

## Ph.D. In Motor Neuroscience

### Courses

Course Title	Course Description	Credit Hours
<b>Total Hours</b>		<b>54</b>
KINE 609R	Theory of Research (Exp Design)	3*
KINE 681	Seminar	6*
KINE 684	Professional Internship	3*
KINE 685	Directed Studies	12*
KINE 691	Research	18*
<b>Minimum Hours</b>		<b>42</b>
STAT 652	Statistics in Research II	3*
STAT 608	Least Square and Regression Analysis	3
STAT 609	Order Statistics and Nonparametric	3
STAT 619	Analysis of Variance	3
STAT 636	Methods in Multivariate Analysis	3
<b>Minimum Hours</b>		<b>9</b>
KINE 682	Seminar in Issues in Motor Development	1
KINE 682	Seminar in Issues in Motor Learning	1
KINE 682	Seminar in Issues in Motor Control	1
KINE 682	Seminar in Neuromuscular Physiology	1
<b>Minimum Hours</b>		<b>3</b>

### Supporting Electives

To be chosen with advisement from graduate advisor

Course Title	Course Description	Credit Hours
<b>Total Minimum Hours</b>		<b>72</b>
VAPH 603	Nueroanatomy	4
VAPH 640	Neurobiology	3
<b>Minimum Hours</b>		<b>3</b>
EPSY 646	Issues in Child and Adolescent Development	3
PSYC 603	Motivation and Cognitive Processes	3
PSYC 606	Learning	3
PSYC 609	Psychophysiology	3
PSYC 610	Organizational Psychology	3
PSYC 615	Perceptual Processes	3
PSYC 634	Principles of Human Development	3

<b>Course Title</b>	<b>Course Description</b>	<b>Credit Hours</b>
PSYC 636	Seminar in Developmental Psychology	3
PSYC 685	Problems	3
<b>Minimum Hours</b>		<b>9</b>
BIEN 601	Foundations of Bioengineering Analysis	3
BIEN 602	Instrumentation and Measurement in Bioengineering	3
BIEN 614	Modeling of Biological Systems	3
BIEN 638	Control Mechanisms in Living Systems	3
INEN 630	Human Operator in Complex Systems	3
INEN 635	Human Information Processing	3
KINE 650	Microcomputer Utilization in Sports Statistics	3
<b>Minimum Hours</b>		<b>6</b>

\*Required Courses

The Ph.D. in Kinesiology with a specialization in Motor Behavior requires a minimum of 72 hours beyond the masters or 96 hours beyond the baccalaureate degree. Depending on preparation and experience doctoral students may be required to complete leveling work in addition to the minimum Ph.D. requirements (see below).

### **Research Experience Requirement**

Prior to scheduling the dissertation proposal meeting, each student will: (a) have presented, as sole or first author, at least one presentation at a state, regional, or national conference; and (b) will be an author on at least one research paper submitted to a peer-reviewed national or international journal. In addition, dissertations will not be signed by the department head until the student has submitted as first author a manuscript (or manuscripts) of the study to a national or international refereed journal (or journals).

### **Minimum Hour Requirement**

The PhD requires a minimum of 67 hours beyond a master's or 96 hours beyond the baccalaureate degree. Depending on the preparation and experience, doctoral students may be required to complete undergraduate or graduate leveling work in addition to the minimum PhD requirements.

### **Suggested Prerequisites or Competency**

Please refer to the Texas A&M University Undergraduate Catalog for the content of the courses listed below. Competency in the content of the course is required rather than the specific course. The Office of Graduate Studies in the Department of Health and Kinesiology in consultation with the graduate committee chair or temporary advisor will be happy to review transcripts of potential graduate students.

<b>Course Title</b>	<b>Course Description</b>
MATH 131	Math Concepts Calculus
PHYS 201	College Physics
PHYS 202	College Physics
ZOOL 318	Chordate Anatomy
-or-	
ZOOL 319	Human Anatomy & Physiology I
ZOOL 320	Human Anatomy & Physiology II
-or-	
ZOOL 388	Principals of Animal Physiology
KINE 406	Motor Lrn & Skill Perf
KINE 425	Tests & Measurements
KINE 426	Analysis of Movement
KINE 433	Exercise Physiology
	Computer Literacy
KINE 606	Physiological Aspects
KINE 630	Mechanical Analysis
KINE 640	Motor Skill Learning
KINE 641	Motor Development
STAT 651	Statistics in Research I

### **Additional Competencies**

Graduate level physiology including at least three of the following: cellular physiology (VTPP 640), physiology of excitable membranes (VTPP 642), neurophysiology (VTPP 643), physiology of muscle (VTPP 644), physiology of Senses(VTPP 650), and Physiological Measurements (VTPP 651).