**MICHIGAN STATE UNIVERSITY APPLICATION FOR INDEPENDENT STUDY**

NAME: DATE:

Last First Middle Initial

PID: LEVEL: CLASS: MAJOR: CUMULATIVE GPA:

(AT, UN, GR) (Fr, So, Jr, Sr)

COURSE: ANS 490 / 890 SECTION: 001 CREDITS: 3 SEMESTER: FALL 2019

Number of Independent Study Total of prior

credits to be earned this semester: 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
   1. Type and amount of reading, writing, lab work, etc. Class meets T R from 12:40 - 2:00 PM in 1240 Anthony Hall. 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, homework, and exams.
   2. ) Estimated contact hours per (c) Deadline for submitting work

week with instructor: 3 for final evaluation: 4/26/19

(d) Evaluation procedure:

STUDENT’S SIGNATURE PHONE

**APPROVALS**

Instructor Signature Date

Academic Advisor Date

Chairperson, Department Offering Course Date

Printed Name of Instructor

Version – 10/14/15