LNMB Study Guide

TL;DR checklist

1. Register as a new student
2. Register for a course
3. Comply to the LLM regulations during your courses
4. Attend (and present at) the LNMB Conference
5. Get enough credits for your LNMB diploma
6. Email the secretariat to request your LNMB diploma
7. You're an LNMB graduate!

Contents

LNMB is the Dutch network on Operations Research in which the universities EUR, RUG, TUD, TU/e, UL, UM, UT, UvA, UvT, VU, WUR, and the research institute CWI participate.

LNMB
Director: Maria Vlasiou
Secretary: Marjo Mulder

University of Twente
P.O. Box 217
7500 AE Enschede

lnmb@utwente.nl
www.lnmb.nl

About LNMB

The Dutch Network on the Mathematics of Operations Research (in Dutch: Landelijk Netwerk Mathematische Besliskunde; abbreviated **LNMB**) is an interuniversity co-operation of all Dutch universities and the Centre for Mathematics and Computer Science (CWI). LNMB offers advanced courses for PhD and Master students by leading experts from the Netherlands and abroad. Additionally, they are responsible for the annual Conference on the Mathematics of Operations Research, which brings together researchers, lecturers, and practitioners from universities, research institutes, and industry. Find more about our PhD curriculum and Master courses.

PhD Courses

Register as a participant!

If you're a new PhD student or not affiliated with a PhD programme (e.g., MSc student or if you are from outside of academia) and want to follow an LNMB course, you first need to fill in the registration form! Note that this is a separate step to registering for a course.

Overview

The programme of the LNMB PhD courses is offered in a biennial cycle of 18 courses covering:

- Combinatorial Optimisation
- Stochastic Operations Research
- Mathematical Programming
- Game Theory
- Applications of OR

An overview of the courses given in the current educational year is found on the website.

The programme is flexible: you can start a course at the beginning of each trimester and choose your own parts of the educational programme. In each trimester, a combination of various subjects is taught. In general, one can follow each of the courses without any prerequisites. The courses take place on Monday in Utrecht. Each trimester has a duration of 10 weeks.

Who can participate

The courses are open to everyone and intended for PhD students in Operations Research. A limited number of courses is offered also online to accommodate participants outside the Netherlands. Master students in mathematics, econometrics or computer science who acquired enough prerequisites are also welcome. Further information can be obtained from the director of the LNMB, in particular regarding what to do in order to have the course count towards your Master's degree. Last, government and/or business employees who want to follow a course may participate.

Registering for a course

Registering for an LNMB PhD course can be done by filling in the form for the right trimester. If you participate for the first time in an LNMB courses, remember that you have to register as a participant

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first, by filling in this registration form (also if you're a MSc student, from abroad, or outside of academia)!

Credit points and certificates

Participants are expected to make exercises (homework) during or at the end of the course to show that they have understood the contents of the course. The credits for participants who have passed the exercises successfully have been set at 4 EC per course (1 EC is equivalent to 28 hours of work, including course attendance). At the end of each course the participants receive a certificate with the grade and the credits involved.

In case a course are only attended, or when the exercises are not passed successfully, then the workload is set at 1 EC. Participants who qualify for 1 EC can receive a certificate on their request, provided they email the secretariat at lnmb@utwente.nl **within a month** from the completion of the course and at any rate no later than a week after grades have been published. To fulfil attendance requirements, participants cannot miss more than two lectures per course. Furthermore, they need to physically attend lectures, unless prior permission from the LNMB director has been received.

Costs

Participants from the Dutch universities that are part of LNMB do not pay any course fee, as these are covered by the institutional contributions. All other participants are required to pay a fee of €600 per course, either via their institution / employer, or privately.

Online attendance

Some courses offer the possibility to attend the lectures online. This is only meant for students who are abroad or cannot make the lectures under any circumstance. If you are unable to make the lectures and want to attend online, only for courses that are already set up for online attendance, you must request an exception via the LNMB Director.

Master courses

LNMB provides also Master courses in Operations Research. These courses are intended for Master students in Mathematics, Econometrics or Computer Science who want to take one or more courses in Operations Research. Usually, the Master thesis adviser will propose or decide that a student will participate in LNMB Master courses.

Due to the small number of Master students in Operations Research at each individual university, a national collaboration is efficient and can help guarantee a qualitatively high level of education. This is the main purpose of the LNMB Master courses. An additional advantage for the students is the contact with professors and students from other universities. The LNMB Master courses are part of the Dutch Master Programme in Mathematics, Mastermath, which is a coordinated programme of the Departments of Mathematics of the Dutch universities.

