

Term Information

Effective Term Spring 2017
[Previous Value](#) Summer 2012

Course Change Information

What change is being proposed? (If more than one, what changes are being proposed?)

Change in course number to 5000-level, update course description, transcript abbreviation, prerequisites, course goals, course content.

What is the rationale for the proposed change(s)?

Additional content and requirements make this course applicable for graduate students, as well as advanced undergraduates. Added readings via Canvas will supplement the primary text and expand the coverage of attention and social communication.

What are the programmatic implications of the proposed change(s)?

(e.g. program requirements to be added or removed, changes to be made in available resources, effect on other programs that use the course)?

None

Is approval of the request contingent upon the approval of other course or curricular program request? No

Is this a request to withdraw the course? No

General Information

Course Bulletin Listing/Subject Area Psychology
Fiscal Unit/Academic Org Psychology - D0766
College/Academic Group Arts and Sciences
Level/Career Graduate, Undergraduate
[Previous Value](#) Undergraduate
Course Number/Catalog 5309
[Previous Value](#) 4309
Course Title Human Motor Control and Learning
Transcript Abbreviation Human Motor Cntrl
[Previous Value](#) Hum Mot Ctrl & Lrn
Course Description Processes underlying the performance, learning, and adaptation of movement skills such as walking, running, driving, drumming, golfing, catching, text editing, and social communication. Selective perception, attention, and memory in the context of action. Multi-limb coordination and multi-tasking.
[Previous Value](#) *Experimental analyses of the processes underlying the performance, learning, and adaptation of movement skills.*
Semester Credit Hours/Units Fixed: 3

Offering Information

Length Of Course 14 Week, 12 Week, 8 Week, 7 Week, 6 Week, 4 Week
Flexibly Scheduled Course Never
Does any section of this course have a distance education component? No
Grading Basis Letter Grade
Repeatable No
Course Components Lecture
Grade Roster Component Lecture
Credit Available by Exam No
Admission Condition Course No

Off Campus	Never
Campus of Offering	Columbus
Previous Value	<i>Columbus, Lima, Mansfield, Marion, Newark</i>

Prerequisites and Exclusions

Prerequisites/Corequisites	Prereq: 2220 (220) or 2220H (220H), and 2300 (300); or graduate standing; or permission of instructor.
Previous Value	<i>Prereq: 2220 (220) or 2220H (220H), and 2300 (300); or permission of instructor.</i>
Exclusions	Not open to students with credit for 309 or 4309.
Previous Value	Not open to students with credit for 309.

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code	42.2704
Subsidy Level	Doctoral Course
Previous Value	<i>Baccalaureate Course</i>
Intended Rank	Junior, Senior, Masters, Doctoral
Previous Value	<i>Junior, Senior</i>

Requirement/Elective Designation

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes	<ul style="list-style-type: none">• Understand cognitive aspects of movement• Understand processes underlying the performance, learning, and adaptation of movement skills• Improve ability to interpret graphic presentations of experimental data• Improve ability to relate elementary mathematical models to observed behavior• Improve understanding of experimental design
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[Previous Value](#)

Content Topic List	<ul style="list-style-type: none">• Sensory contributions to movement• Central contributions to movement• Speed and accuracy• Coordination• Conditions of practice• Augmented feedback• Motor learning processes• Attention and performance• Social communication
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Previous Value

- *Sensory contributions*
- *Central contributions*
- *Speed and accuracy*
- *Coordination*
- *Conditions of practice*
- *Augmented feedback*
- *Motor learning processes*

Attachments

- Psych 4309 SP16.doc: syllabus
(Syllabus. Owner: Paulsen,Alisa Marie)
- Psych 5309 SP17.doc: syllabus
(Syllabus. Owner: Paulsen,Alisa Marie)
- Psychology Curriculum Map Updated June 2016.docx: curriculum map
(Other Supporting Documentation. Owner: Paulsen,Alisa Marie)

Comments

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Paulsen,Alisa Marie	06/09/2016 10:29 AM	Submitted for Approval
Approved	Opfer,John Erich	06/09/2016 10:44 AM	Unit Approval
Approved	Haddad,Deborah Moore	06/09/2016 11:55 AM	College Approval
Pending Approval	Nolen,Dawn Vankeerbergen,Bernadette Chantal Hanlin,Deborah Kay Jenkins,Mary Ellen Bigler Hogle,Danielle Nicole	06/09/2016 11:55 AM	ASCCAO Approval

Spring, 2016

OLD SYLLABUS

Psychology 4309 - Human Motor Control and Learning

(Class no. 25056; 3 semester credit hours)

Instructor: Dr. Richard Jagacinski
208 Lazenby Hall
jagacinski.1@osu.edu
Office hours: By appointment

Class: Tues & Thurs, 2:20 – 3:40 p.m.
Jennings 140

Course Assistant: Chelsea Voskuilen
voskuilen.2@osu.edu
Office hours: Mondays, 11-1 p.m. in 291-D Psychology Building

Prerequisites: Psychology 2220 and 2300 or permission of the instructor.

