

SPECIFIC REGULATIONS FOR THE DOCTORAL PROGRAMME IN SUPPLY CHAIN AND OPERATIONS MANAGEMENT

Approved by the councils of the Department of Management and the Institute
of Industrial and Control Engineering



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TEACHING AND RESEARCH STAFF OF THE PROGRAMME

The teaching and research staff of the programme is made up of professors and researchers who belong to the Department of Management (OE) and/or the Institute of Industrial and Control Engineering (IOC) and have proven research experience¹ in the subject area of the programme. The academic committee of the doctoral programme studies and, if appropriate, approves applications to join the programme by teaching and research staff from other units that conduct research in the subject area of the programme.

GOVERNING BODIES OF THE DOCTORAL PROGRAMME

The governing bodies of the Supply Chain and Operations Management programme of the Universitat Politècnica de Catalunya are:

- The academic committee of the doctoral programme
- The doctoral programme coordinator

THE ACADEMIC COMMITTEE OF THE DOCTORAL PROGRAMME

The academic committee of the doctoral programme organises, designs and coordinates the doctoral programme. The committee is ultimately responsible for ensuring the quality of the activities related to the programme and for implementing the relevant measures for continuous improvement. It is also responsible for admissions to the programme. Its competences are regulated in the Internal Regulations of the Doctoral School (<http://doctorat.upc.edu/ca/gestio-academica/normatives/reglament-de-regim-intern-de-lescola-de-doctorat-de-la-upc>).

The academic committee consists of:

- The doctoral programme coordinator.
- Five members of the teaching and research staff of the programme, for a period of three years. There must be at least two members of the OE and two members of the IOC. The programme coordinator presents a proposal for members that must be approved by the councils of the OE and the IOC.
- A student representative from the doctoral programme.

¹ In accordance with the provisions of the Internal Regulations of the Doctoral School (<http://doctorat.upc.edu/ca/gestio-academica/normatives/reglament-de-regim-intern-de-lescola-de-doctorat-de-la-upc>), they must meet at least one of the following conditions: (a) they must have supervised a doctoral thesis that has been defended in the last five years; (b) they must have an active research premium obtained in the last seven years; (c) they must have been the principal investigator in a project funded by an external public institution and awarded in a competitive call in the last five years or currently be acting as such.

- The administrative officer of the programme, who acts as the secretary of the committee in an advisory, non-voting capacity.

In the event of a tied vote on a decision, the coordinator has the casting vote.

THE DOCTORAL PROGRAMME COORDINATOR

The programme coordinator is a member of the teaching and research staff of the programme and is appointed by the rector upon the proposal of the directors of the OE and the IOC. This person must either belong to the OE and be assigned to the IOC or be in possession of a favourable report issued by the councils of the OE and the IOC.

ADMISSION

PROFILE

The most appropriate educational background for admission to the doctoral degree in Supply Chain and Operations Management is a bachelor's degree in science or technology and a master's degree in industrial engineering, industrial scheduling, logistics or supply chain management, that is, a master's degree related to the scientific subject area of the programme.

ADMISSION CRITERIA

The academic committee studies candidates' applications to consider their admission. The following specific admission requirements are taken into consideration:

- Candidates must be sufficiently motivated to pursue a doctoral degree.
- They must hold a bachelor's degree, a master's degree or equivalent in industrial scheduling, industrial engineering, logistics or supply chain management. They may gain admission to the doctoral programme from other degrees if they can prove that they have studied (on the degree in question or other degrees) topics related to the scientific subject area of the doctoral programme. In any case, knowledge of analytical techniques such as optimisation (mathematical programming) or statistics is required.
- They must be able to demonstrate an English language level that enables them to understand the scientific literature and communicate the results of research.

Admissions to the programme are granted throughout the year. Each application is studied and assessed by the committee in accordance with the criteria detailed below. These criteria are used to prioritise applications if the number of applications is higher than the number of places. In any event, the minimum score for admission is 60 out of 100.

