

**SAPIENZA UNIVERSITÀ DI ROMA**

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**DOCTORATE IN  
MATHEMATICAL MODELS FOR ENGINEERING  
ELECTROMAGNETICS AND NANOSCIENCES**

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**PLAN OF STUDY AND RESEARCH  
CURRICULA IN  
MATHEMATICS FOR ENGINEERING  
ELECTROMAGNETICS**

1. FIRST YEAR

The curriculum requires all first-year students to follow three general advanced courses, depending on the student's previous experience. As a general rule these courses are worth 3 CFU each.

The Board may authorize plans of study deviating from this rule, when justified.

Seminars are organized every year by the Faculty and are usually given by professors and researchers of other Italian or foreign Universities. Seminars are not quantified in terms of CFU.

Other information:

- (1) At the beginning of the first year students must present to the Board of Professors a plan of study.
- (2) At the beginning of the first year each student should choose as a tutor a member of the Board; the tutor follows and helps the student along the whole cycle of Doctorate.
- (3) By the end of June, each student must present to the Board a research plan, eventually leading to the final dissertation under the advice of a supervisor. The plan must fall within the scientific interests of the Doctorate. The Board approves the student's research plan, possibly after consulting an external referee.  
The choice of both the tutor and the supervisor may be postponed if allowed by the Board.
- (4) By October 15 students are required to present to the Board a statement accounting for their activity in the year. By October 31 the Board evaluates the student's activity and advancements

in research and study, and may approve the admission to the following year.

Summary of first year activity:

<b>Activity</b>	<b>CFU</b>
General advanced courses	9
Seminars or laboratory	21
Research and related to research	18
Other activities proposed by the student and approved by the Board	12

## 2. SECOND YEAR

The curriculum requires all second-year students to follow two general advanced courses, depending on the student's previous experience and research plans. As a general rule these courses are worth a total of 3 CFU.

Seminars are organized every year by the Faculty and are usually given by professors and researchers of other Italian or foreign Universities. Seminars are not quantified in terms of CFU.

The Board may authorize plans of study deviating from this rule, when justified.

Other information:

- (1) At the beginning of the second year students must present to the Board of Professors a plan of study.
- (2) The student should develop the research required by the subject of the thesis, working full-time in the laboratories of the Departments involved in the Doctorate or possibly in other Italian or foreign institutions, following Coordinator's authorization. The appearance of the results of the student's research in international scientific journals or proceedings, and in general the advancement of the thesis, are made known to the Coordinator.
- (3) By October 15 students are required to present to the Board a statement accounting for their activity in the year. The Board, by October 31, evaluates the student's activity and advancements in research and study, approving the admission to the following year.

Summary of second year activity:

<b>Activity</b>	<b>CFU</b>
General advanced courses	3
Seminars or laboratory	21
Research and related to research	24
Other activities proposed by the student and approved by the Board	12

### 3. THIRD YEAR

The curriculum does not require third-year students to follow courses.

Seminars are organized every year by the Faculty and are usually given by professors and researchers of other Italian or foreign Universities. Seminars are not quantified in terms of CFU.

The Board may authorize plans of study deviating from this rule, when justified.

Other information:

- (1) The third year is entirely devoted to the preparation of the final dissertation.
- (2) By October 31 the student must send a copy of the dissertation to the referees, who are chosen by the Faculty. The referees must turn in their report by December 15; if the Dissertation is not considered complete, they can recommend a further period of work on it, not longer than six months.
- (3) At the end of the third year the student must write under the tutor's guidance a final statement on the work done in the three years of Doctorate. This statement is sent to the Coordinator and made available to the Board, together with the referees' reports.

The students are also required to give to the Board a presentation, about 30 minutes long, about their thesis. After the presentation the Board evaluates the student's activity and may approve the admission to the final exam. The admission must take place at least one month before the Final Exam.

- (4) The Final Exam must be held by February 28: the students present the results they obtained to the Examination Committee, in about 30 minutes, answering the questions of the Committee. After the presentation the Committee produces a final statement and may propose the awarding of the title. The Final Exam can be taken only once.

Students who obtained a suspension not longer than six months, or whose thesis was found not complete by the referees, must take the Final Exam by September 30.

Summary of third year activity:

<b>Activity</b>	<b>CFU</b>
General advanced courses	0
Seminars or laboratory	24
Research and related to research	24
Other activities proposed by the student and approved by the Board	12

#### 4. GENERAL REMARKS

- (1) Students are expected to perform their research activity, and laboratory activity when required, on a daily basis.
- (2) Students may undertake limited (auxiliary) teaching duties which in no case may compromise their study or research duties. Such teaching duties must be authorized by the Coordinator.
- (3) Students should visit other Italian or foreign Universities or research institutions for at least three months overall, during the whole Doctorate course.

For periods up to six months only the Coordinator's authorization is required. For longer periods the justified approval of the Board is necessary.

The total length of the periods spent in other institutions may never exceed a half of the duration of the Doctorate course, excepting the case of specific conventions.