INSA INSTITUT NATIONAL DES SCIENCES APPLIQUÉES LYON

DPT GENIE CIVIL ET URBANISME
CIVIL ENGINEERING AND URBANISM
INSA Campus LyonTech - 8 rue des Sports
Batiment Eugène Freyssinet - 69621 VILLEURBANNE
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Engineering methods

Surveying

IDENTIFICATION

CODE : GCU-3-S2-EC-TOP
ECTS : 1.0

HOURS

Lectures :	4.0 h
Seminars :	11.0 h
Laboratory :	0.0 h
Project :	0.0 h
Teacher-student contact :	15.0 h
Personal work :	10.0 h
Total :	25.0 h

ASSESSMENT METHOD

Written exam 2h

TEACHING AIDS

Duplicated documents

TEACHING LANGUAGE

French

CONTACT

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AIMS

This module is part of the course unit GCU-S6-OUTILS-2 and contributes to:

Competences in Engineering Science:
A5- Process data

Competences in Humanities, Documentation and Physical and Sports Education:
B3- Interact with others, work as a team

Competences specific to the specialty:
C24- Contribute to organize construction sites, to the compliance of safety rules and deadlines

Allows the student to work and be evaluated on the following knowledge:
- Master the use of topographic devices - levels, theodolites, distance-meters - to achieve a leveling.
- Perform angular measurements and distances.
- Establish a map of a defined area.

Allows the student to work and be evaluated on the following abilities:
- General principles of topography and estimation of errors.
- Principle of direct leveling.
- Angular and distance measurements: theodolites and distance-meters.
- Topographic calculations.

CONTENT

Aims are to propose a training in surveying :

- General introduction and error estimation,
- Principals of levelling and field work,
- Angular and distance measurements (Theodolites and distance-meters),
- Field measurements and realisation of topographic plans (by using autocad),
- Setting out a new building project.

BIBLIOGRAPHY

Brabant, M. (2000). Maîtriser la topographie : des observations au plan. Paris : Eyrolles, 552 p.