Operational Excellence and Assessment Support

Academic Learning Compacts

College of Sciences
Academic Learning Compacts

Mathematics - B.S.

Discipline Specific Knowledge, Skills, Behavior and Values

1. Students will be able to identify and use the logical principles of mathematical proof.
2. Students will be able to identify and use specific concepts, theorems and results from real analysis.
3. Students will be able to identify and use specific concepts, theorems and results from partial differential equations.
4. Students will be able to recognize mathematically correct arguments and derivations.
5. Students will be able to select the appropriate proof technique for questions in pure mathematics.
6. Students will be able to select the appropriate solution method for questions in applied mathematics.
7. Students will be able to employ mathematical terminology and notation accurately.
8. Students will be able to communicate mathematical information in oral and written form using appropriate mathematical language.
9. Students will demonstrate knowledge in mathematical content.
10. Students will be prepared for advanced study in Mathematics or related fields or will be prepared for employment in Mathematics or a related field.

Critical Thinking

1. Students will be able to identify and use the logical principles of mathematical proof.
2. Students will be able to identify and use specific concepts, theorems and results from real analysis.
3. Students will be able to identify and use specific concepts, theorems and results from partial differential equations.
4. Students will be able to recognize mathematically correct arguments and derivations.
5. Students will be able to select the appropriate proof technique for

questions in pure mathematics.

6. **Students will be able to select the appropriate solution method for questions in applied mathematics.**

Communication

1. **Students will be able to employ mathematical terminology and notation accurately.**
2. **Students will be able to communicate mathematical information in oral and written form using appropriate mathematical language.**

Assessment of Mathematics - B.S. Outcomes

These outcomes will be assessed using a variety of assessment methods, including:

- **Tests**
- **Projects**
- **Problem finding and solving**
- **Papers**