

Mathematics

Maths S2

IDENTIFICATION

CODE : PC-S2-MA-C
ECTS : 5.0

HOURS

Lectures : 19.5 h
Seminars : 45.0 h
Laboratory : 0.0 h
Project : 0.0 h
Teacher-student
contact : 64.5 h
Personal work : 67.0 h
Total : 131.5 h

ASSESSMENT METHOD

- IE1 : duration 1,5 h, coefficient 1,5.
- IE2 : duration 1,5 h, coefficient 1,5.
- IEF : duration 2h, coefficient 2.
Concepts from the first semestre
and seen throughout the semestre
are necessary to all the evaluations.

TEACHING AIDS

Online documents on Moodle.

TEACHING LANGUAGE

French

CONTACT

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

AIMS

Follows the first semester.
One variable functions calculus and/or Linear Algebra.
Lessons are in French.

Contribution to the following abilities in Engineer 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

Tests based on the following abilities :

- C11 - 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
- C54 - To interpret some results.

CONTENT

One-variable functions calculus and linear algebra following the first semester curriculum.

Over the whole year :

- Usual functions
- Limits
- Continuity
- Differentiability
- Equivalents
- Taylor expansions
- Polynomials
- Vector spaces
- Linear Maps
- Matrices

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

PC-S1-MA-C

INSA LYON

Campus LyonTech La Doua

20, avenue Albert Einstein - 69621 Villeurbanne cedex - France
Phone +33 [0]4 72 43 83 83 - Fax +33 [0]4 72 43 85 00
www.insa-lyon.fr