Department: Mathematics and Computer Sciences

Division: Pure Mathematics **Level and Major:** Graduate

Course Title: Algebraic Topology

Number of Credits: 3

Prerequisite: Lecturer:

Course Description:

Course Goals and Objectives:

Course Topics:

- Homotopy of Functions
- Fundamental Groups
- Fundamental Group of the Circle and Its Applications
- Seifert-van Kampen Theorem and Its Applications
- Covering Spaces
- Simplicial Homology
- Singular Homology
- Relative Homology
- Excision Theorem and Its Applications
- Mayer-Vietoris Sequences and Their Applications
- Cellular Homology

Reading Resources:

Evaluation: