

General Information	
Academic subject	Mathematics (I.C. Mathematics and Statistics)
Degree course	Bachelor programme: Food Science and Technology
ECTS credits	6 ECTS
Compulsory attendance	No
Teaching language	Italian

Subject teacher	Name Surname	Mail address	SSD
	Marina Popolizio	marina.popolizio@unisalento.it	MAT/05

ECTS credits details		
Basic teaching activities	4 ECTS Lectures	2 ECTS Laboratory classes

Class schedule	
Period	I semester
Course year	First
Type of class	Lecture

Time management	
Hours	150
In-class study hours	60
Out-of-class study hours	90

Academic calendar	
Class begins	October 9 th , 2017
Class ends	January 26 th , 2018

Syllabus	
Prerequisites/requirements	Basics of Mathematics
Expected learning outcomes	<p><i>Knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Understanding the concept of function and the basics of differential calculus and integral calculation for real functions of a real variable. <p><i>Applying knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Competence in function analysis and in the basic properties of differential and integral calculus. <p><i>Making informed judgements and choices</i></p> <ul style="list-style-type: none"> ○ Choosing and using the most appropriate analytical techniques to solve specific problems in food processes. <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ Ability to describe the qualitative and quantitative trends of specific quantities in the food process. <p><i>Capacities to continue learning</i></p> <ul style="list-style-type: none"> ○ Ability to deepen the knowledge of specific mathematical functions useful in describing or analyzing food production processes. <p>The expected learning outcomes, in terms of both knowledge and skills, are provided in Annex A of the Academic Regulations of the Degree in Food Science and Technology (expressed through the European Descriptors of the qualification)</p>
Contents	<ul style="list-style-type: none"> • Sets and numbers. • Algebraic Equations and Inequalities. • Elements of analytic geometry. • Real functions of one real variable.

	<ul style="list-style-type: none"> • Limits. • Continuous functions and classification of discontinuity points. • Derivable functions and derivation rules.
Course program	
Reference books	<ul style="list-style-type: none"> • A. BRANNAN, A First Course in Mathematical Analysis. The Open University, Milton Keynes. • P. MARCELLINI - C. SBORDONE, Analisi Matematica uno, Editore Liguori, Napoli. • P. MARCELLINI - C. SBORDONE, Esercitazioni di Matematica, vol. I (parte I[^] e II[^]), Editore Liguori, Napoli.
Notes	
Teaching methods	<p>Lectures</p> <p>Lecture notes and educational supplies will be provided by means of online platforms (i.e.: Edmodo, Google Drive...)</p>
Evaluation methods	<p>The exam consists of both written exercises and oral dissertation on the topics developed during the theoretical and theoretical-practical lectures in the classroom, as reported in the Academic Regulations for the Bachelor Degree in Food Science and Technology (article 9) and in the study plan (Annex A).</p> <p>Students attending at the lectures may have a middle-term preliminary exam, consisting of a written test, relative to the first part of the program, which will concur to the final evaluation and will be considered valid for a year.</p> <p>The evaluation of the preparation of the student occurs on the basis of established criteria, as detailed in Annex A of the Academic Regulations for the Bachelor Degree in Food Science and Technology.</p> <p>Non-Italian students may be examined in English language, according to the aforesaid procedures.</p>
Evaluation criteria	<p><i>Knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ To be able to describe the qualitative behavior of mathematical functions. ○ To know and to be able to apply basics of differential calculus for real functions of real variables. <p><i>Applying knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ To be able to adequately apply basic formulas of calculus. <p><i>Making informed judgements and choices</i></p> <ul style="list-style-type: none"> ○ To be able to apply the most appropriate analytical techniques to solve specific problems in food processes. <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> ○ To be able to describe the qualitative and quantitative trends of specific quantities in the food process. <p><i>Capacities to continue learning</i></p> <ul style="list-style-type: none"> ○ To be able to deepen the knowledge of specific mathematical functions useful in describing or analyzing food production processes.
Receiving times	All afternoons by previous agreement by e-mail