

AU College of Veterinary Medicine
Undergraduate Research in Veterinary Biomedical Sciences (VBMS)

VBMS 4980 – Undergraduate Research

Available: Spring, 2010

Credit: Variable (1-3h/Semester; Maximum 9h)

Graded: Yes (See below)

Prerequisites: Undergraduate Juniors / Seniors in good academic standing
Approval by AU-CVM faculty mentor
Approval by Associate Dean for Research & Graduate Studies

Environment: Students will work with AU-CVM faculty mentors in established research environments as approved by the Associate Dean for Research and Graduate Studies at the AU-CVM.

Learning Outcomes: Undergraduate research experiences will be structured on a student-by-student basis by AU-CVM/VBMS faculty mentors. Expected outcomes for each research experience must be defined, in writing, by the mentor and a document, signed by both student and mentor, must be filed in the Office of the Associate Dean for Research and Graduate Studies (ORGS) in the AU-CVM in advance of the initiation of all undergraduate research programs.

Broadly, learning outcomes will include, but will not necessarily be limited to: (1) introduction to/experience with the scientific method and hypothesis testing; (2) development and/or refinement of a technical skill set(s) appropriate to the scientific discipline (ex. animal-handling skills, laboratory safety, validation of one or more analytical biotechniques); (3) development/refinement of written and oral communication skills associated with maintenance of a laboratory notebook and preparation of formal written and oral summaries of research activities.

Course Content: Each research experience for undergraduate students (REU) will be unique. Therefore, content cannot be standardized. However, AU-CVM/VBMS faculty mentors will be required (see above) to define - in writing - the goals and aims of proposed REUs with a breakdown of basic activities, definition of all deliverables and a timetable. This 'syllabus' and research plan will be signed by mentor and student and filed in the Office of the Associate Dean for Research and Graduate Studies (ORGS).

Project Requirements for Students: Students will be required to: (1) maintain a laboratory notebook (to remain as property of the mentor/PI laboratory); (2) compose and submit a brief (~5 pages plus references as appropriate) summary of the research experience; and (3) prepare and deliver an oral presentation (10-20 minutes using Powerpoint or equivalent software) in review of the research experience. The latter will be presented to the AU-CVM/VBMS mentor, members of the sponsoring laboratory and guests as deemed appropriate by the mentor.

Grading: Attendance and overall work ethic 25%; Laboratory technique and lab notebook quality 25%; Written research summary report 25%; Oral research summary presentation 25%; Grades: 90-100 (A), 80-89 (B), 70-79 (C), 60-69 (D), <60 (F).