 Motor Development

Attach a brief supporting statement for changes made to items 3a thru 3d, and 5 below.

3. Change requested
   a) Prerequisite(s): From ___________________________ To ___________________________
   b) Withdrawal (reason) ____________________________________________________________
   c) Cross-list with _________________________________________________________________
   d) Change in course title and description. Enter complete current course title and current course description; complete proposed course title and proposed course description in items 4 and 5.
   e) Change in credit/contact hours. Complete item 6b. Underscore change(s). Attach a course syllabus.

4. Complete current course title and current course description: Motor Development

Motor, physical and neuromuscular development from prenatal periods to old age; stages of development, motor system and development of specific motor patterns.

5. Complete proposed course title and proposed course description (not to exceed 50 words): Motor Neuroscience:

Developmental Issues - Explores the contemporary developmental issues associated with motor behavior (perception to action) across the lifespan; topics include physical and neurological growth, perception, motor control, and environmental influence.

6. a) As currently in course inventory:

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b) Change to:

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Approval recommended by:

Head of Department ___________________________ Date ___________________________
Chair, College Review Committee ___________________________ Date ___________________________

Head of Department (if cross-listed course) ___________________________ Date ___________________________
Dean of College ___________________________ Date ___________________________

Submitted to Coordinating Board by:

Director of Academic Support Services ___________________________ Date ___________________________

Questions regarding this form should be directed to Sandra Williams at 845-8836.
OAR/AS – 04/07
MOTOR NEUROSCIENCE: DEVELOPMENTAL ISSUES       KINE 641

INSTRUCTOR:      Dr. Carl Gabbard
276Q Read       845-1277 (w) 694-6467 (h)  c-gabbard@tamu.edu
Lab (269 Col.)   website: http://motordevelopment.tamu.edu/

PREREQUISITIE(S): KINE 307 or equivalent

DESCRIPTION: Explores contemporary issues associated with motor behavior
(perception to action) across the lifespan. Topics include: physical and neurological
growth, perception, motor control, and environmental influence.

COURSE TOPICS (attached)

OBJECTIVES (attached)

GRADING:
Tests (3 @ 25% – two and final) 75%
Written and verbal report 25%
    Scale: 90%=A, 80%=B, 70%=C, 60%=D, 59% and below = F

TEXTBOOK AND READINGS:
Main text: Lifelong motor development (5th ed.), 2008, Gabbard, C., (Benjamin
Cummings)
Handouts:
    Damon & R. Lerner (Eds.), Handbook of child psychology (6th ed.). New York:
    Wiley.
    (Eds.), Handbook of child psychology (6th ed.). New York: Wiley.
Article reading list: [changes by semester]

ASSIGNMENTS:
1- Complete readings before topic review.
2- Written / verbal report: Review 5 contemporary readings (2003 >) from
    "scientific" journals that focus on one specific aspect of lifelong physical
growth and motor behavior that is of interest to you. The focus is on
lifelong- so select papers that reflect various stages of the lifespan. [This
requirement may not be appropriate if your paper is related to a specific theory
of development / aging]. Use APA style and see separate sheet for format
suggestions.
    Verbal report - using power point, give a 20 min presentation of your
    written
    report findings. In addition, provide a one-page summary of key points for
    each classmate. Overall grade: written 2/3, verbal 1/3
COURSE TOPICS:
Introduction to the Developmental Perspective
   General Terminology
   Significant Observations (Assumptions) about Development
   Research Methods
   Theoretical Views
      Environmental
      Biological

Biological Growth and Development
   Heredity and Neurological Changes
   Physical Growth Changes
   Factors Affecting Growth and Development

Perception and Information Processing
   Perceptual Development and Theory
   Information Processing and Motor Control
      Models and Control Theory

Motor Behavior Across the Lifespan
   Early Movement Behavior
   Motor Behavior during Early Childhood
   Motor Behavior during Later Childhood and Adolescence
   Motor Behavior in the Adult Years

OBJECTIVES (competencies):

(1) Introduction to the Developmental Perspective

   Explain the developmental systems perspective and describe the relationship to motor development.

   Define the term motor development and the lifespan perspective.

   Describe the primary determinants of motor behavior.

   Define the general terms that are unique to the fields of human and motor development.

   Discuss and support the major observations (assumptions) associated with human development.
Illustrate and briefly describe the developmental continuum.

Briefly describe major environmental and biological theoretical views on human and motor development.