Required Book

Schmidt, R. A. & Lee, T. D. (2011). *Motor control and learning*, 5th edition.
Champaign, IL: Human Kinetics.

This course will examine the processes underlying the performance, learning, and adaptation of movement skills such as pursuing moving targets, running, driving, performing musical polyrhythms, hitting, and catching. Motion skills are often sophisticated in their behavioral organization and reflect implicit problem solving in accomplishing various tasks. Motion patterns can also be used to make inferences about underlying perceptual and cognitive processes. Analyzing motion is therefore an important aspect of understanding human behavior.

Evaluation

Student evaluation will be based on a midterm (25%), an experiment (10%), a paper (20%), 4 unannounced quizzes (10%), and a final exam (35%). The experiment will consist of data collection in class, elementary statistical analysis, and a brief written report. The paper will be approximately 5 pages in length on a relevant topic on motor control and learning chosen by the student. The questions on the exams and quizzes will be multiple choice and true-false and will cover material in the lectures and in the course book. The lowest quiz grade will be dropped to accommodate an absence due to illness or a family emergency, or unusually poor performance on one quiz. There will be no make-up experiments, exams, or quizzes. The lab report and paper must be handed in on time to avoid a penalty for lateness.

Classroom conduct

Cell phone calls, text messaging, web browsing, newspaper reading, and sleeping are not permitted during class. Please do that elsewhere. Please do not hesitate to ask questions if some aspect of a lecture or reading is unclear. Other students may have the same question, and you will be doing them a favor by asking.

Approximate Schedule

Week	Topic	Reading
1-2	Sensory contributions	Ch. 5
3-4	Central contributions	Ch. 6
5-6	Speed and accuracy	Ch. 7
6	In-class experiment, Thursday, Feb. 18. Bring a sharpened pencil.	
7-8	Coordination	Ch. 8
7	Written report* of the in-class experiment is due Thursday, Feb. 25. Provide a paper copy.	
8-9	Conditions of practice	Ch. 11
9	Midterm: Thursday, March 10 on Chapters 5 - 8	
10	Spring Break Week – no class	
11-12	Augmented feedback	Ch. 12
13-14	Motor learning processes	Ch. 13
13	Paper* (approx. 5 pages) is due by Thursday, April 7. Provide a paper copy.	
15	Attention and performance Review	Ch. 4

Final exam: Weds, April 27, 2:00 – 3:45 p.m. (on the entire course, but with slightly more emphasis on the material after the midterm)

*Detailed instructions for the lab report and paper will be provided.

Students with Disabilities

This syllabus is available in alternative formats upon request. Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; <http://www.ods.ohio-state.edu/>.

Academic Misconduct. All students at the Ohio State University are bound by the Code of Student Conduct (see <http://oaa.ohio-state.edu/coam/code.html>). Violations of the code in this class will be dealt with according to the procedures detailed in that code. Specifically, any alleged cases of misconduct will be referred to the Committee on Academic Misconduct. It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term academic misconduct includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct.

Spring, 2017

NEW SYLLABUS

Psychology 5309 - Human Motor Control and Learning

(Class no. xxxx; 3 semester credit hours)

Instructor: Dr. Richard Jagacinski
208 Lazenby Hall
jagacinski.1@osu.edu
Office hours: By appointment

Class: Tues & Thurs, 2:20 – 3:40 p.m.
Jennings 140

Course Assistant: Chelsea Voskuilen
voskuilen.2@osu.edu
Office hours: Mondays, 11-1 p.m. in 291-D Psychology Building

Prerequisites: Psychology 2220 and 2300 or graduate standing or permission of the instructor.

Required Book

Schmidt, R. A. & Lee, T. D. (2011). *Motor control and learning*, 5th edition.
Champaign, IL: Human Kinetics.

The additional readings are available on Canvas.

This course will examine the processes underlying the performance, learning, and adaptation of movement skills such as walking, running, driving, drumming, catching, golfing, text editing, and social communication. Motion skills are often sophisticated in their behavioral organization and reflect implicit problem solving in coordinating multiple limbs and meeting environmental demands. Motion patterns can also be used to make inferences about underlying cognitive processes such as selective perception, attention, and memory in the context of action. Analyzing motion is therefore an important aspect of understanding human behavior.

