

# UE GPU Computing



Level  
Baccalaureate  
+5



ECTS  
6 credits



European Credit  
Transfer and  
Accumulation  
System (ECTS)  
Exchange  
credits  
6.0



Component  
UFR IM2AG  
(informatique,  
mathématiques  
et  
mathématiques  
appliquées)



Semester  
Automne

- > **Teaching language(s):** English
- > **Open to exchange students:** Yes
- > **European Credit Transfer and Accumulation System (ECTS) Exchange credits:** 6.0
- > **Code d'export Apogée:** GBX9AM49

## Presentation

### Description

In this course, we will introduce parallel programming paradigms to the students in the context of applied mathematics. The students will learn to identify the parallel pattern in numerical algorithm. The key components that the course will focus on are : efficiency, scalability, parallel pattern, comparison of parallel algorithms, operational intensity and emerging programming paradigm. Through different lab assignments, the students will apply the concepts of efficient parallel programming using Graphic Processing Unit. In the final project, the students will have the possibility to parallelize one of their own numerical application developed in a previous course.

### Course parts

Lectures	Lectures (CM)	18h
Practical work	Practical work (TP)	18h

### Recommended prerequisites

C or C++, Compiling, Data structures, Architecture, Concurrency

**Period** : Semester 9

## Useful info

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### Contacts

Program director

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### Campus

› [Grenoble - University campus](#)