

# Assessment Plan

2017-18



## Program (CENG) - Mathematics

**University Mission:** George Fox University, a Christ-centered community, prepares students spiritually, academically, and professionally to think with clarity, act with integrity, and serve with passion.

**Program Mission:** To provide students with the foundational knowledge necessary for a thorough understanding of the basic areas of undergraduate mathematical studies, as well as the skills required to use that understanding.

**Alignment of Program Mission to GFU Mission:** If we successfully carry out our mission we will prepare students "academically and professionally to think with clarity, act with integrity" as desired in the University Mission.

### Outcome: Computational Competency

Develop computational competency including the use of technology.

**OutcomeType:** Student Learning Outcome

#### Assessment Tools

**Exam/Quiz - In Course** - Departmental Assessment Exam (Active)

**Target:** Half the class obtaining a score of 70% or better

**Schedule for Data Collection:** December 1 of each academic year

**Schedule for Data Analysis & Reporting:** February 1

#### Related Goals

College of Engineering

**Departmental** - Graduate well-rounded students of high character who are professionally competent, spiritually grounded, globally aware and socially engaged.

Program (CENG) - Mathematics

**Departmental** - Develop skills at using technology where appropriate, especially in the calculus sequence

**Departmental** - Study applications of mathematics to applications in the sciences as well as to other mathematical topics.

### Outcome: Applications

Understand and appreciate the applications of mathematics to relevant subjects

#### Assessment Tools

**Exam/Quiz - In Course** - Departmental Math Assessment Exam (Active)

**Target:** Half the class scoring above 70%

**Schedule for Data Collection:** December 1

**Schedule for Data Analysis & Reporting:** February 1

#### Related Goals

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Program (CENG) - Mathematics

**Departmental** - Develop skills at using technology where appropriate, especially in the calculus sequence

**Departmental** - Study applications of mathematics to applications in the sciences as well as to other mathematical topics.

**Departmental** - Provide a well-rounded education that will prepare students for a variety of experiences including graduate school in mathematics and related subjects.

## Outcome: Prepare Students

Prepare students for further study and/or careers involving mathematics

**Outcome Status:** Active

### Assessment Tools

**Survey** - Alumni Survey (Active)

**Target:** 90% of alumni surveyed felt prepared for their chosen career path

**Schedule for Data Analysis & Reporting:** April 1

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**Departmental** - Study applications of mathematics to applications in the sciences as well as to other mathematical topics.

**Departmental** - Provide a well-rounded education that will prepare students for a variety of experiences including graduate school in mathematics and related subjects.

**Departmental** - Understand the theoretical nature of mathematics as presented especially in course Math 340, 410 and 420, with preparation provided in Math 290

**Departmental** - Be able to transport mathematical ideas across courses, to recognize a familiar mathematical structure in a new and different context.

## Outcome: Advanced Study

Apply mathematical theory, concepts and methods of inquiry to advanced topics.

### Assessment Tools

**Exam/Quiz - In Course** - Final Exam - Math420 (Active)

**Target:** 90% pass rate

**Schedule for Data Collection:** May 1

**Schedule for Data Analysis & Reporting:** May 1

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Program (CENG) - Mathematics
<b>Departmental</b> - Provide a well-rounded education that will prepare students for a variety of experiences including graduate school in mathematics and related subjects.
<b>Departmental</b> - Understand the theoretical nature of mathematics as presented especially in course Math 340, 410 and 420, with preparation provided in Math 290
<b>Departmental</b> - Understand the axiomatic development of mathematical systems, especially in Math 331 (probability systems), Math 320 (vector spaces) and Math 410 (groups, rings, etc.).
<b>Departmental</b> - Be able to transport mathematical ideas across courses, to recognize a familiar mathematical structure in a new and different context.

## Outcome: Mathematical Systems

Understand the development of a mathematical system from the axioms up.

## Assessment Tools

<b>Exam/Quiz - In Course</b> - Departmental Assessment Exam (Active)
<b>Target:</b> Half the class scoring above 70%
<b>Schedule for Data Analysis &amp; Reporting:</b> February 1

## Related Goals

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