

## Descriptions—Russian of Courses

**891. Special Topics in Russian Studies**  
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Approval of department. Special topics supplementing regular course offerings proposed by faculty on a group study basis for graduate students.

**892. Seminar in Russian Literature**  
Spring of odd years. 3(3-0) A student may earn a maximum of 15 credits in all enrollments for this course. R: Approval of department. Intensive study of specific author, period, or work.

**898. Master's Research**  
Fall, Spring. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of department. Directed research for Plan B master's degree requirements.

**899. Master's Thesis Research**  
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of department. Directed research for Plan A master's degree requirements.

**990. Doctoral Independent Study**  
Fall, Spring, Summer. 1 to 12 credits. A student may earn a maximum of 18 credits in all enrollments for this course. R: Approval of department. Special projects, directed reading, and research arranged by an individual doctoral student and a faculty member in areas supplementing the regular course offerings.

**999. Doctoral Dissertation Research**  
Fall, Spring, Summer. 1 to 18 credits. A student may earn a maximum of 36 credits in all enrollments for this course. R: Approval of department.

## SMALL ANIMAL CLINICAL SCIENCES SCS

### Department of Small Animal Clinical Sciences College of Veterinary Medicine

**511. Veterinary Radiology**  
Fall. 1(1-0) R: Open only to graduate-professional students in College of Veterinary Medicine. Principles of veterinary radiology, radiation safety, and normal radiologic anatomy.

**611. Diagnostic Imaging Clerkship**  
Fall, Spring, Summer. 3 credits. R: Completion of semester 5 of the professional veterinary program. Not open to students with credit in SCS 623. Diagnostic radiography and ultrasound imaging. Radiation safety. Special procedures.

**612. Problems in Diagnostic Imaging Clerkship**  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: SCS 611. R: Completion of semester 5 of the graduate-professional program in the College of Veterinary Medicine. Advanced diagnostic radiography, ultrasound imaging, and magnetic resonance imaging.

**613. Diagnostic Ultrasound Clerkship**  
Fall, Spring. 3 credits. P: Completion of semester 5 of the professional veterinary program. RB: (SCS 611) R: Open only to fourth year graduate-professional students in the College of Veterinary Medicine. Principles of ultrasound physics, ultrasound scanning techniques, and interpretation of ultrasound imaging.

**625. Small Animal General Medicine Clerkship**  
Fall, Spring, Summer. 3 credits. P: Completion of semester 5 of the professional veterinary program. R: Open only to graduate-professional students in College of Veterinary Medicine. Not open to students with credit in SCS 622. Diagnostic and treatment services for routine and emergency outpatients.

**626. Small Animal Soft Tissue Surgery Clerkship**  
Fall, Spring, Summer. 3 credits. P: Completion of semester 5 of the professional veterinary program. R: Open only to graduate-professional students in College of Veterinary Medicine. Not open to students with credit in SCS 624. Diagnosis and preoperative, surgical, and postoperative care of patients requiring routine elective and major soft tissue surgical procedures.

**636. Problems in Soft Tissue Surgery Clerkship**  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: SCS 626. R: Completion of semester 5 of the graduate-professional program in the College of Veterinary Medicine. Soft tissue surgery problems.

**640. Cardiology Clerkship**  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: Completion of semester 5 of the professional veterinary program. R: Open only to graduate-professional students in College of Veterinary Medicine. Not open to students with credit in SCS 660. Diagnosis and medical, and surgical treatment of small animal thoracic and cardiovascular disorders.

**641. Ophthalmology Clerkship**  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: Completion of semester 5 of the professional veterinary program. R: Open only to graduate-professional students in College of Veterinary Medicine. Not open to students with credit in SCS 663. Ophthalmic evaluation of all species. Diagnosis and medical and surgical treatment of ophthalmic disease.

**642. Zoo and Wildlife Clerkship**  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: Completion of semester 5 of the professional veterinary program. R: Open only to graduate-professional students in College of Veterinary Medicine. Not open to students with credit in SCS 665. Zoo animal and wildlife medicine and surgery.

**643. Neurology Clerkship**  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: Completion of semester 5 of the professional veterinary program. R: Open only to graduate-professional students in College of Veterinary Medicine. Not open to students with credit in SCS 666. Diagnosis and medical and surgical treatment of small animal neurological disorders.

**644. Dermatology Clerkship**  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: Completion of semester 5 of the professional veterinary program. R: Open only to graduate-professional students in College of Veterinary Medicine. Not open to students with credit in SCS 681. Diagnosis and treatment of small animal dermatological disorders.

**645. Intensive Care Unit Clerkship**  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: Completion of semester 5 of the professional veterinary program. R: Open only to graduate-professional students in College of Veterinary Medicine. Not open to students with credit in SCS 622. Intensive care and management of critically ill small animals.

**646. Small Animal Orthopedic Clerkship**  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: Completion of semester 5 of the professional veterinary program. R: Open only to graduate-professional students in the College of Veterinary Medicine. Not open to students with credit in SCS 624. Diagnosis and preoperative, surgical, and postoperative care of patients requiring routine and major orthopedic surgical procedures.

**647. Small Animal Internal Medicine Clerkship**  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: Completion of semester 5 of the professional veterinary program. R: Open only to graduate-professional students in the College of Veterinary Medicine. Not open to students with credit in SCS 661. Diagnosis and therapy for complicated medical cases of small animals.

**648. Anesthesia Clerkship**  
Fall, Spring, Summer. 3 credits. R: Completion of semester 5 of the professional veterinary program. Not open to students with credit in SCS 621. Pre-anesthesia evaluation, induction, monitoring, and recovery of large and small animal patients requiring routine and major surgical procedure.

**650. Advanced Cardiology**  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: SCS 640. R: Completion of semester 5 of the graduate-professional program in the College of Veterinary Medicine. Advanced cardiology practice.

**651. Problems in Ophthalmology Clerkship**  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: SCS 641. R: Completion of semester 5 of the graduate-professional program in the College of Veterinary Medicine. Ophthalmic problems.

**653. Problems in Neurology Clerkship**  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: SCS 643. R: Completion of semester 5 of the graduate-professional program in the College of Veterinary Medicine. Neurology problems.

**656. Problems in Orthopedic Surgery Clerkship**  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: SCS 646. R: Completion of semester 5 of the graduate-professional program in the College of Veterinary Medicine. Orthopedic surgery problems.

**657. Problems in Internal Medicine Clerkship**  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: SCS 647. R: Completion of semester 5 of the graduate-professional program in the College of Veterinary Medicine. Internal medicine problems.

**658. Problems in Anesthesiology Clerkship**  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: SCS 648. R: Completion of semester 5 of the graduate-professional program in the College of Veterinary Medicine. Advanced practice of anesthesiology in the teaching hospital setting.

**690. Veterinary Molecular Biology Clerkship**  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Completion of semester 5 of the graduate-professional program in the College of Veterinary Medicine. Concepts and techniques of veterinary molecular biology.

**693. Problems in Small Animal Clinical Sciences Clerkship**  
Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Completion of semester 5 of the graduate-professional program in the College of Veterinary Medicine. Special problems.

**694. Small Animal Specialty Practice Clerkship**

Fall, Spring, Summer. 3 credits. A student may earn a maximum of 12 credits in all enrollments for this course. P: Completion of semester 5 of the professional veterinary program. R: Open only to fourth year graduate-professional students in the College of Veterinary Medicine

Supervised, off-campus, specialty practice experience in an assigned veterinary practice or other school of veterinary medicine.

**695. Emergency and Critical Care Medicine**

Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P: Completion of semester 5 of the professional veterinary program. R: Open only to graduate-professional students in the College of Veterinary Medicine.

Admission, triage, diagnosis, treatment, and discharge of patients entering an emergency service. Daily instructional rounds.

**808. Problems in Small Animal Surgery**

Fall, Spring, Summer. 1 to 9 credits. A student may earn a maximum of 15 credits in all enrollments for this course. R: Open only to graduate students in Small Animal Clinical Sciences.

**813. Small Animal Seminar**

Fall, Spring, Summer. 1(1-0) A student may earn a maximum of 3 credits in all enrollments for this course. R: Open only to graduate students in Small Animal Clinical Sciences.

**899. Master's Thesis Research**

Fall, Spring, Summer. 1 to 8 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to graduate students in Small Animal Clinical Sciences.

## SOCIAL SCIENCE                      SSC

### College of Social Science

**101. Preview of Science**

Fall. 1(1-0) Interdepartmental with Natural Science; Agriculture and Natural Resources; and Engineering. Administered by Natural Science. R: Approval of College

Overview of natural sciences. Transitional problems. Communications and computer skills. Problem solving skills. Diversity and ethics problems in science. Science and society.

**192. Environmental Issues Seminar**

Fall, Spring. 1(1-0) A student may earn a maximum of 4 credits in all enrollments for this course. Interdepartmental with Natural Science; Agriculture and Natural Resources; Engineering; and Communication Arts and Sciences. Administered by Natural Science. R: Open only to students in the College of Agriculture and Natural Resources or College of Engineering or College of Natural Science or College of Communication Arts and Sciences or College of Social Science. Approval of college.

Environmental issues and problems explored from a variety of perspectives, including legal, scientific, historical, political, socio-economic, and technical points of view.

**290. Selected Topics in Social Science**  
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to freshmen or sophomores.

Topics may cover contemporary, theoretical, or applied issues or interdisciplinary approaches.

**390. Disease in Society: An Introduction to Epidemiology and Public Health**

Spring. 3(3-0) Interdepartmental with Epidemiology. Administered by Epidemiology.

Human epidemiology and population health issues facing contemporary society, in both developed and less developed settings. Health-related information in the mass media and scholarly publications.

**490. Special Topics in Social Science**

Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to juniors or seniors or graduate students.

Topics may cover contemporary, theoretical, or applied issues or interdisciplinary approaches.

**493. Social Science Internship**

Fall, Spring, Summer. 3 to 12 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to juniors or seniors in the College of Social Science. Approval of college.

Methods and concepts from social and behavioral sciences applied in career-related settings.

**496. Field Study Abroad**

Fall, Spring, Summer. 3 to 10 credits. A student may earn a maximum of 16 credits in all enrollments for this course. R: Open only to juniors or seniors. Approval of college.

Study abroad under MSU faculty supervision. Social behavior and processes in selected countries.

**499. Directed Research in Interdisciplinary Studies in Social Science (W)**

Fall, Spring, Summer. 3 credits. P: Completion of Tier I writing requirement. R: Open only to juniors or seniors in the Interdisciplinary Studies in Social Science major. Approval of college.

Directed individual and small group research under faculty supervision in the student's Interdisciplinary Concentration.

**826. International Development and Sustainability**

Summer. 3(3-0) Interdepartmental with Anthropology; Political Science; Forestry; and Resource Development. Administered by Resource Development.

Environmental, economic, political, legal, management, and cultural components of sustainable development.

**999. Doctoral Dissertation Research**

Fall, Spring, Summer. 1 to 12 credits. A student may earn a maximum of 36 credits in all enrollments for this course.