MASTER GÉNIE CIVIL

RÉSUMÉ DE LA FORMATION

Type de diplôme : Master
Domaine ministériel : Sciences, Technologies, Santé

PRÉSENTATION

Presentation

The aim of this master is to train scientific experts in Mechanics and Physics high potential fields such as civil engineering structures, coastal engineering, geomechanics or physics of porous media. The master develops around two shared courses: Structures of civil and coastal engineering and Mechanics and Physics in Porous Media. Those two academic courses cover a wide spectrum of interests ranging in scale from a pore to a structure.

This international master’s degree in Physics and Simulation in Civil Engineering offers multidisciplinary key courses to achieve an advanced specialist level in the aforementioned fields. It is suited for students planning both an academic or an industrial career and provides the theoretical basis and the practical expertise required to pursue in research or R&D structures or companies.

The master is fully taught in English and is hosted at ISA BTP Engineering School in Anglet (France). ISA BTP is highly recognised by the scientific and the professional communities and certified by ISO-9001 and EUR ACE.

The program is carried out in close collaboration with SIAME and LFCR research laboratories where numerical and experimental practicals will be performed. Students will also benefit from the global research environment and administrative support of the University Pau & Pays Adour, the E2S I-site program and the research federation IPRA.

ORGANISATION DE LA FORMATION

- M2 Computations in Civil and Coastal Engineering (CCCE)
- M2 Mechanics and Physics in Porous Media (MPPM)

PLUS D'INFOS

Crédits ECTS : 60
Durée : 1 an
Niveau d'étude : BAC +5
Public concerné
* Formation initiale
* Étudiants étrangers
* Formation continue
Nature de la formation :
Diplôme
Langue
d’enseignement : Fully taught in English
Effectif : 10 per course
Stage : Obligatoire

EN SAVOIR PLUS
Details and inscriptions

LABORATOIRE(S) PARTENAIRE(S)
IPRA - FR2952
LFCR - UMR5150
SIAME - EA 4581

ETABLISSEMENT(S) PARTENAIRE(S)
ADMISSION REQUIREMENTS

Academic requirements

Applicants must hold a Bachelor of Engineering, Bachelor of Science or Equivalent.

Applicants must be fluent in English, both in writing and speaking. An applicant whose native language is not English has to take a recognized international English test.

English Language Requirements

Minimum required score: CECRL B2 level in English

Application deadline: June 30, 2018

COMPOSANTE

Collège Sciences et Technologies pour l’Energie et l’Environnement (STEE)
ISABTP - Institut supérieur aquitain du BTP

LIEU(X) DE LA FORMATION

Anglet

RESPONSABLE(S)

Gregoire David
david.gregoire@univ-pau.fr
Tel. +33 559574479
The CCCE course focuses on the modeling and simulation of complex civil engineering structures submitted to special or extreme loadings with emphasis on advanced material modeling, geotechnical computation and a focus on coastal engineering structures.

Program objectives

* Prepare students at an advanced specialised level to meet present and future challenges in civil or coastal engineering, geomechanics or physics of porous media
* Develop engineering research skills to engage in quality and successful research,
* Prepare students for leading positions in industry and government Research and Development departments.

Student Learning Outcomes

At the end of this program, the students in the « Physics and Simulation in Civil Engineering Master” will be able to:

* Demonstrate mastery of a solid body of knowledge and skills in engineering science to solve relevant problems,
* Design and conduct experiments, analyze and interpret data,
* Review, analyze, and interpret the body of scientific literature, contemporary issues and innovations in physics and civil engineering area,
* Produce quality research,
* Carry out a research project to understand a physical phenomenon pertaining to civil engineering, coastal engineering, geomechanics or physics of porous media.
ADMISSION REQUIREMENTS

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English Language Requirements

**Minimum required score:** CECRL B2 level in English

POURSUITE D’ÉTUDES

Prospects for employment or further study

**Sectors:** Civil engineering, coastal engineering, geomechanics, physics of porous media

**Fields:** Research and R&D structures

**Positions:** PhD student and R&D Engineer

COMPOSANTE

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LIEU(X) DE LA FORMATION

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M2 Mechanics and Physics in Porous Media (MPPM)

**PRÉSENTATION**

The MPPM course focuses on the mechanics and physics in porous media. It encompasses experimental characterisation of porous media by indirect porosimetry and direct imaging, poromechanical behaviour modelling, transport properties estimation, fluid-solid couplings and properties of confined fluids in porous media.

**OBJECTIFS**

Program objectives

* Prepare students at an advanced specialised level to meet present and future challenges in civil or coastal engineering, geomechanics or physics of porous media

* Develop engineering research skills to engage in quality and successful research

* Prepare students for leading positions in industry and government Research and Development departments.

**SAVOIR FAIRE ET COMPÉTENCES**

Student Learning Outcomes

At the end of this program, the students in the « Physics and Simulation in Civil Engineering Master” will be able to:

* Demonstrate mastery of a solid body of knowledge and skills in engineering science to solve relevant problems

* Design and conduct experiments, analyze and interpret data,

* Review, analyze, and interpret the body of scientific literature, contemporary issues and innovations in physics and civil engineering area,

* Produce quality research,

* Carry out a research project to understand a physical phenomenon pertaining to civil engineering, coastal engineering, geomechanics or physics of porous media.

**PLUS D’INFOS**

Crédits ECTS : 60

Public concerné

* Formation initiale

* Formation continue

* Etudiants étrangers

Effectif : 10

Stage : Obligatoire

**EN SAVOIR PLUS**

Details and inscriptions

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LFCR - UMR5150

SIAME - EA 4581

**ETABLISSEMENT(S) PARTENAIRE(S)**

ISA BTP Engineering School
INFORMATIONS SUPPLÉMENTAIRES

Go to the program website here.

CONDITIONS D'ACCÈS

ADMISSION REQUIREMENTS

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**Fields:** Research and R&D structures

**Positions:** PhD student and R&D Engineer

COMPOSANTE

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LIEU(X) DE LA FORMATION

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