Evaluation

Student evaluation will be based on a midterm (25%), an experiment (10%), a paper (20%), 4 unannounced quizzes (10%), and a final exam (35%). The experiment will consist of data collection in class, elementary statistical analysis, and a brief written report. The paper will be approximately 5 pages in length for undergraduates and 10 pages in length for graduate students on a relevant topic on motor control and learning chosen by the student. The questions on the exams and quizzes will be multiple choice and true-false and will cover material in the lectures and in the course book. The lowest quiz grade will be dropped to accommodate an absence due to illness or a family emergency, or unusually poor performance on one quiz. There will be no make-up experiments, exams, or quizzes. The lab report and paper must be handed in on time to avoid a penalty for lateness.

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Approximate Schedule

Week	Topic	Reading
1-2	Sensory contributions	Ch. 5
3-4	Central contributions	Ch. 6
	Maslovat, D., Chua, R., Klapp, S. T., & Franks, I. M. (2016). Independent planning of timing and sequencing for complex movements. <i>Journal of Experimental Psychology: Human Perception and Performance</i> .	
	Gilden, D. L., & Wilson, S. G. (1995). Streaks in skilled performance. <i>Psychonomic Bulletin and Review</i> , 2, 260 – 265.	
5-6	Speed and accuracy	Ch. 7
6	In-class experiment, Thursday, Feb. 18. Bring a sharpened pencil.	
7-8	Coordination	Ch. 8
7	Written report* of the in-class experiment is due Thursday, Feb. 25. Provide a paper copy.	
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12-13	Motor learning processes	Ch. 13
13	Paper* (approx. 5 pages) is due by Thursday, April 7. Provide a paper copy.	

14 Attention and performance Ch. 4

Huttermann, S., Simons, D., & Memmert, D. (2014). The size and shape of the attentional "spotlight" varies with differences in sports expertise. *Journal of Experimental Psychology: Applied*, *20*, 147-157.

Strayer, D. L., Drews, F. A., & Johnston, W. A. (2003). Cell phone-induced failures of visual attention during simulated driving. *Journal of Experimental Psychology: Applied*, *9*, 23-32.

Strayer, D. L. (2016). Attention and driving. In J. M. Fawcett, E. F. Risko, & A. Kingstone (Eds.), *The handbook of attention* (pp. 423-442). Cambridge, Massachusetts: MIT Press.

15 Social aspects of movement

Rosenbaum, D. A. (2010). Smiling. *Human motor control and learning* (pp. 364-378). San Diego, California: Academic Press.

Enticott, P. G., Johnston, P. J., Herring, S. E., Hoy, K. E., & Fitzgerald, P. B. (2008). *Neuropsychologia*, *46*, 2851-2854. Mirror neuron activation is associated with facial emotion processing.

Shergill, S. S., Bays, P. M., Frith, C. D., & Wolpert, D. M. (2003). Two eyes for an eye: The neuroscience of force escalation. *Science*, *301*, 187.

Review

Final exam: Weds, April 27, 2:00 – 3:45 p.m. (on the entire course, but with slightly more emphasis on the material after the midterm)

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Curriculum Map – Psychology

Program Objectives

Knowledge Base in Psychology

- K1. Describe key concepts, principles, & overarching themes in psychology
- K2. Develop working knowledge of psychology's content domains
- K3. Describe applications of psychology

Scientific Inquiry & Critical Thinking

- S1. Use scientific reasoning to interpret psychological phenomena
- S2. Demonstrate psychology information literacy
- S3. Engage in innovative & integrative thinking & problem solving
- S4. Interpret, design, & conduct basic psychological research
- S5. Incorporate sociocultural factors in scientific inquiry

Ethical & Social Responsibility in a Diverse World

- E1. Apply ethical standards to evaluate psychological science & practice
- E2. Build & enhance personal relationships
- E3. Adopt values that build community at local, national, & global levels

Communication

- C1. Demonstrate effective writing for different purposes
- C2. Exhibit effective presentation skills for different purposes
- C3. Interact effectively with others

Professional Development

- P1. Apply psychological content & skills to career goals
- P2. Exhibit self-efficacy & self-regulation
- P3. Refine project-management skills
- P4. Enhance teamwork capacity
- P5. Develop meaningful professional direction for life after graduation

