### Online Mathematical Courseware from

# Maplesoft and the University of Waterloo

The University of Waterloo has formed a partnership with Maplesoft to support their growing online course offerings. Based on their previous experiences with Maple T.A.™, the online testing and assessment system designed especially for math-based content, they turned to Maplesoft to develop a platform that supports effective, engaging, online education for science, technology, engineering, and mathematics (STEM) courses. By combining Maple T.A with tools for developing, managing, and displaying dynamic STEM content, the collaboration has produced an environment for mathematical exposition, exploration, evaluation, and enrichment.

#### **Secondary School Courseware Project**

The first use of this platform is the Secondary School Courseware project. The University is launching a courseware site designed to support high school students and teachers in their precalculus and calculus courses.

- Helps prepare students for university-level mathematics courses
- Provides freely accessible content for use by high school teachers and students around the world
- Consists of a large, searchable suite of lessons, worksheets, self-assessment questions, exercises, and solutions
- Enables teachers and students to interact with dynamic applications to explore concepts and deepen understanding
- Includes quizzes that give instant feedback, allowing students to practice as much as they need, evaluate their level of understanding, and even try out enrichment and extension questions

Work is already underway to use the Maplesoft-developed platform in other online courses offered by the University of Waterloo, including core math courses, and as well as courses in optimization, modeling, computer science, and quantum information systems.

## About the University of Waterloo

The University of Waterloo, based in Ontario, Canada, has long been recognized as the most innovative university in Canada. With its early, wide-spread adoption of co-operative education, its highly popular mathematics contests, and its strong focus on science, technology, engineering, and mathematics, the University of Waterloo is frequently at the forefront of STEM education initiatives.

#### For more information:





Visit the **Centre for Education in Mathematics and Computing** for more information on the Secondary School Courseware project and other University of Waterloo initiatives in education.

cemc.uwaterloo.ca



To learn more about how Maplesoft can help with your online STEM course initiatives, contact the **Maplesoft Teaching Solutions Group**.

www.maplesoft.com/TeachingSolutions

