

MONTGOMERY COLLEGE - Germantown Campus**Mathematics & Statistics Department****Course Syllabus****I. Instructor Information**

Professor: Dr. Zhou Dong

Email: Zhou.Dong@MontgomeryCollege.edu

Phone: (240) 567-7810

Office: HT 134

Mail box: HT 314

Office Hours: T 10:30 am – 12:00 pm, W 1:00 pm – 2:00 pm, R 10:30 am – 12:00 pm

II. General Course Information

Scientific Research Honors Module – SCIR297HM

PREREQUISITE:

Completion of at least 12 college credits, a 3.2 grade point average or higher, a grade of A or B in ENGL 101 or ENGL 101A and BIOL 150, CHEM 131, MATH 165, and approval of instructor.

Summer I & II 2019: CRN 45726

Class Times: TBA

Class Room: TBA

III. Specific Outcomes

Designed for the promising science, engineering, or mathematics (SEM) student who would like to build upon general SEM skills learned from general courses in order to generate competency in scientific critical thinking and research. This course enables SEM students to pursue research topics of their own choosing with the guidance and supervision of an assigned faculty member. Students should have a strong interest in SEM and be committed toward completion of a multi-semester and interdisciplinary-spanning research project. Projects will not duplicate curriculum content but will expand on that content.

IV. Text and Supplies

Model Theory: an Introduction (2nd edition), by David Marker, Springer Graduate Texts in Mathematics 217, 2002

V. Grading

A. Requirements

The student is required to

- Attend and participate in all class meetings
- Complete readings and homework as assigned
- Prepare a math department talk to be given during the Fall 2019 semester

B. Course Grade

Attendance and Participation	40%
Homework	30%
Talk Presentation	30%

A = 90% – 100%

B = 80% – 90%

C = 70% - 80%

D = 60% - 70%

F < 60%

VI. Student Code of Conduct and Collegewide Policies and Procedures

<http://cms.montgomerycollege.edu/mcsyllabus/>

VII. Campus Resources

A. Student Health and Wellness

<http://cms.montgomerycollege.edu/student-health-and-wellness/fuel-for-success/>

VIII. Course Schedule

Week	Chapter/Section
Week 1	Chapter 1 Structures and Theories 1.1 Languages and Structures
Week 2	1.2 Theories
Week 3	1.3 Definable Sets and Interpretability
Week 4	Chapter 2 Basic Techniques 2.1 The Compactness Theorem
Week 5	2.2 Complete Theories
Week 6	2.3 Up and Down
Week 7	2.4 Back and Forth
Week 8	Chapter 3 Algebraic Examples 3.1 Quantifier Elimination
Week 9	3.2 Algebraically Closed Fields
Week 10	3.3 Real Closed Fields
Fall 2019 Semester	Math Department Talk

The professor reserves the right to make changes to this syllabus.

Last Updated June 29, 2021

