

Optimization Master program - seminar and invited courses

In our master program you can get ECTS in the following ways :

- our regular courses : the 10 core courses of the first term (basic or advanced, 5 ECTS and 30h each), and specialized courses of the second term (4 ECTS each, between 20 and 24h each).
- courses from other master programs listed in our webpage
- courses from other master programs that you could propose yourself
- research internship (20 ECTS in the second term)
- language course (2 ECTS, either in the first or in the second term)
- the invited course of the second term (this year, algorithmic game theory, 2 ECTS)
- seminars (2 ECTS, either in the first or in the second term)

Difference between regular courses, invited courses and seminars

The regular courses of a master program are meant for master students. They can occasionally be attended by PhD students or other colleagues, but the level is set on the level of master students. They typically last between 20h and 30h and take the time to provide full details. There is an examination. The teacher is a professor or researcher from our institutions or typically from Ile-de-France.

An invited course is given by a guest from abroad or from other French cities, who comes to Paris for some time. The course is open to master students, PhD students, researchers. . . It is often shorter (also due to constraints in the planning of the guest, but this is not the only reason). It typically presents in a pedagogical way the theory the guest is a specialist of, including recent results which could be of interest for researchers. In general there is not a standard examination.

A seminar (or a talk : often we use the word seminar to denote a cycle of talks, organized periodically in front of a common audience, with different speakers each time) is a 1h talk by a researcher who typically presents his own recent results. It is attended by other researchers, including PhD students. It could be hard for master students, but it is a very interesting exercise : it allows to have an idea of the current research topics, and of the scientific research is presented in the academic world.

Validation of invited courses and of seminars

The invited course of the second term (Bubeck) is validated as an independent course, for 2 ECTS. We require students who want to validate to write a short report (3-4 pages) on the content of the course, in order to show that they really learnt something from the course. The grade is based on the report and on assiduity.

The invited course of the first term (Gondzio) is NOT validated as an independent course. It is part of the grade of ACO II. We require students who want to validate ACO II to write a short report (3-4 pages) on the content of Gondzio's course, in order to show that they really learnt something from the course. There will be a unique grade, based on the evaluation of the computer part by Gilbert, and on the report and on assiduity for Gondzio's part.

In order to get 2 ECTS for seminars you have to attend seminars (choosing from the approved lists on the websites or proposing other seminars to the director of the program) and then write a short report (again, 3-4 pages) about one of the talks you attended. The grade is obtained in the following way : let P be defined as a score

where one obtains 1.5 points for every attended seminar and 2.5 points if there are two seminars in a row in the same day, and let S be the grade (between 0 and 20) that we give to the summary ; the final grade is obtained as $\min\{15, P\} * (12 + S)/24$, rounded up to the next integer.

Notice that you don't have to choose a unique cycle of seminars (for instance, attending talks only from Séminaire Parisien d'Optimisation) : you can mix all of them, and you don't have to tell us in advance which one will you choose.

If you want to attend Gondzio's course but not ACO II

The attendance to the course by Jacek Gondzio can be considered as attending some seminars and counted into the score P for the seminar grade, for those students who do not validate ACO II. Full attendance is credited 7 points in the computation of P .

Recommendations

- go to seminars
- go to Bubeck' course
- go to Gondzio's course, whether or not you validate ACO II
- do not wait April or May to start going to seminars

of course if you go to many seminars and you do not validate ACO II Gondzio's course could become useless from the grade point of view, but it will not be useless for your own culture.

Most seminars have already started. Some take place on Monday morning, when most of you have no courses for the moment. It could be a good occasion to attend them (this applies to the Game Theory Seminar and to the Calculus of Variations Working Group).