

INTERNATIONAL PROGRAMMES

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Doctorate



CEPLAS - Cluster of Excellence on Plant Sciences

University of Cologne • Köln

Overview

Doctoral Degree (Dr rer nat or PhD)
Köln
 Heinrich Heine University (HHU), Düsseldorf Max Planck Institute for Plant Breeding Research (MPIPZ) Cologne Forschungszentrum Jülich (FZJ) The Graduate School programme is under the umbrella of the Graduate School for Biological Sciences (GSfBS) and the Albertus Magnus Graduate School at the University of Cologne, the Interdisciplinary Graduate and Research Academy (iGRAD) and the Heine Research Academies (HeRA) at HHU.
• English
The programme is conducted in English. Non-native speakers need to provide evidence of proficiency in English. The doctoral dissertation is usually written in English. German is also accepted.
9 semesters or more
Winter semester
Please consult the CEPLAS website.
None
Yes
No
The CEPLAS Graduate School offers a structured four-to-five-year doctoral programme covering the fields of molecular plant sciences, plant genetics, plant-microbe interactions, synthetic biology as well as quantitative and computational biology. The programme is jointly organised by the Universities of Düsseldorf and Cologne, the Max Planck Institute for Plant Breeding Research and the Forschungszentrum Jülich. It leads students with a Bachelor's degree through a unique qualification phase to the dissertation research phase and finally to the PhD. PhD students work in one of the CEPLAS member laboratories on a topic related to the CEPLAS research programme. CEPLAS Graduate School members benefit from comprehensive training programmes that address their academic as well as career development aspirations and needs.

Course Details

Course organisation

The CEPLAS Graduate School programme is comprised of a one-year qualification phase followed by a dissertation phase of three to four years.

The qualification phase includes lectures, exercises, courses in transferable skills and lab rotations. It aims to provide the theoretical knowledge as well as practical skills that are necessary to successfully conduct a research project. The qualification phase starts with an on-boarding workshop followed by two seven-week subject modules jointly taught at the Universities of Düsseldorf and Cologne. The subject modules cover the research topics within CEPLAS as well as advanced genetics, plant biochemistry and physiology, plant development, plant-microbe interactions, synthetic biology and modelling, methodology (genomics, transcriptomics, proteomics, metabolomics) and biostatistics/computational biology. The modules consist of lectures, exercises and seminars. The subject modules are followed by training in "Good Scientific Practice" and scientific writing. The final part of the qualification phase consists of three lab rotations, each with a duration of six weeks, in CEPLAS research groups where students will conduct small research projects. One of the rotation labs will subsequently serve as the host for the dissertation phase.

The doctoral research project is the foundation of the dissertation phase. It aims to qualify CEPLAS doctoral researchers for independent and professional scientific work. All CEPLAS doctoral researchers are supported by a Thesis Advisory Committee (TAC), which includes the main adviser and at least one to two additional, experienced scientists (internal/external) from whom they receive scientific feedback about their research progress. The written dissertation and an oral defence (disputation) complete the PhD. Apart from their dissertation research, CEPLAS doctoral students benefit from comprehensive scientific and career training programmes that address their academic and career development aspirations and needs.

A Diploma supplement will be issued

No

International elements

• International guest lecturers

Integrated internships

During the qualification phase, three lab rotations in CEPLAS research groups are mandatory. Other internships are not mandatory, but they are encouraged in cooperation with CEPLAS collaboration partners. Special funding is provided upon application (CEPLAS Mobility Fund).

Special promotion / funding of the programme

• DFG (e.g. Research Training Groups)

Course-specific, integrated German language courses

No

Course-specific, integrated English language courses

No

Costs / Funding

Semester contribution	The semester contribution amounts to approx. 320 EUR per semester. The fee includes a semester ticket that covers public transport in the entire federal state of North Rhine-Westphalia.
Costs of living	Approx. 900-1,000 EUR per month
Funding opportunities within the university	Yes
Description of the above- mentioned funding opportunities within the university	The programme is supported by the German Research Foundation. During the one-year qualification phase, CEPLAS Graduate School students receive a stipend of 934 EUR/month. During their dissertation phase, CEPLAS PhD students receive a contract with the university (according to German Civil Pay Scale, 65% E12/E13 TV-L) for up to four years.

Requirements / Registration

Academic admission requirements	A prerequisite for admission to the CEPLAS Graduate School is a Bachelor's degree in biological sciences or a subject related to biological sciences (e.g. cell or molecular biology, genetics, biochemistry, computational biology/bioinformatics, quantitative or synthetic biology) at the beginning of the graduate programme in October. Applicants holding a Master's degree in biological sciences or related disciplines are currently not eligible for the CEPLAS Graduate School programme. After acceptance to the CEPLAS Graduate School, the final programme admission requires a successful registration for a Master's programme in Biology or Biochemistry either at the University
	of Cologne or the University Düsseldorf.
Language requirements	Knowledge of the German language is not required. However, very good skills in spoken and written English are necessary. Applicants are asked to provide appropriate evidence of their language skills.
Application deadline	Please consult the CEPLAS website.
Submit application to	Please consult the CEPLAS website.

Services

Due to the intense nature of the programme, students will have little time for part-time jobs. However, employment as student assistants is a possibility.
Accommodation is available through the student union in Cologne or Düsseldorf ("Kölner Studierendenwerk" and "Studierendenwerk Düsseldorf") or the private housing market. Rent for a single room in a student hall of residence is approx. 200-350 EUR. Rent for a single room through the private housing market is approx. 300-600 EUR.

Structured research and supervision

Yes

Research training / discussion

Yes

Career advisory service

During the dissertation phase, all CEPLAS Graduate School doctoral researchers are accompanied by a Thesis Advisory Committee (TAC), which includes the main adviser and at least one additional CEPLAS group leader who reach an agreement on training and supervision. The CEPLAS Graduate School includes training in career-relevant skills (e.g., excursions to biotech companies, workshops in grant-writing, etc.).

Support for international students and doctoral candidates

- Welcome event
- Visa matters
- Support with registration procedures

General services and support for international students and doctoral candidates

The CEPLAS Graduate School provides extensive support for international students upon arrival in Germany as well as for the entire duration of the programme. This includes intensive support in finding accommodation, enrolment at the university, visa processing, and orientation in town. For the entire duration of the PhD programme, the CEPLAS Graduate School office provides advice and help in all matters relating to the graduate programme and life in Germany. The Graduate School is in close contact with the university's International Office, which provides assistance to international students in various issues.

Contact

University of Cologne

CEPLAS Graduate School

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Course website: https://www.ceplas.eu

f https://www.facebook.com/plantsoftomorrow

https://twitter.com/ceplas_1

in https://www.linkedin.com/company/ceplas

https://www.instagram.com/ceplas 1/

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Editor

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Disclaimer

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