HONORS PROGRAM

DEPARTMENT OF MATHEMATICS
SOUTHERN OREGON UNIVERSITY

Revised: October 25, 2011

I. <u>PREAMBLE</u>:

The Mathematics Department at Southern Oregon University offers the following honors program in mathematics. This program is designed to give the students a strong background in undergraduate mathematics along with the opportunity to work independently in some chosen area of mathematics.

II. <u>OBJECTIVES OF PROGRAM</u>:

The objectives of the Mathematics Department Honors Program are:

A) To provide a program specially designed to meet the needs of superior students in the field of mathematics.

B) To encourage independent study on the part of the student.

C) To provide the student with the experience of investigating mathematical ideas in depth, organizing and presenting those ideas in both the written and oral form.

D) To give the student the opportunity to investigate areas of mathematics not ordinarily included in the undergraduate curriculum.

III <u>QUALIFICATIONS FOR ADMISSION</u>:

A) Students are encouraged to apply as soon as they complete 12 credits of upper division mathematics course work, but no later than the spring quarter preceding the student's graduation year. The student must successfully petition the Mathematics Department for admission to the honors program. The petition should include:

   i) A letter requesting admission to the Honors Program. This letter should: explain the reasons why the student wants to pursue honors, outline a potential topic for their honors thesis, identify a faculty member who has agreed to mentor, and propose a tentative timetable for completing the project. The applicant should work with their proposed mentor to create this letter.

   ii) An up-to-date Southern Oregon University transcript.

   iii) Two letters of recommendation by university faculty, one of which is by a faculty member in the Southern Oregon University Mathematics Department who is willing to mentor the student. (Mathematics faculty may elect to speak in favor of applicant at the department meeting where application is considered rather than write a formal letter.)

B) At the time of their applications, students must have a GPA of 3.0 or better.

C) The application will be reviewed and voted upon by the Mathematics Department.

IV.   REQUIREMENTS FOR COMPLETING PROGRAM:

The requirements for the completion of the Honors in Mathematics are as follows:

A)   Satisfactory completion of the requirements for the major in mathematics.

B)   Satisfactory completion of a second topic in any two of the following four topics courses: Applied Mathematics (Mth 421), Analysis (Mth 431), Abstract Algebra (Mth 441), or Statistics (Mth 461).

C)   Honor students work with a faculty mentor while independently studying an advanced mathematical topic and preparing an expository thesis (eight credits of Math 401 and four credits of Math 403).

D)   Students completing the honors program will have their projects accepted in lieu of the Senior Colloquium (Math 490).

E)   While in the Departmental Honors Program students maintain a mathematics GPA of 3.25 or better and an overall University GPA of 3.00 or better.

F)   Once approved, any variations or exceptions to the requirements must be approved by the Mathematics Department.

V.   GRADUATION WITH HONORS IN MATHEMATICS:

Students who complete the Departmental Honors Program will receive the following recognition:

A)   The words "Graduation with Honors in Mathematics" will appear on the student diploma and official transcript. Completion of the Honors Degree in mathematics will be acknowledged in the graduation program.

B)   The Mathematics Department will include the student's Honors Thesis in the Departmental Honors Library.

C)   The Mathematics Department will engrave the student's name on the Departmental Honor Roll.

VI.   POLICIES REGARDING CONTINUED PARTICIPATION:

Students admitted to the program will be expected to maintain a high level of performance in all their college work and will be expected to show reasonable progress toward satisfaction of the requirements for completion of the program. Policies regarding continued participation in the Department Honors Program are as follows:

A)   A student's progress in the program will be subject to review by the Mathematics Department at any time. Students will automatically be reviewed at the following times:

   i)   When the student's GPA in mathematics drops below 3.25 or his/her overall GPA drops below 3.00.

   ii) During the first quarter of the senior year.

B)   Any student who withdraws from the program or is withdrawn by the Mathematics Department may apply for readmission according to the procedures under Section III, Part A as modified by the department for each individual case.

VII.   PROCEDURES FOR WRITING AND PRESENTING A SENIOR HONORS THESIS:

The thesis will be an organized, logical presentation of a body of mathematical knowledge. The thesis will be expository in nature but may include original research. The student will comply with the following procedures in writing and presenting the Honors Thesis:

A)   As a result of his/her research the student will prepare a preliminary draft of his/her thesis and present it to the Mathematics Department for approval. His/her preliminary draft must be suitable for evaluation of his/her work**.**

B)   After acceptance of his/her work, the student will prepare the final copy of his/her work that is to be presented to the Mathematics Department for duplication. The final copy will be prepared with a format that is consistent with departmental guidelines.

C)   The Mathematics Department will have the right and the responsibility to duplicate the student's thesis.

D)   The student will make a one hour (approximately) presentation of his/her topic to a public audience.

VIII. PROCEDURES FOR COMPLETION OF THE REQUIREMENTS OF THE DEPARTMENTAL HONORS PROGRAM:

A)   Prior to the student's last quarter of work towards the Bachelors Degree, he/she will submit to the Mathematics Department a form (furnished by the department) indicating his/her plans for completion of the requirements of the program.

B)   Upon completion of the requirements the Mathematics Department will forward to the registrar the name of the student for appropriate recognition.