



**Course:** Foundations of Math and Precalculus 10

**Course Description:** Students are expected to be able to do the following:

- Develop thinking strategies to solve puzzles and play games
- Explore, analyze, and apply mathematical ideas using reason, technology, and other tools
- Estimate reasonably and demonstrate fluent, flexible, and strategic thinking about number
- Visualize to explore and illustrate mathematical concepts and relationships
- Apply flexible and strategic approaches to solve problems
- Use mathematical vocabulary and language to contribute to discussions in the classroom
- Take risks when offering ideas in classroom discourse

**Big Ideas:** By the end of this course, students will understand:

Algebra allows us to generalize relationships through abstract thinking.

The meanings of, and connections between, each operation extend to powers and polynomials.

Constant rate of change is an essential attribute of linear relations and has meaning in different representations and contexts.

Trigonometry involves using proportional reasoning to solve indirect measurement problems.

**Core Competencies:**

**Communication**

Students communicate with intention and purpose. They understand that communication can influence, entertain, teach, inspire, and help us make sense of the world and our experiences. They recognize the role the audience plays in constructing meaning, and they make strategic choices to help convey their messages and create their intended impact.

**Thinking**

Students learn to engage in inquiry when they identify and investigate questions, challenges, key issues, or problematic situations in their studies, lives, and communities and in the media. They develop and refine questions; create and carry out plans; gather, interpret, and synthesize information and evidence; and reflect to draw reasoned conclusions.

**Personal & Social**

Students build and maintain diverse, positive peer and intergenerational relationships. They are aware and respectful of others' needs and feelings and share their own in appropriate ways. They adjust their words and actions to care for their relationships.

**Resources:** Foundations of Math and Pre-Calculus 10 Mickelson 2<sup>nd</sup> Edition

**Assessment:**

Formative (30%)

- Self-Assessments
- Homework
- Quizzes

Summative: (70%)

- Tests
- Project



With respects to the First People's Principles of Learning, students may be alternatively assessed in ways that people can display knowledge and subject mastery. The alternative assessment can be storytelling, art or other expressions of self, knowing and learning.

### First Peoples Principles of Learning

Learning is embedded in memory, history, and story.

Learning involves patience and time.

**Expectations:** Attendance in the classroom is mandatory. Students are expected to use their electronics responsibly, speak English, and participate in daily activities. Students will take an active role by discussing, doing work, working in partners or groups, and taking notes. Students are responsible for any missed assignments.

Week	Topics Covered	Assignments
1	Operation on Power	<ul style="list-style-type: none"><li>• Homework</li><li>• Quizzes</li><li>• Test</li></ul>
2-3	Prime Factorization	<ul style="list-style-type: none"><li>• Self-Assessment</li><li>• Project</li><li>• Test</li></ul>
4-5	Functions and Relations	<ul style="list-style-type: none"><li>• Homework</li><li>• Quizzes</li><li>• Test</li></ul>
6-7	Function and Linear Systems	<ul style="list-style-type: none"><li>• Homework</li><li>• Self-Assessment</li><li>• Quizzes</li><li>• Test</li></ul>
8-9	Arithmetic Sequences	<ul style="list-style-type: none"><li>• Homework</li><li>• Self-Assessment</li><li>• Quizzes</li><li>• Test</li></ul>
10-12	Multiplication and Factoring of Polynomial Expressions	<ul style="list-style-type: none"><li>• Homework</li><li>• Self-Assessment</li><li>• Quizzes</li><li>• Test</li></ul>
13	Primary Trigonometric Ratios	<ul style="list-style-type: none"><li>• Homework</li><li>• Self-Assessment</li><li>• Quizzes</li><li>• Test</li></ul>