Criterion	Score
Relevance of the qualification (0-30 points)	<ul style="list-style-type: none"> ▪ Industrial engineering, industrial scheduling, logistics or supply chain management: 30 points ▪ Other engineering degrees with education in related subjects: 20 points

	<ul style="list-style-type: none"> ▪ Other engineering degrees without education in related subjects: up to 15 points ▪ Other degrees: up to 10 points
Awarding university (0-30 points)	<ul style="list-style-type: none"> ▪ Universities ranked in the top tercile in a prestigious international ranking: 30 points ▪ Universities ranked in a prestigious international ranking: 10-20 points ▪ Universities not ranked in a prestigious international ranking: 0 points
Academic record (0-25 points)	<ul style="list-style-type: none"> ▪ Equivalent to an A: 25 points ▪ Equivalent to a B: 10 points ▪ Equivalent to a C or lower: 0 points
Research experience (0-10 points)	<ul style="list-style-type: none"> ▪ Research experience and authorship or co-authorship of scientific publications (papers or conference proceedings): 5-10 points ▪ Research experience without publications: 2-4 points ▪ No research experience: 0 points
Relevance of the research interests to the programme research lines or topics * (0-5 points)	<ul style="list-style-type: none"> ▪ The topic of interest matches one in the list: 5 points ▪ The topic of interest is related to one in the list: 2 points ▪ The topic of interest is not related to any in the list: 0 points

* Programme research lines:

- Supply chain design and management
- Operations management
- Aggregate and integrated business planning
- Assembly line design and balancing
- Organisation of working time
- Scheduling
- Urban logistics, reverse logistics (green logistics) and port logistics
- Decision support systems for sustainable energy

BRIDGING COURSES

The academic committee may require candidates to pass specific bridging courses, which may include research or cross-disciplinary training.

Upon the proposal of the tutor or the thesis supervisor, the committee considers and, if necessary, indicates the bridging courses necessary to complete the training of its doctoral students so that they acquire specific knowledge or skills for the programme. This may include courses, seminars or other activities planned or organised by the committee, the Doctoral School or other organisations.

RESEARCH PLAN

Within one year of completing their first enrolment, doctoral candidates must prepare a research plan and submit it to the academic committee. The research plan must be endorsed by the thesis

supervisor and academic tutor, and may be improved and made more specific over the course of the programme.

Failure to submit the plan within this period leads to dismissal from the programme. In the event that such a failure is justified, the doctoral candidate will not be dismissed but will be awarded an unsatisfactory assessment in the corresponding year.

The research plan must include:

- Personal details of the doctoral candidate and the proposed thesis supervisor.
- Title of the research plan.
- Summary of the research plan (between 100 and 150 words).
- Definition of the research problem or topic.
- Objectives of the proposed thesis.
- Expected results and contributions.
- Literature review.
- Working hypothesis, if applicable.
- Methodology, work plan, schedule and resources for writing the thesis.
- Proposed table of contents of the thesis.
- Bibliography.
- Publications by the doctoral candidate in the field of study, if any.

The maximum length of the document is 30 pages, with single spacing and in a 12-point font or equivalent.

The authorisation of the thesis supervisor and a favourable report by the academic committee are essential for the research plan to be considered.

The research plan must be publicly presented and defended to an examination committee in the call immediately following the submission of the plan to the academic committee. The programme establishes two calls for defending the research plan, one in February and the other in June. The result of the defence is considered in the assessment of the doctoral candidate in the corresponding year.

The examination committee that assesses the research plan must be made up of three members who hold a doctoral degree and have proven research experience, and must be approved by the academic committee of the doctoral programme.

The research plan is assessed in an oral presentation by the doctoral candidate lasting 30 minutes at most, followed by a debate with the members of the committee lasting no longer than an hour. The aim is to assess the state of the doctoral candidate's knowledge of the topic of study and the feasibility of the proposed research.

In the assessment report, the committee includes the result of the assessment and, if it is unsatisfactory, the main reasons for this. The result of the assessment and its justification is communicated to the doctoral candidate within a week.

