

**MICHIGAN STATE UNIVERSITY
APPLICATION FOR INDEPENDENT STUDY**

NAME: _____ DATE: _____
 Last First Middle Initial
PID: _____ LEVEL: _____ CLASS: _____ MAJOR: _____ CUMULATIVE GPA: _____
COURSE: ANS 490 / ANS 890 SECTION: 001 CREDITS: 3
SEMESTER: FS18

Number of Independent Study credits to be earned this semester: _____ Total of prior Independent Study credits: _____

1. DESCRIPTION (Subject matter, purpose, methods) Introduction to Quantitative Genetics: Quantitative trait variation is pervasive in nature, it can be found among individuals in populations of virtually all life forms.
For many quantitative traits, including in particular production of plants and animals, disease risks of humans, genetics contribute a significant part. Quantitative genetics is the discipline that deals with how the heritable (genetic) part of quantitative trait variation originates, dynamically changes, pass on to next generations. This is important for genetic improvement of food animals and crops, development of diagnosis and treatments of genetic diseases, and understanding evolution. This lecture-based independent study course covers the basics of quantitative genetics and is highly recommended for students who seek advanced and/or professional studies in genetics and employment opportunities in the breeding industry.

2. RATIONALE (Why independent study rather than regular course?) At present, no other courses at MSU covers the same materials. However, the subject is important to prepare the students for further study and employment opportunities.

3. PREPARATION (Relevant course work, reading, work experience, etc.) _____
Students with prior preparation in genetics (molecular or quantitative, any level, e.g. ANS314) and statistics (basic statistical treatment of data, e.g. STT200) will be expected do well. However, all necessary background knowledge will be reviewed in lecture and further references will be provided.

4. WORK TO BE COMPLETED
(a) Type and amount of reading, writing, lab work, etc. Class meets M W F from 4:10 - 5:00 PM. Room to be determined. There will be weekly quizzes and homework assignments. A mid term and a final exam will be administered. Students will be evaluated based on performance in quizzes, homeworks, and exams.

(b) Estimated contact hours per week with instructor: 3
(c) Deadline for submitting work for final evaluation: _____
(d) Evaluation procedure: _____

STUDENT'S SIGNATURE _____ PHONE _____

APPROVALS

Instructor Signature Date

Academic Advisor Date

Chairperson, Department Offering Course Date