

 Targeted job

DTU Global Top Student Programme - Internship in Computational Materials Science and Functional Oxides



DTU Energy

Government/ Charity/ Public Institution/ Other
Engineering

Published on 9 June 2026

Contract

Internship 4 to 9 months

Location

Kongens Lyngby, Region Hovedstaden (Denmark)

Start date

January 2027

Salary

Information not provided

Remote working

No remote working

The Technical University of Denmark (DTU) is one of Europe's leading engineering universities, known for excellence in research, education, innovation, and scientific advice. We work closely with industry and international partners to apply science and technology for societal benefit in an interdisciplinary and inclusive environment.

This internship is offered through DTU's Global Top Student Programme. Only top bachelor students nominated by their home university are eligible to apply. As participants, you will join a  our academic environment where theory meets practice, and students develop both professionally and personally.

Job Description

The Department of Energy Storage and Conversion (DTU Energy) is part of DTU and focuses on research and development of functional materials, components and systems, as well as their applications as sustainable technologies. The department works at the forefront of battery design, electrolysis, thermal energy storage, carbon capture, and electromechanical conversion among other activities. Combining research, education, and collaboration with external partners, DTU Energy is focused on leading the sustainable Green transition. The department is characterized by a collaborative culture, high academic standards and a strong focus on innovation and real-world impact and applications.

You will join Dr. John Mangeri at the Section for Functional Oxides within the department. The section consists of five permanent staff, several postdoctoral researchers, and Master's level and PhD students working closely together on functional oxides for next-generation electronics and energy storage. Our group is internationally recognized for the synthesis and characterization of materials engineered at the atomic scale to exhibit tailored nanoscale properties. As an intern, you will work closely with the group and support the on-going experimental efforts *with advanced simulation tools*. You will gain fluency in some of the methods and frameworks that a computational materials scientist relies on and have an opportunity to contribute to state-of-the-art research, and most importantly, you will be encouraged to exercise your creativity in a flexible fashion.

Your tasks will include (but are not limited to):

- Develop and use an open-source software framework (C++, Python) for simulations of ferroic nanostructures. Many of the use cases align directly with the interests of the functional oxides group at DTU Energy and you will experience the very satisfying theory-experiment connection first-hand.
- Test and develop your own approaches for solving well-defined problems and then explore the possible ways to optimize them. Letting your computer run for two minutes to arrive at the right answer is satisfying, but can we do it in two seconds?
- Work with high-performance supercomputing resources.
- Learn and implement state-of-the-art visualization tools (Blender, ParaView).
- Contributing to reports, presentations, and scientific documentation.
- Participate in team meetings and project discussions

The exact tasks and responsibilities are flexible and can be based on your background, interests, and the needs of the team.

Approval and qualifications

We are looking for a motivated and curious candidate who:

- Is currently enrolled in the final year of a Bachelor's degree programme
- Has a background/interests in computational modeling, physics, and materials science
- Has relevant academic or practical experience (C++, python exposure is desired – but not a pre-requisite, ideally has knowledge of partial differential equations)
- Has an interest in nanotechnology and functional materials, and the advanced computer simulations needed to study them
- Is analytical, organized and able to work independently.
- Has good collaboration and communication skills
- Has demonstrated proficiency in written and spoken English, documented by one of the following English language tests. Minimum required scores are:

- Duolingo English Test (overall: 120)
- TOEFL (old scale overall: 92, new scale overall: 4.5)
- IELTS Academic (overall: 6.5)
- CAE (overall: 180)

You can read more about the language test requirements [here](#).

What we offer

DTU offers a prestigious internship at the Lyngby Campus in Greater Copenhagen, providing hands-on research experience in an international academic environment. Interns collaborate with leading researchers on advanced projects while developing their professional skills in a supportive setting.

Living in Greater Copenhagen also offers international students a high quality of life, a strong academic community, and a vibrant city experience in Denmark's capital region.

As part of the internship, the student will also become a member of DTU's alumni community network, gaining access to a range of exclusive offers and support, including:

- Administrative and practical support – assistance with residence permits, housing, etc.
- Social and networking framework, including an introduction week, cultural activities, and semester events
- Parallel academic opportunities – coursework on the side

Practical information:

- Internship period: 25 January 2027 – 25 June 2027 (one semester) or until 18 December 2027 (two semesters)
- Working hours: 25–37 hours per week, either full-time or part-time depending on whether the student chooses to take courses alongside the internship.
- Location: DTU Lyngby Campus in the Greater Copenhagen area
- Compensation: this is an unpaid internship

You can read more about the department here: <https://www.energy.dtu.dk/>

For useful information on the programme and student life at DTU, see [Global Top Student Programme](#) and [Student guide – DTU](#).

Application procedure

The application procedure consists of two steps.

Step 1: Nomination

In order to be considered for this programme, you must be nominated by your home university in the DTU Exchange Student system. Once you have been nominated, you must complete your nomination by uploading the following documents:

- Grade transcripts (in English) including an official description of the grading scale
- Documentation proving that you have passed one of the above English language tests

Step 2: Application

To apply, please open the link "Apply now", fill out the online application form, and attach all your materials in English as PDF files. The files must include:

- A CV including information about your education, relevant research experience, language skills, and other skills relevant to the internship position
- A motivated cover letter (max. 1 page)

Your complete online application must be submitted no later than 15 September 2026 (23:59 Danish time).

We look forward to receiving your application.

DTU – For the benefit of society since 1829

DTU is one of Europe's leading elite technical universities. Through research and education at an international top level, we create solutions to the major societal challenges of our time and help secure Europe's global leadership in sustainable technological development. Since Hans Christian Ørsted founded DTU almost 200 years ago, our mission has remained the same: We develop and create value through the natural and technical sciences for the benefit of society. DTU has 13,800 students, 1,600 PhD students, and 6,500 employees. We work in an international environment and have an inclusive, stimulating, and informal work culture. DTU has campuses in all parts of Denmark and in Greenland and collaborates with the best universities around the world.

Application deadline

16 September 2026

Study level

Bachelor level or equivalent

Job Category

Engineering

Related tags

DTU Global Top Student Programme