In any semester (Fall or Spring), three LNMB Master courses are given. The subjects of the courses are taken from the following areas: Mathematical Programming, Combinatorial Optimisation and Stochastic Operations Research. The programme is flexible in the sense that new Master students can start with their programme at the beginning of any semester. Furthermore, the individual programmes can vary; each student can choose their own courses. The courses take place on Monday in Utrecht.

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LNMB

landelijk netwerk
mathematische besliskunde

Who can participate?

Although the courses are intended for Master students, PhD students are also welcome. It is up to their thesis adviser to propose or decide that a PhD student will attend such a course. Further information can be obtained from the LNMB Director.

Credit points

All students are subjected to an examination that usually consists of making exercises during the course and also a written or oral examination – this varies per course. The credits for participants who have passed the examination successfully have been set by LNMB at *6 EC* per course (1 EC is equivalent to 28 hours work). A final decision about the credits and the grade is formally up to the university of the student.

Registering for a course

Application to the LNMB Master courses can be done via the website of the Dutch Master Programme in Mathematics http://www.mastermath.nl.

LNMB Conference

The annual LNMB Conference, The Mathematics of Operations Research, is the premier gathering for senior and junior researchers in the Netherlands working in this field. It serves as the primary annual meeting of Operations Research scientists in the country.

The programme features presentations on the state-of-the-art research and real-world applications, attracting both academic scholars and professionals from industry and the public sector. Participants gain insight into the latest international and national research developments, as well as the current challenges, projects, and impact of OR in practice.

LNMB hosts four international keynote speakers, who present the latest advancements in Operations Research. Half the programme is dedicated to LNMB PhD students, providing the community with an overview of ongoing OR research within the Netherlands. PhD students get the opportunity to present their work for a broad audience during this conference.

The third day of the LNMB conference, co-organised with NGB, continues our tradition of connecting research in Operations Research with real-world applications, offering participants a deeper understanding of how OR is applied in practice and addressing contemporary challenges faced by professionals.

LNMB Diploma

PhD students who have sufficiently participated in the LNMB PhD programme may apply for the *LNMB Diploma* by emailing the secretariat, providing evidence that all requirements have been fulfilled, and attaching their obtained certificates – **thus remember to save your obtained certificates**. The requirements for the LNMB Diploma are as follows:

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- PhD students must have attended at least one *LNMB Conference on the Mathematics of Operations Research* in full (1 EC).
- PhD students must have given a presentation at an *LNMB Conference on the Mathematics of Operations Research*.
- PhD students must have completed at least 5 LNMB courses (4EC each for a total of 20EC, thus with successfully completing the exercises!)
- PhD students must have completed a total of 25 ECs. After satisfying previous conditions, this leaves 4 EC. The remaining 4 ECs may be completed through other eligible educational activities. These are:
  - additional LNMB courses,
  - a course from the graduate program GP-OML,
  - full attendance at the LNMB conference,
  - Master's courses from a Dutch institute or Mastermath,*
  - PhD-level courses from comparable national schools,**
  - Credit may also be given for other scientific activities for which LNMB issues credit.

* In the case of Master courses, the supervisor of the PhD student should give approval and specify the necessity of the course.

** For other PhD-level courses from comparable national schools, acceptance of the course to the LNMB Diploma must be approved by the LNMB Director.

LLM policy

The general use of Large Language Models (LLMs) is forbidden for assisting with homework exercises, unless explicitly stated otherwise. Lecturers may choose any level of engagement with LLMs for their courses. When LLM usage is allowed, students must adhere strictly to the lecturer's guidelines and are required to provide full transparency.

Full disclosure of AI use is mandatory: You are required to disclose any use of AI tools in your report. This includes the tools used, key interactions or iterations, a logbook including full prompts and responses, and how the output was validated.

LNMB courses are part of your professional PhD training, not just a path to a diploma. Students are therefore encouraged to focus on learning critical thinking, rather than automating assignments for credit.

Contact information

For any general questions, reach out to LNMB directly at lnmb@utwente.nl. This email is monitored by the Director (Prof. Dr. Maria Vlasiou) and the LNMB secretary (Ms. Marjo Mulder).

If you want to provide input for the LNMB PhD programme or wish to discuss matters confidentially, please contact the current PhD representative (Chris Petri: j.c.petri@utwente.nl).