

## EX210 : Optional units O71

### Shared by UV(s) :

M7-C Partial Derivative Equations - Optional unit O71 page 0

### To choose from :

MF208 Free-surface flows page 0  
MS203 Structural analysis page 0

### ECTS credits :

3.00

### Number of hours :

Combined lecture and tutorial classes : 36.00

### Teacher(s) :

LAC Patrick

### Title :

Optional units O71

## MF208 : Free-surface flows

**Shared by choice module(s) :**

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**ECTS credits :**

3.00

**Evaluation :**

S1: CC x1; S2: ET(2h,E,sd,ca) x1

**Number of hours :**

Combined lecture and tutorial classes : 36.00

Individual work : 18.00

**Teacher(s) :**

COQUERELLE Mathieu

**Title :**

Free-surface flows

**Abstract :**

This lecture aims at describing the physics involved in free-surface flows, including modeling aspects. Surface tension and capillary effects are introduced. Static and dynamic contact angles are discussed, wetting processes and various laws are demonstrated.

# MS203 : Structural analysis

## Shared by choice module(s) :

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## ECTS credits :

3.00

## Evaluation :

S1: CC; S2: ET(2h,E,sd,sc)

## Number of hours :

Combined lecture and tutorial classes :                      36.00

Individual work :    18.00

## Teacher(s) :

LAC Patrick

## Title :

Structural analysis

## Abstract :

Virtual work theorem (VWT) - Formulation of structural models using VWT - Discretization of VWT by Galerkin method and finite element method - Implementation of 1D and 2D finite elements.

## Plan :