Learning Goal Levels

- F – Foundational
- A- Advanced

I. Data Analysis and Research Requirement																				
Course	Area	K1	K2	K3	S1	S2	S3	S4	S5	E1	E2	E3	C1	C2	C3	P1	P2	P3	P4	P5
2220(H) Data Analysis		F			F	F	F	F					F			F	F	F		
2300 Research Methods		F	F	F	F	F	F	F	F	F	F		F		F	F	F	F		

II. Core Requirements (1 from each area)																				
A. Brain and Behavior																				
Course	Area	K1	K2	K3	S1	S2	S3	S4	S5	E1	E2	E3	C1	C2	C3	P1	P2	P3	P4	P5
3313 Intro to Behavioral Neuroscience	BN	F	F		F	F				F										
3313H Intro to Behavioral Neuroscience	BN	F	F		F	F	F	F		F	F		F	F	F				F	
3513 Intro to Cognitive Neuroscience	CO	F			F	A		F		F			F							
B. Cognitive Psychology																				
3302 Perception & Language	CO	A	A	A	A	A	F		F											
3310 Sensation & Perception	CO	A	A	F	A	F	F									F				F
3312 Memory & Cognition	CO	A	A	F	A	A	F	F	F	F			F	F	F					F
C. Clinical and Developmental Psychology																				
2367.02 Abnormal Psychology Analysis	CL	F	F	F	F		F						F		F				F	
3331 Abnormal Psychology	CL	F	F	A	A			A	A											
3335 Psychology of Adjustment	CL	F																		
3340 Lifespan Development	D	F	F	F	F	F						F	F							
3530 Theories of Personality	CL	A	A	A	A	F	F	F	A	F	A		F				F			
3550 Psychology of Childhood	D	F	F	F	F	F						F	F							
3551 Psychology of Adolescence	D	F		F	F	F		F						F						F

D. Social Psychology																			
2367.01 Social Psychology	S	F	F,A	F,A	F	F,A	F,A	F		F		F	F,A	F	F	F	F,A	F	F
3325 Intro to Social Psychology	S	F	F,A	F,A	F	F,A	F	F		F		F			F				
3375 Stereotyping and Prejudice	S	F	F	F,A	F	F	F	F	F	F	F	F,A			F	F,A			

III. Advanced Requirements																				
Course	Area	K1	K2	K3	S1	S2	S3	S4	S5	E1	E2	E3	C1	C2	C3	P1	P2	P3	P4	P5
Sequenced Advanced Courses																				
4305 Intro to Psychopharmacology	BN	A	A	A	A	A	A	A	A											
4475 The Self	S	A	A	A	A		A		A		A	A			A	A				A
4501 Advanced Behavioral Neuroscience	BN	A	A	A	A	A	A	A												
4510 Cognitive Psychology Laboratory	CO	A	A	A	A	A	A	A		A			A	A	F	F				
4518 Attitudes	S	F,A	F,A	F	F,A	F,A	F	F	F		F	F				F	F	F		
4520 Social Psychology Laboratory	S	A		F,A	F,A	F,A	A	F,A	F,A	F,A		A	A	A		F,A	F,A	A	A	A
4532 Clinical Psychology Science	CL	A	A	A	A		A	A		F,A						A				A
4540 Counseling Psychology	CL	F,A	F,A	F	F	F	F		F	F	F,A	F			F	F				
4630 Attitudes and Persuasion	S	F,A	F,A	F,A	F,A	F	F	F,A	F			F	F,A		F	F	F	F		
4644 Hormones and Behavior	BN	A	A	A	A	A	A	A												
5600 Psychobio. of Learning and Memory	BN	A	A	A	A	A			A	A	A									
5602 Behavioral Genetics	BN	A	A	A	A	F	F	A	A											
5606 High Level Vision	CO	A	A	F	A	F	A	A					A	A	F					
5614 Cognitive Neuroscience	CO	A	F	F	A	A	F	A	F	F			F	A	A			A	A	
5622 Development of Brain	BN	A	A	A	A	A	A	A	A					A	A					

