

Mathematics

Maths S1

IDENTIFICATION

CODE : PC-S1-MA-AP
ECTS : 7.0

HOURS

Lectures : 28.0 h
Seminars : 56.0 h
Laboratory : 0.0 h
Project : 0.0 h
Teacher-student
contact : 84.0 h
Personal work : 83.0 h
Total : 167.0 h

ASSESSMENT METHOD

Continuous evaluation :
- test 1 : duration 1,5 h, coefficient 1,5.
- test 2: duration 2 h, coefficient 2.
- final test: duration 3h, coefficient 3.
Concepts studied throughout the semester have to be known as prerequisite for future evaluations.

TEACHING AIDS

Online document under Moodle.

TEACHING LANGUAGE

English

CONTACT

M. MOULIN Sylvain
sylvain.moulin@insa-lyon.fr

AIMS

Calculus with one-variable functions and/or linear algebra.
To be continued in second semester.

Contribution to the following abilities in Engineering School :

C1 - Analyse a system or issue
C2 - Exploit a Real or Virtual system Model
C6 - Communicate an analysis, a scientific path, in an argued and logical discussion

In this frame, the student will work and be tested on the following abilities :

C111 - To split up a problem or a system into its component parts in interaction
C14 - To build a scheme of the system or the problem
C15 - To identify problematics or objectives
C16 - To build a proof.
C21 - To compute by graphical resolution an exact or approximate solution
C23 - To estimate errors induced by the model implementation
C25 - To use algebraic and numerical computational techniques.
C55 - To synthetize intermediate results in response to questioning.
C62 - To be able to speak with a satisfying level of langage aiming at a good balance between a usual and

CONTENT

One-variable functions calculus with few repetitions from high school curriculum (Math Speciality).
Linear Algebra.

To be continued in the second semester.

BIBLIOGRAPHY

Azoulay-Avignant : Mathématiques [Ediscience]
Guinin-Aubonnet-Joppin : Précis de Mathématiques [Bréal]
Thuillier-Belloc : Mathématiques [Masson]
Lemberg: Bien commencer ses études en mathématiques [Vuibert]
Balac-Sturm : Algèbre et Analyse 1ère année et Exercices de 1ère année [PPUR]

PRE-REQUISITE

Complete curriculum of a European scientific high school.