



## Certificate of Achievement

# Austin Woodall

has completed the following course:

**PRECALCULUS: THE MATHEMATICS OF NUMBERS, FUNCTIONS AND EQUATIONS**  
**UNIVERSITY OF PADOVA**

This online course provided the essential mathematical knowledge and skills that a student must have in order to take a first course in calculus. It focused upon basic technical aspects, but was also concerned with imparting an understanding of the concepts involved.

5 weeks, 6 hours per week



**Carlo Mariconda**  
Professor of Mathematical Analysis  
University of Padova

1111-2011  
**800**  
ANNI



UNIVERSITÀ  
DEGLI STUDI  
DI PADOVA

The person named on this certificate has completed the activities in the attached transcript. For more information about Certificates of Achievement and the effort required to become eligible, visit [futurelearn.com/proof-of-learning/certificate-of-achievement](https://futurelearn.com/proof-of-learning/certificate-of-achievement).

This certificate represents proof of learning. It is not a formal qualification, degree, or part of a degree.

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### PRECALCULUS: THE MATHEMATICS OF NUMBERS, FUNCTIONS AND EQUATIONS UNIVERSITY OF PADOVA

91%  
OVERALL  
SCORE

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#### STUDY REQUIREMENT

5 weeks, 6 hours per week

#### LEARNING OUTCOMES

- Describe the basic arithmetic of numbers, including absolute value and radicals
- Identify the standard notation for sets and set operations
- Explain the elements of mathematical reasoning and proofs
- Classify the types of functions and their graphs
- Solve polynomials: roots, factoring, and division
- Solve equations and inequalities

#### SYLLABUS

- Numbers: integers, rationals, real numbers, absolute value, induction.
- Functions: graphs, integer powers, roots and radicals, rational powers.
- Algebra: polynomials and their roots, quadratic polynomials, polynomial division, finding roots, binomial coefficients.
- Equations: types of equations, equivalence, polynomial equations, equations involving a radical, equations with several radicals/with absolute values, equations in several variables.
- Inequalities: linear and polynomial inequalities, inequalities involving radicals and absolute values.