and Behavior																					
5681 Development and Psychopathology	CL	A		A	A			F													
5684 Psychology of Delinquency	D	A	A	A	A	A	A	F	A	A	F	A	A	F	A	A	A	F	F	A	
Advanced Courses																					
5309 Human Motor Control	CO	A	A	A	A	A	F	F					F			F					
4485 Psychology and the Law		F,A	F,A	F,A	F, A	F	F	F	F	F	F	F,A	F,A			F,A					
4505 History of Psychology		A	F,A	A	F	A			A	F											
4508(H) Judgment and Decision-Making	Q	F	F	A	F		F	F	F												
4511 Psychological Testing		F	F	F	A	F		A		F			F	F		F					
4515 Psychology of Emotion	S	A,F	A,F	A,F	A,F	A,F		A,F	A,F	F	F					F			F		
4521 Personnel Psychology		F,A		F,A	F,A	F,A	F, A	F,A	F, A	F	F,A	F,A	F,A	F,A	F,A	F,A	F,A	F	F,A	F	F,A
4522 Organizational Psychology		A,F	A,F	A,F	F	F	A,F	F	F	F,A			F	F	F	F,A	F	F	F	F	
4531 Health Psychology	CL	A	A	A	A	F	F			A	F		F		F	F	F	F	F	A	
4543 Psychology of Gender	CL	A	F	A	A	A	F	F	A		A	F	F	F	A	F	A	F	F	F	
4545 Cross-Cultural Psychology	CL	F,A	F,A	A	A	F	F	F	F	F	F,A	F,A	F	F	F	F			F		
4552 Psychology of Adult Years	D	F		F	F	F															
4554 Language Development	D		A		A	A	A	F					A	A							
4555 Adolescent Sexuality	D	F		F	F	F		F					F	F					F		
4571 Psychology of Dev. Disabilities	I	F		F	F	F, A							F, A					F			
5601 Comparative Psychology		A	A		A	A															
5608 Introduction to Mathematical Models	Q	F			A			A										F			
5610 Emotion Regulation	CL	A	A	A	A	A	A	F	F	F			A		A	A					

5613H Biological Psychiatry	BN	A	A	A	A	A	A												
5615 Psychology of Language	CO				F	F	F	F	F	F			F						
5618 Computational Cog. Neuroscience	CO	A	A	A	F	F	F						F	A	F	F			
5621 Intro to Event-Related Potentials	CO	A	A	A	A	F	A	A		F	F	F	F	A	F	F			A
5832 Lifespan Sociomoral Development	D	A	F		F	A							A						
5898 Seminar in Behavioral Neuroscience	BN	A	A	A	A	A	A	A	A					A	A				

IV. Elective Courses

Course	Area	K1	K2	K3	S1	S2	S3	S4	S5	E1	E2	E3	C1	C2	C3	P1	P2	P3	P4	P5
2301 Psychology of Extraordinary Beliefs	Q	F			A				F	F										
2303 Positive Psychology	CL	F		F	F	F	F	F		F	A	A	F		F	F	F			
2311 Psychology of Motivation	CO	A	A	F	F	F	F								F	F	F			
2333 Psychology of Human Sexuality	CL	A	F	F	F	F			F	F	A	A			F	F	F			
2350 Contemp. Developmental Psychology	D	F		F	F		F					F								
2376 Interpersonal Relationships	S	F,A		F,A	F	F		F	F		F				F	F		F	F	
2420 Psychology Applied to Sport		F		F,A	F,A	F			F	F	F				F	F			F	
2462 Psychology of Creativity							F,A				F	F		F	F	F,A				
3321(H) Quant. and Statistical Methods		F			A	F	F	F	F											
3371 Language and the Mind	CO	A	F		A	F		F	F		F		F	A	A	A	F	F	F	
3624 Primate Cognition		F	F		F	F				F										
4525 Psychology of Personal Security	S	A		F,A	F,A	F	F,A		F	F,A	F	F,A	F,A		F	F	F	F	F	
5425 Introduction to fMRI	CO	A		F,A	F,A	F	F,A			F,A	F	F,A	F,A		F	F	F	F		
5612 Introduction to Cognitive Science	CO	A	A		F	F	F						F							
5620 Technology, Efficiency, and Happiness	CO	A	F	A	F	F	F	F				F	F	A		F				
5891 Proseminar in Cognitive Science	CO	A	A	A	A	A	A	A		A			A	A	F					
Experiential Elective Courses																				
3191 Internship in Psychology		F		F		F					A	F,A	F		A	F,A	F,A		A	F,A
3193.01 Individual Studies in Psychology		A				A														
3193.02 Individual Studies: Teaching		A	F,A	F,A	F,A	A	A	F	F	F	A	F,A	A	A	A	F,A	F	F,A	A	A

4998 Undergraduate Research		A			F,A	A	F, A	F,A		F,A					A					
4999.01(H) Thesis Research I			A		A	A	A	A		A	A		A	A		A	A	A		A
4999.02(H) Thesis Research II			A		A	A	A	A		A	A		A	A		A	A	A		A
5700 Science Education Outreach	D		A	A	A	A		A	A			A		A	A	A	A		A	