

Internships

Please read this document in its entirety.

Overview

This document will outline the application materials you should prepare before applying to IECS internships. Be sure to read both the *Common Application* and *Position Specific* sections.

Common Application	
Application Website:	https://www.cecs.ucf.edu/international-engineering/internships/
Personal Information	<p>You will need to provide directory information:</p> <p>Full name, UCFID, date of birth, email address, and phone number</p> <hr/> <p>You will need to provide academic information:</p> <p>Academic Information, degree program, GPA, expected graduation date</p>
Resume	<p>You will need to provide a resume:</p> <p>The resume must be in a PDF or Word file format.</p>
Brief Essay	<p>Write a brief essay with a maximum length of 3000 character (~500 words) addressing the following prompt:</p> <p>Explain why you're interested in this internship, how it aligns with your career goals, and what you hope to contribute to and learn from the experience.</p>

	<p>Additionally, address how prepared you are to live and work in another country and adapt to the professional and cultural norms.</p>
References	<p>Provide two professional or academic references. References should not be family or friends.</p> <p>The best references can speak to your qualifications, skills, and character. Ideally, your references should include individuals such as professors, mentors, or employers who have had direct experience working with you in a professional or academic capacity.</p> <p>You will provide name, relationship, and email.</p>
<h2 style="text-align: center;">FERPA Waiver</h2>	

The Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99) is a Federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. Generally, schools must have written permission from the eligible student in order to release any information from a student's education record.

You will need to authorize the College of Engineering & Computer Science to share your information with the internship site.

INTERNATIONAL ENGINEERING & COMPUTER SCIENCE PROGRAM



Position Specific Application Materials

This portion of the document provides additional information regarding each opportunity and materials that should be prepared.

Tata Power

The Tata Power internship takes place during the summer semester. Depending on the project and specialization interns can expect to be placed in either Bangalore or Mumbai.

Select your Area(s) of Interest

- Renewable Energy
- Machine Design
- Artificial Intelligence
- Cybersecurity
- Facility and System Design
- Other*

Other: You may provide an additional area of interest for project consideration.

Be prepared to provide relevant information addressing the following items in text entry box (300 character limit). Each bullet represents a text entry box.

- Technical and soft skills
- Extracurricular, co-curricular, and volunteer experience
- Certifications (if any)

Siemens Energy

The Siemens Energy internship takes place during the summer semester. Depending on the specific project and specialization interns can expect to be placed in different location across Erfurt, Germany in association with the University of Applied Sciences Erfurt.

Select a project

Project descriptions for each project can be found linked in the document.

- [Generator acoustics in the R&D department](#)
- [Generator winding design](#)

Be prepared to address your German language skills related Speaking and Reading ability.

Be prepared to provide relevant information addressing the following items in text entry box (300 character limit). Each bullet represents a text entry box.

- Technical and soft skills
- Extracurricular, co-curricular, and volunteer experience
- Certifications (if any)

Generator acoustics in the R&D department

SIEMENS Energy engineering in Erfurt is using an acoustic camera from sevenbel[®] ([Use of Acoustic Cameras in Product Development | Seven Bel Blog](#)) to localize sources of noise. The two following pictures show example views:

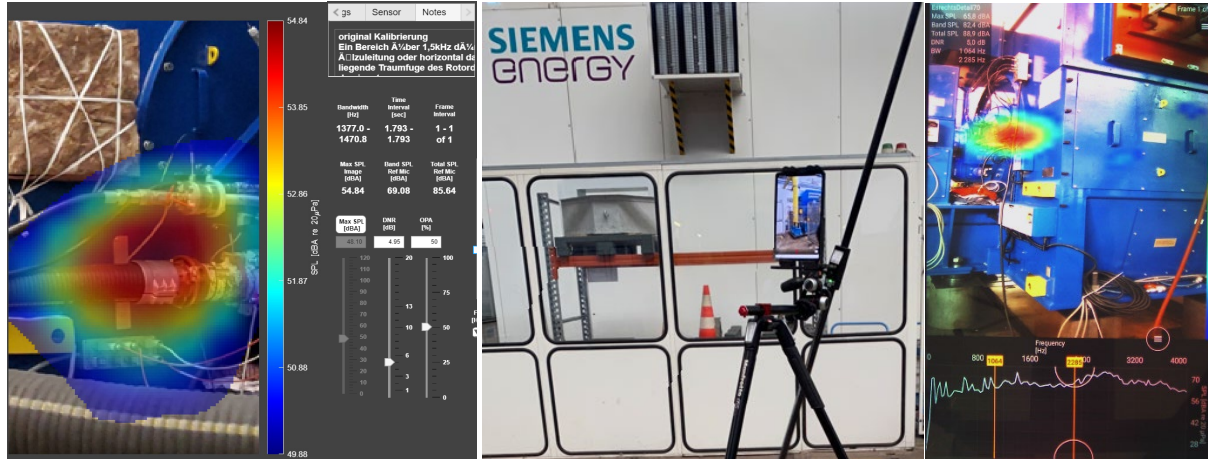


Figure 1: Examples of measurements

The results are analyzed individually to get an optimized approach of best cost noise reduction. During your time with us you will get the opportunity to join such a measurement in our shop-test-area. You will learn about the challenges of acoustic generator optimization in the market environment.

After you have familiarized yourself with these boundary conditions, your task will be to design a semi-automated evaluation based on Excel. You will be able to contact the specialists at Sevenbel to read out the measurement data obtained and integrate it into the Excel evaluation.

The second step is to use the evaluation to predict how much quieter the generator will be with simple noise-reducing measures. For this purpose, you will receive data on the material properties from tests carried out for us in the sound laboratory.

