



POLITÉCNICA

INTERNATIONAL
CAMPUS OF
EXCELLENCE

COORDINATION PROCESS OF
LEARNING ACTIVITIES
PR/CL/001



E.T.S. de Ingeniería y Sistemas
de Telecomunicación

ANX-PR/CL/001-01

LEARNING GUIDE

SUBJECT

593000415 - Advanced Research Seminars Ii

DEGREE PROGRAMME

59AF - Master Univ. Ing. Sistemas y Servicios para la Sociedad de la Información

ACADEMIC YEAR & SEMESTER

2020/21 - Semester 2

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Learning guide

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1. Description

1.1. Subject details

| | |
|---------------------------------------|--|
| Name of the subject | 593000415 - Advanced Research Seminars II |
| No of credits | 5 ECTS |
| Type | Optional |
| Academic year of the programme | First year |
| Semester of tuition | Semester 2 |
| Tuition period | February-June |
| Tuition languages | English |
| Degree programme | 59AF - Master Univ. Ing. Sistemas y Servicios para la Sociedad de la Informacion |
| Centre | 59 - Escuela Tecnica Superior de Ingenieria y Sistemas de Telecomunicacion |
| Academic year | 2020-21 |

2. Faculty

2.1. Faculty members with subject teaching role

| Name and surname | Office/Room | Email | Tutoring hours * |
|--|--------------------|------------------------|---|
| Cesar Benavente Peces (Subject coordinator) | 7007 | cesar.benavente@upm.es | M - 12:30 - 13:30 Tu - 12:30 - 13:30 W - 12:30 - 13:30 Th - 12:30 - 13:30 F - 12:30 - 13:30 |

* The tutoring schedule is indicative and subject to possible changes. Please check tutoring times with the faculty member in charge.

2.2. Research assistants

| Name and surname | Email | Faculty member in charge |
|-------------------|-------------------|--------------------------|
| Tena Ramos, David | david.tena@upm.es | Benavente Peces, Cesar |

2.3. External faculty

| Name and surname | Email | Institution |
|------------------|-------------------------------|---------------------|
| Henryk Richter | henryk.richter@uni-rostock.de | Universität Rostock |
| Volker Kühn | volker.kuehn@uni-rostock.de | Universität Rostock |
| Steffen Lochmann | Steffen.Lochmann@hs-wismar.de | Hochschule Wismar |
| Andreas Ahrens | andreas.ahrens@hs-wismar.de | Hochschule Wismar |

3. Prior knowledge recommended to take the subject

3.1. Recommended (passed) subjects

The subject - recommended (passed), are not defined.

3.2. Other recommended learning outcomes

- Degree in Electrical and Electronic Engineering, Computer Science Engineering o Information and Communications Technologies Engineering

4. Skills and learning outcomes *

4.1. Skills to be learned

CB10 - To have the learning abilities to continue studying in a mostly self-guided or autonomous manner.

CB6 - To have knowledge that provides the basis or the opportunity of being original to develop and/or to apply ideas, usually in a research context.

CB7 - To be capable of applying the students' acquired knowledge, as well as their problem solving abilities, to new or not well-known environments in broader (or multidisciplinary) contexts that are in the framework of their expertise area.

CB9 - To be capable of communicating the conclusions, together with the knowledge and reasons behind them, to both specialized and non-specialized audiences, in a clear and unambiguous manner.

CE.2 - To be capable of analyzing the Information Society services as well as the technological requirements for its implementation, considering Design for All concepts.

CE.3 - To be capable of identifying the enterprise resource planning systems and the customer relationship management systems.

CE.7 - To be capable of proposing, organizing and executing research works in the framework of the Information Society engineering.

CGEN.3 - To be capable of elaborating, planning strategically, leading, coordinating and managing, both technically and economically, projects in the framework of the Information Society engineering, according to ethical, quality and environmental criteria.

CGEN.5 - To be capable of applying the principles of economy and management of human resources and projects, as well as the legislation, regulation and normalization in the framework of the Information Society engineering.

4.2. Learning outcomes

RA2 - Evaluate communication standards typically used in the deployment of wireless systems

RA1 - Design radiating systems to deploy radio communication systems

* The Learning Guides should reflect the Skills and Learning Outcomes in the same way as indicated in the Degree Verification Memory. For this reason, they have not been translated into English and appear in Spanish.

