

TEXAS A&M UNIVERSITY
DEPARTMENT OF KINESIOLOGY & SPORT MANAGEMENT

Master of Science in Kinesiology
with Specialization in Motor Neuroscience

The M.S. in Kinesiology with an emphasis in *Motor Neuroscience* offers advanced scientific study of the psychological and neural mechanisms underlying skilled human behaviors. This is accomplished by assessing change that occurs (a) across the lifespan (development and aging), (b) due to practice or experience (adaptation and learning), or following illness and injury (rehabilitation and neural disorders).

NON-THESIS OPTION

Course ID	Course Title	Credit Hours
KINE 601	Reading Research Publications in Kinesiology	3
KINE 606	Motor Neuroscience I	3
KINE 627	Exercise Biomechanics	3
KINE 640	Motor Neuroscience II	3
KINE 641	Motor Neuroscience: Development Issues	3
KINE 681	Seminar – Lecture (3 semesters)	3
KINE 685	Directed Study in Motor Neuroscience	3
KINE 690 ¹	Theory of Kinesiology Research	3
Electives	As Approved by Faculty Advisor	≥ 24
MINIMUM TOTAL		36

THESIS OPTION

Course ID	Course Title	Credit Hours
KINE 601	Reading Research Publications in Kinesiology	3
KINE 606	Motor Neuroscience I	3
KINE 627	Exercise Biomechanics	3
KINE 640	Motor Neuroscience II	3
KINE 641	Motor Neuroscience: Development Issues	3
KINE 681	Seminar – Lecture (3 semesters)	3
KINE 685	Directed Study in Motor Neuroscience	3
KINE 690 ¹	Theory of Kinesiology Research	3
KINE 691	Research	6
Electives	As Approved by Faculty Advisor	≥ 6
MINIMUM TOTAL		36

ADVISOR-DIRECTED ELECTIVE CONSIDERATIONS

Course electives must be chosen with prior advisor approval before the student enrolls in the course or includes it on their degree plan. Other courses not on this list may be chosen with prior advisor approval.

Course ID	Course Title	Credit Hours
CSCE 314/604	Programming Languages	3
CSCE 421/633	Machine Learning	3
KINE 307	Motor Development	3
KINE 406	Motor Learning and Skilled Performance	3
KINE 407	Motor Control and Learning Lab	1
KINE 426	Exercise Biomechanics	3
PBSI 340	Psychology of Learning	3
PBSI 345	Human Cognitive Processes	3
PBSI 350	Cognitive Neuroscience	3
KINE 609	Professional Career Development	3
KINE 614	External Research Funding Development	3
KINE 642	Self-Organization in Motor Neuroscience	3
KINE 651	Introduction to Human Clinical Research	3
KINE 682	Seminar in Motor Neuroscience	1-3
KINE 683	Practicum in Kinesiology	1-3
KINE 684 ²	Professional Internship	1-3
KINE 689	Special Topics in Motor Neuroscience	3
NRSC 603	Neuroanatomy	4
PBSI 603	Motivation and Cognitive Processes	3
PBSI 606	Learning	3
PBSI 615	Perceptual Processes	3
PBSI 627	Psychology Assessment of Children and Adolescents	3
PBSI 636	Seminar in Developmental Psychology	3
PBSI 649	Seminar in Behavioral Neuroscience	3
PBSI 695	Manuscript Development and Publication	3
STAT 652	Statistics in Research II	3
STAT 653	Statistics in Research III	3

¹ May be substituted with STAT 651 Statistics in Research I.

² KINE 684 - Professional Internship may be chosen by Thesis students as an elective, but the course hours cannot count toward the degree plan minimal credit hour requirements.

Up to four credit hours of KINE 684 - Professional Internship credits can be used by Non-Thesis students to count toward the minimal credit hours required for the degree.

REQUIRED UNDERGRADUATE COMPETENCIES

Courses completed at Texas A&M or equivalents taken from another accredited undergraduate institution as verified by transcript. Courses taken on-line or at distance will not be accepted for laboratory courses.

Course ID	Course Title
PSYC/NRSC 107	Foundations of Psychology/Neuroscience
BIOL 319 & 320	Human Anatomy and Physiology I & II
KINE 406	Motor Learning and Skilled Performance
MATH 142	Business Calculus or equivalent
PHYS 201	College Physics
or	
KINE 426	Exercise Biomechanics