(2) Heredity and Neurological Changes

Define the term heredity and describe its primary characteristics.

*Review biological structures and function of nervous system (see text)*

Outline and describe the sequence of early developmental changes in the central nervous system.

Explain brain lateralization in terms of both brain structure and its effect on motor behavior.

Outline and briefly describe the primary neurological changes that occur with aging.

(3) Physical Growth Changes

Provide a brief summary of the major changes in physical growth that take place over the course of the life span.

Outline and briefly describe the significant growth and development events that occur during the prenatal period.

Discuss the major characteristics and changes associated with the pubescent (adolescent) growth spurt.

Identify the major changes in body mass that accompany lifelong development and the methods used to assess those changes.

List and briefly describe the various ways of estimating physical maturity.

Discuss maturity variations among developing individuals.

Explain secular trend.

(4) Factors Affecting Growth and Development

List and briefly describe the maternal factors that can affect prenatal development.

Identify the principles of teratogenic effects and describe associated environmental agents.
Identify the possible effects of physical activity on growth, development, and motor performance after birth.

List and briefly describe the possible effects of hormones on growth and development over the life span.

(5) Perceptual Development

Diagram the information-processing model (perceptual-motor process) and briefly explain the four primary components.

List and describe the nine basic functional aspects of the visual modality and the changes associated with visual development.

Outline the basic function and structure of kinesthetic perception.

Provide a general definition of perceptual integration and discuss the specific visual-auditory, visual-kinesthetic, and auditory-kinesthetic intermodal relationships.

Describe the major changes that occur in perception with aging.

Discuss the Gibson’s Ecological Perspective and its role in understanding perception to action.

(6) Information Processing and Motor Control

Describe the functional and developmental aspects associated with attention.

Discuss memory in regard to definition, structures, processing strategies, and changes across the life span.

Discuss the various processes and developmental characteristics associated with information-processing speed and movement time.

Define programming and explain its relationship to schema theory.

Discuss three features of developmental biodynamics associated with motor control.

Describe the theory and application of Newell’s (Constraints) model.

(7) Movement Behavior Across the Lifespan

Describe the three early movement behaviors associated with prenatal through infancy.
Describe the developmental characteristics involved in manual control during the first two years of life.

Discuss the theoretical views associated with motor asymmetries.

Provide a brief overview of motor behavior from early childhood to adolescence.

Describe the growth and physiological characteristics associated with peak maturity.

Identify the motor performance characteristics that parallel peak biological maturity.

Describe the various biological theories of advanced aging.

Briefly introduce and outline the characteristics associated with biological regression and motor performance.
STATEMENTS:

ADA Statement: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Disability Services in Room B118 of Cain Hall, or call 845-1637. Helpful information is located at http://disability.tamu.edu.

Plagiarism Statement: As commonly defined, plagiarism consists of passing off as one’s own the ideas, words, writings, etc., which belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of that person. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without which research cannot be safety communicated. If you have any questions regarding plagiarism, please consult the latest issue of the Texas A&M University Student Rules, http://student-rules.tamu.edu, under the section “Scholastic Dishonesty.”

Copyright Statement: The materials used in this course are copyrighted. These materials include but are not limited to syllabi, quizzes, exams, lab problems, in-class materials, review sheets, and additional problem sets. Because these materials are copyrighted, you do not have the right to copy the handouts, unless permission is expressly granted.

Aggie Code of Honor: “Aggies do not lie, cheat or steal, nor do they tolerate those who do.” “The Aggie Code of Honor is an effort to unify the aims of all Texas A&M men and women toward a high code of ethics and personal dignity. For most, living under this code will be no problem, as it asks nothing of a person that is beyond reason. It only calls for honesty, integrity, characteristics that Aggies have always exemplified. The Aggie Code of Honor functions as a symbol to all Aggies, promoting the understanding and loyalty to truth and confidence in each other.”
All students are expected to abide by the Aggie Honor Code. Students should be aware of all Honor Council Rules and Procedures on the Honor Council website at www.tamu.edu/aggiehonor.

Absences: Regular class attendance is required. Students who choose not to attend class are at a disadvantage in assignments and exams. Makeup exams / assignments will be given only for University approved absences. You have within 30 calendar days from the last day of the absence to make up these exams/assignments. Makeup exams are different from the regular scheduled test. See TAMU Student Rule 7 for additional information.
http://student-rules.tamu.edu/rule7.htm