5. Brief description of the subject and syllabus

5.1. Brief description of the subject

The subject "Advanced Research Seminars II" aims at teach the student the state of the art in certain specific aspects of the specialization of the studies that he is undertaking as well as obtaining transversal competences related to professional practice and scientific activity.

Consequently, the organization of the subject is specific and in accordance with its objectives.

It is organized in a number of specific thematic seminars, aimed at intensifying the training of the student, and more specifically to improve the competences and learning outcomes specific to the Master.

Each seminar has a teaching load of between 1 and 2 ECTS, and are taught by researchers specialized professors and reseachers in disciplines related to the objectives of the Master program.

In addition, most of the participating researchers are professors come from foreign institutions, in order to be able to offer the student the point of view and activity of other centers and research groups, thus enriching the student's education.

The seminars take place in workshops agreed with the investigators based on their availability, so a full closed schedule and planning can't be given.

The teaching schedule is compatible with that of the other subjects.

5.2. Syllabus

1. Seminar 1
2. Seminar 2
3. Seminar 3
4. Seminar 4
5. Seminar 5

6. Schedule

6.1. Subject schedule*

| Week | Face-to-face classroom activities | Face-to-face laboratory activities | Distant / On-line | Assessment activities |
|------|---|------------------------------------|-------------------|---|
| 1 | Development of seminar 1 Duration: 10:00 | | | Bibliography and references search and review Continuous assessment and final examination Not Presential Duration: 01:00 Individual work Continuous assessment and final examination Not Presential Duration: 15:00 Exposition and demonstration of work Continuous assessment and final examination Presential Duration: 01:00 |
| 2 | Development of seminar 1 Duration: 10:00 | | | Bibliography and references search and review Continuous assessment and final examination Not Presential Duration: 01:00 Exposition and demonstration of work Continuous assessment and final examination Presential Duration: 01:00 Individual work Continuous assessment and final examination Not Presential Duration: 15:00 |
| | Development of seminar 1 Duration: 10:00 | | | Bibliography and references search and review Continuous assessment and final examination Not Presential Duration: 01:00 Exposition and demonstration of work |

| | | | | |
|---|--|--|--|--|
| 3 | | | | <p>Continuous assessment and final examination Presential Duration: 01:00</p> <p>Individual work</p> <p>Continuous assessment and final examination Not Presential Duration: 15:00</p> |
| 4 | <p>Development of seminar 1 Duration: 10:00</p> | | | <p>Bibliography and references search and review</p> <p>Continuous assessment and final examination Not Presential Duration: 01:00</p> <p>Exposition and demonstration of work</p> <p>Continuous assessment and final examination Presential Duration: 01:00</p> <p>Individual work</p> <p>Continuous assessment and final examination Not Presential Duration: 15:00</p> |
| 5 | <p>Development of seminar 1 Duration: 10:00</p> | | | <p>Exposition and demonstration of work</p> <p>Continuous assessment and final examination Presential Duration: 01:00</p> <p>Bibliography and references search and review</p> <p>Continuous assessment and final examination Not Presential Duration: 01:00</p> <p>Individual work</p> <p>Continuous assessment and final examination Not Presential Duration: 15:00</p> |
| 6 | | | | |

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Depending on the programme study plan, total values will be calculated according to the ECTS credit unit as 26/27 hours of student face-to-face contact and independent study time.

* The schedule is based on an a priori planning of the subject; it might be modified during the academic year, especially considering the COVID19 evolution.

7. Activities and assessment criteria

7.1. Assessment activities

7.1.1. Continuous assessment

| Week | Description | Modality | Type | Duration | Weight | Minimum grade | Evaluated skills |
|------|---|----------|---------------|----------|--------|---------------|---|
| 1 | Bibliography and references search and review | | No Presential | 01:00 | 2% | 5 / 10 | CB6 CB10 |
| 1 | Individual work | | No Presential | 15:00 | 16% | 5 / 10 | CB7 CGEN.5 CGEN.3 CE.7 CE.2 CE.3 |
| 1 | Exposition and demonstration of work | | Face-to-face | 01:00 | 2% | 5 / 10 | CB9 |
| 2 | Bibliography and references search and review | | No Presential | 01:00 | 2% | 5 / 10 | |
| 2 | Exposition and demonstration of work | | Face-to-face | 01:00 | 2% | 5 / 10 | |
| 2 | Individual work | | No Presential | 15:00 | 16% | 5 / 10 | |
| 3 | Bibliography and references search and review | | No Presential | 01:00 | 2% | 5 / 10 | |
| 3 | Exposition and demonstration of work | | Face-to-face | 01:00 | 2% | 5 / 10 | |
| 3 | Individual work | | No Presential | 15:00 | 16% | 5 / 10 | |
| 4 | Bibliography and references search and review | | No Presential | 01:00 | 2% | 5 / 10 | |
| 4 | Exposition and demonstration of work | | Face-to-face | 01:00 | 2% | 5 / 10 | |
| 4 | Individual work | | No Presential | 15:00 | 16% | 5 / 10 | |
| 5 | Bibliography and references search and review | | No Presential | 01:00 | 2% | 5 / 10 | |
| 5 | Exposition and demonstration of work | | Face-to-face | 01:00 | 2% | 5 / 10 | |
| 5 | Individual work | | No Presential | 15:00 | 16% | 5 / 10 | |

