

# Essential Mathematics for Global Leaders I

## 概要

Mathematics is often considered as a convenient language in Science. Indeed, Physics, Chemistry, Engineering, Biology, Finance, each scientific disciplines hold at different level some numbers, equations, statistics, modelization problems etc. The objective of this course (Essential Maths I & II) is to provide the foundations to become more autonomous and confident in handling the mathematics occurring in other sciences. Another aspect is to get acquainted with fundamental mathematical terms in English. More specifically, Essential Maths I is targeted to students who have not attended a math course since some time and as such, the main purpose is to reactivate basic mathematical notions already learned. But with the hindsight and maturity gained by graduate students, therefore the topics will not be covered in details (as a consequence at a rather fast pace). Also, topics will be illustrated by examples from other Sciences. If time allows, some new materials like infinite series or multivariate functions may be taught. It is important in Mathematics to practice in order to grasp knowledge, therefore some short Practice Sessions will be set (ideally, with the software Mathematica). Essential Maths I is also supposed to prepare to the course Essential Maths II which will cover more advanced topics at the undergraduate level.

## 講師



**Dahan, Xavier** (ダハン、グザビエ)

仏、エコール・ポリテクニクにて博士号取得。

九州大学特任助教、九州先端科学技術研究所特別研究員を経て、現在リーディング大学院推進センター特任准教授。

## スケジュール

※日程が一部変更になりました

日時	教室	講義テーマ
10月6日(月) 9:00~10:30	カンファレンス ルーム (本館135)	(Tentative) 1. Guidance – Introduction to mathematic through a modern perspective. 2. Equations, Inequalities, Modulus, Polynomials, Fractions. 3. Functions and graphs. Basic functions, basic graphs and their equations. 4. Infinitely small and large: limits 5. Differentiation 6. Integration 7. Geometry in the plane and the space. Vectors, norm, projections, symmetry. 8. Complex numbers. 9. Combinatorics and probability 10. Differential equations.
10月13日(月) 9:00~10:30		
10月20日(月) 9:00~10:30		
10月27日(月) 9:00~10:30		
11月 6日(木) 9:00~10:30		
11月17日(月) 9:00~10:30		
11月24日(月) 9:00~10:30		
12月 1日(月) 9:00~10:30		
12月 8日(月) 9:00~10:30		
12月15日(月) 9:00~10:30		
12月22日(月) 9:00~10:30		
1月 5日(月) 9:00~10:30		
1月12日(月) 9:00~10:30		
1月19日(月) 9:00~10:30		
1月26日(月) 9:00~10:30		
2月 2日(月) 9:00~10:30		

## 学生へのメッセージ

Mathematics appear in many different sciences and as such, studying it is essential. On the other hand, it is not always the most popular subject among students! I will do my best to make this course attractive and to make you more confident with maths...especially in English.