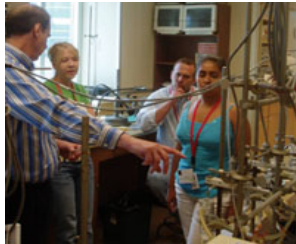


# Program and Agenda

## The Course



This course is one of four National Institutes of Health (NIH)-sponsored courses held nationwide each year. It consists of a two-week intensive experience for 12 students followed sometime within the next year by an optional internship. The course has cardiovascular and neuropharmacology emphases, and it includes lectures, demonstrations and an abundance of hands-on laboratory exercises. The last two days

of the course feature a focused research experience in one of the Omaha faculty laboratories chosen by the student to best match their own interests. The course is now in its fifth year, and has been highly successful.

Course participants are encouraged to take advantage of the opportunity for additional training following the course, through internships available in various academic and industry research laboratories. These internships provide more extensive experience with integrative pharmacology techniques and can be tailored to meet individual research and training needs.

Internships can be from one week to several months in duration and can take place immediately following the course or any time in the following year. Assistance in arranging internships will be provided, and financial support may also be available for the student and/or the mentor to help cover internship expenses.

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## KEY CURRICULUM TOPICS

### Topics, procedures and techniques (partial list)

#### *Introductory and General*

- Ethical aspects of care and use of animals in research
- Proper handling of animals and drug administration
- Anesthetizing and ventilating animals
- Surgical procedures on small and large animals
- Post-operative pain control
- Use of imaging techniques with experimental animals
- Primate models for biomedical research



### *Neuropharmacology*

- Animal models in central nervous system drug development
- Behavioral studies in animal models for learning and memory, pain and motor function

### *Cardiovascular Pharmacology*

- Effects of drugs on isolated rat blood vessels and heart preparations
- Cardiovascular instrumentation of dogs and rats
- Animal models of heart failure