7.1.2. Final examination

| Week | Description | Modality | Type | Duration | Weight | Minimum grade | Evaluated skills |
|------|---|----------|---------------|----------|--------|---------------|---|
| 1 | Bibliography and references search and review | | No Presential | 01:00 | 2% | 5 / 10 | CB6 CB10 |
| 1 | Individual work | | No Presential | 15:00 | 16% | 5 / 10 | CB7 CGEN.5 CGEN.3 CE.7 CE.2 CE.3 |
| 1 | Exposition and demonstration of work | | Face-to-face | 01:00 | 2% | 5 / 10 | CB9 |
| 2 | Bibliography and references search and review | | No Presential | 01:00 | 2% | 5 / 10 | |
| 2 | Exposition and demonstration of work | | Face-to-face | 01:00 | 2% | 5 / 10 | |
| 2 | Individual work | | No Presential | 15:00 | 16% | 5 / 10 | |
| 3 | Bibliography and references search and review | | No Presential | 01:00 | 2% | 5 / 10 | |
| 3 | Exposition and demonstration of work | | Face-to-face | 01:00 | 2% | 5 / 10 | |
| 3 | Individual work | | No Presential | 15:00 | 16% | 5 / 10 | |
| 4 | Bibliography and references search and review | | No Presential | 01:00 | 2% | 5 / 10 | |
| 4 | Exposition and demonstration of work | | Face-to-face | 01:00 | 2% | 5 / 10 | |
| 4 | Individual work | | No Presential | 15:00 | 16% | 5 / 10 | |
| 5 | Bibliography and references search and review | | No Presential | 01:00 | 2% | 5 / 10 | |
| 5 | Exposition and demonstration of work | | Face-to-face | 01:00 | 2% | 5 / 10 | |
| 5 | Individual work | | No Presential | 15:00 | 16% | 5 / 10 | |

7.1.3. Referred (re-sit) examination

No se ha definido la evaluación extraordinaria.

7.2. Assessment criteria

General rules.

1. **Extension of the task. The task (theoretical description).** In any case, must have a minimum of 20 A4 pages written with Arial 10 points and double spaced, and an additional cover page with the title of the work and personal data of the student, and additional pages with used references.
2. **Practical developments: complementing the theoretical work with practical demonstrations will have a greater value, due to the student's interest in learning and the difficulty they may entail.**
3. **The task is individual in character and must be related to the subjects related to the seminars.**
4. **Evaluable aspects. The task must be original and if possible with a high practicality.**
5. **References should be appropriate in relation to the task area. Relevant international journals, transactions and electronic publications must be used, which can be accessed through the UPM's resources.**
6. **The evaluable aspects are those that are described in the following table with the corresponding weight.**

| Assessed aspects | % |
|--------------------------|----|
| Originality | 30 |
| Referencies | 10 |
| Accuracy | 10 |
| Clarity | 10 |
| Practical demonstrations | 40 |

8. Teaching resources

8.1. Teaching resources for the subject

| Name | Type | Notes |
|--|--------------|-------|
| Classroom | Equipment | |
| White/black board | Equipment | |
| Overhead projector | Equipment | |
| Slides | Bibliography | |
| b-learning platform | Web resource | |
| Library | Bibliography | |
| Access to electronic bibliographic resources | Bibliography | |

9. Other information

9.1. Other information about the subject

The seminars are developed in **English**.

Both in the Moodle platform and the faculty website the information and schedule of the new activities will be periodically updated.

The number of seats will be limited to guarantee the attendees' health according to current regulation due to COVID-19.