FOREST LAKE AREA SCHOOLS
FOREST LAKE, MN 55025

February 6, 2013

AGENDA ITEM: 9.3

TOPIC: APPROVAL OF PROPOSED NEW COURSE: CIS MATHEMATICAL MODELING AND PREDICTION

BACKGROUND: Through exploration of possible math offerings that would provide students opportunity to earn college credits beyond the current opportunities in Advanced Placement Calculus and Statistics, the secondary math department researched the proposed course, CIS Mathematical Modeling and Prediction, offered through the University of Minnesota. This course, comparable to an Algebra III course will offer students non-traditional exploration of advanced algebra topics.

PROCESS: After researching potential college credit offerings, secondary mathematics staff attended an informational meeting at the University of MN concerning this course. Staff was invited to an interview to screen potential teachers for approval to teach the course. Forest Lake Area Schools has been granted permission to offer this course based on the interview and acceptance of our staff member by the U of M for teaching this course. It is proposed that this course is offered in the HS registration guide for the 2013-14 school year. The course will be taught at the Area Learning Center, but all HS students are eligible for the course.

This course introduces students to the art of mathematical prediction through algebraic modeling and elementary probability theory. The class covers techniques of representing the behavior of real-world data with algebraic equations, including linear, polynomial, exponential and logarithmic functions. Students will learn to develop equations that accurately represent the behavior of real-world data. Problems will draw from various disciplines. While students practice traditional algebraic methods, they will also use the spreadsheet program Excel extensively to investigate the behavior of data sets. The class will also strengthen students' ability to communicate and evaluate mathematical reasoning.

RECOMMENDATION: Approval of Proposed New Course: Mathematical Modeling and Prediction.