

## MOOC RELEASED FOR NUMERICAL METHODS

By AUTAR KAW

April 5, 2016: After rigorous and comprehensive development and assessment of the NSF funded innovative [open courseware on Numerical Methods](https://www.coursera.org/course/numerical-methods) since 2002, Professor Kaw is offering a FREE Massive Open Online Course (MOOC) in Numerical Methods – Part 1 of 2 at <https://www.canvas.net/browse/usflorida/courses/numerical-methods>.

The MOOC is Part 1 of a two-part course in Numerical Methods. The course covers the mathematical procedures of differentiation, nonlinear equations and simultaneous linear equations. The MOOC was previously on Udemy.com but is being migrated to CANVAS in two stages. CANVAS has a user friendly interface, a familiar look for many students using CANVAS, and has the capability of online quizzes that are algorithmic.

Start your journey today whether you are learning numerical methods for the first time or just need a refresher. Unlike other MOOCs, you have a lifetime access to the course and you can pace yourself. Ask questions within the course and we will keep the conversation going!



The screenshot shows the Canvas LMS interface for the course "INTRODUCTION TO NUMERICAL METHODS - PART 1 OF 2". The course is self-paced and has a course date of Sept 4, 2016. The duration is ongoing, and the commitment is 6 hours/week. The requirement is Calculus Algebra, the course type is Self-paced, and the credential is None. The instructor is Autar Kaw, Professor. The description states: "This course is the first in a two-part series that introduces numerical methods. Numerical methods are techniques to approximate mathematical procedures (e.g., integrals). Approximations are needed because we either cannot solve the procedure analytically (e.g., the standard normal cumulative distribution function) or because the analytical method is infeasible (e.g., solving a set of a thousand simultaneous linear equations for a thousand unknowns)." The course is currently enrolled.

**About:** Numerical methods are techniques to approximate mathematical procedures (example of a mathematical procedure is an integral). Approximations are needed because we either cannot solve the

procedure analytically (example is the standard normal cumulative distribution function) or because the analytical method is intractable (example is solving a set of a thousand simultaneous linear equations for a thousand unknowns).

**Materials Included:** Textbook Chapters, Video Lectures, Quizzes, Solutions to Quizzes, Online Quizzes

**How Long to Complete:** About 20 hours of lectures need to be watched and estimated time to read textbook and do quizzes is 40 hours. It is a typical 7-week semester length course.

**Course Structure:** For each section, you have video lectures, followed by a textbook chapter, a quiz and its complete solution, and automatically graded online quizzes.

For more information or questions, contact Dr. Autar Kaw at [kaw@usf.edu](mailto:kaw@usf.edu).