A positive assessment is essential for the doctoral candidate to continue on the programme. Should the committee detect significant deficiencies, the assessment will be unsatisfactory and the doctoral candidate will have to submit a new research plan within six months. The month of August does not count towards this deadline. The second research plan is assessed by the academic committee of the doctoral programme, which may call the doctoral candidate to a meeting to discuss any issues that it deems appropriate. If the assessment is still unsatisfactory, the academic committee issues a reasoned report and the doctoral candidate is asked to withdraw from the programme. Any student who fails to attend a follow-up meeting without justification will be dismissed from the programme.

ASSESSMENT OF THE DOCTORAL CANDIDATE

Each academic year, the thesis supervisor issues a progress report based on the research plan. The report states whether progress is satisfactory or unsatisfactory, estimates what percentage of the thesis has been completed and its completion date, and gives details of the publications derived from work on the thesis, if any. The report must state the reasons for the assessment.

Each year, the academic committee of the doctoral programme assesses candidates' progress on their doctoral thesis research plan, as well as their activity report and reports issued by the thesis supervisor and academic tutor (if applicable). One of the annual assessments considers the committee's assessment of the public presentation and defence of the research plan and the work so far.

A doctoral candidate may appeal against the assessment by lodging a duly substantiated appeal with the academic committee of the doctoral programme within 10 working days from the notification of the assessment. The academic committee must rule on the appeal within 15 working days, in accordance with the provisions of the UPC's Academic Regulations for Doctoral Studies (https://doctorat.upc.edu/ca/gestio-academica/normatives/normativa-academica-doctorat_CG2018-01-21_cat.pdf). Assessment reports issued by an academic committee may be challenged by lodging an appeal with the rector.

DOCTORAL THESIS

SUBMISSION OF AN ARTICLE-BASED THESIS

The specific regulations, approved by the Standing Committee of the Doctoral School, can be consulted by following this link: http://doctorat.upc.edu/ca/gestio-academica/normativa/arxius-compendis/normativa_td_compendi_pd-cadena-submin-i-direccio-operacions_cp_12-01-2017.pdf

PRELIMINARY ASSESSMENT OF THE THESIS

The thesis must be submitted with a detailed report by the supervisor that also gives evidence of the publications derived from the thesis and the quality indicators for each of these publications.

In order for the committee to authorise the thesis defence, the thesis must meet one of the following conditions:

- a) Two papers published or accepted for publication in JCR-indexed journals, of which at least one must belong to the first or second tercile² (T1 or T2).
- b) One paper published or accepted for publication in a JCR-indexed journal (which belongs to T1 or T2) and two publications that belong to any of the following categories:
 - Papers published or accepted for publication in peer-reviewed JCR-indexed journals in the third tercile (T3) or SJR-indexed (Scimago Journal and Country Rank) journals.
 - Lectures or communications presented at scientific conferences that have undergone a full text review process.
 - Books or book chapters published or accepted for publication by scientific publishing houses.

THESIS EXAMINATION COMMITTEE

The thesis examination committee is composed of five members (three regular members and two substitutes):

- Chair
- Secretary
- Member
- Substitute
- Substitute

Most members (regular members but also in general) must be external to the UPC. Neither the supervisor nor the academic tutor may form part of the committee. As a general rule, the co-authors of papers submitted as part of a doctoral thesis cannot form part of the thesis examination committee.

All the members of the committee must meet the following criteria:

- 1) They must have proven research experience in accordance with criteria equivalent to those at the UPC.³
- 2) They must have research experience in an area related to the subject of the thesis. The academic committee of the doctoral programme assesses the suitability of each member

² According to the journal's position in the ranking (based on the impact factor) in comparison to other journals in the same category.

³ In accordance with the provisions of the Internal Regulations of the Doctoral School (<http://doctorat.upc.edu/ca/gestio-academica/normatives/reglament-de-regim-intern-de-lescola-de-doctorat-de-la-upc>), they must meet at least one of the following conditions: (a) they must have supervised a doctoral thesis that has been defended in the last five years; (b) they must have an active research premium obtained in the last seven years; (c) they must have been the principal investigator in a project funded by an external public institution and awarded in a competitive call in the last five years or currently be acting as such.



based on the following information: (i) published papers, (ii) supervised theses and (iii) supervised competitive research projects.