Join us, come to fantastic Erfurt and become part of the exciting further development of a traditional product!

Figure 2: View of first noise-assessment

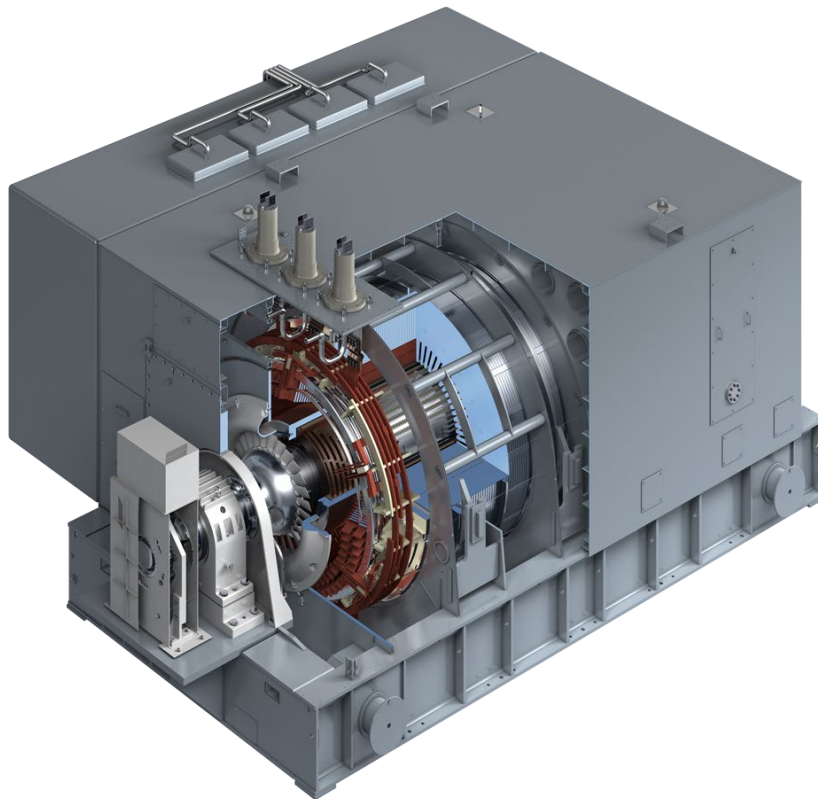
Zusammenfassung mech. Leerlauf		Band	Schalldruckpegel	$10^{(0.1 \cdot L_{p,d})}$	Reduktion im Band	Reduktion jeweils am Gesamtpegel
ES links original						
ES links reduziert						
ES rechts original			84,9 dB(A)	3,09E+08		
ES rechtss reduziert					80,3 dB(A)	1,07E+08
Seite original			85,2 dB(A)	3,31E+08		
Seite reduziert					83,6 dB(A)	2,32E+08
TS rechts original			85,9 dB(A)	3,89E+08		
TS rechtss reduziert					85,3 dB(A)	3,37E+08
original gesamt				90,1 dB(A)		
reduziert gesamt						88,3 dB(A)
Gesamtabsenkung um				1,8 dB	als Einzelschallquellen betrachtet	
			85,3 dB(A)		83,1 dB(A)	
Gesamtabsenkung um				2,3 dB	als Mittelwert der Einzelmessungen	

Generator winding design

SIEMENS Energy engineering in Erfurt (Germany) is constantly working on improving and further developing synchronous generators and associated products for shaping the Energy of Tomorrow.

The Erfurt generator factory is located in the center of Germany and is developing and manufacturing generators for power generation and synchronous condensers for grid stabilisation.

We are market leader for air cooled 2-pole generators in the 25 to 370 MVA power range and supply to a range of international customers. This includes traditional and renewable energies as well as replacing older generators with our high efficiency generators.



We are looking for an intern who will work as part of an international team to design and model stator winding components for new developments.

The tasks include:

- Developing a new stator winding for 30 degree angled 3-phase winding from existing standard of 60 degree angled 3-phase winding.
- Adaptation of existing 3D models of stator bars and circuit rings with outlet connectors for a new stator.
- Working with Creo Parametric 8 using parametric models.
- Documenting results with MS Office OneNote and Excel.

Join us on our mission to energize society and provide sustainable energy for future generations!

MDC Power

The MDC Power internship takes place during the summer semester. Interns can expect to be placed at the Kölleda Location just north of Erfurt, Germany in association with the University of Applied Sciences Erfurt.

Be prepared to address your German language skills related Speaking and Reading ability.

Be prepared to provide relevant information addressing the following items in text entry box (300 character limit). Each bullet represents a text entry box.

- Technical and soft skills
- Extracurricular, co-curricular, and volunteer experience
- Certifications (if any)

MDC Industrial Engineering



Over 13 million engines in more than 20 years and over 1,400 employees at two locations in Thuringia – that is MDC Power: a subsidiary of Mercedes-Benz AG.

As a first-class engine plant, we stand for innovation and continuous improvement: at the main location in Kölleda as well as in Arnstadt, where we refine crankcases for top engines from Mercedes-Benz and Mercedes-AMG using the 40-times patented Nanoslide® technology.

And we stand for the future of the region. This is evident in our work, for example, in close dialogue with Thuringian universities, with whom we develop new processes and standards for environmentally friendly manufacturing, but also in our training commitment, through which an average of about 15 young people from the region find their way into a profession each year. Last but not least, it is also evident in our everyday interactions: because we take responsibility for the people who work with us and live here.

We are looking for an intern who will work as part of our industrial engineering team to support various topics, which include:

- Involvement in the planning, preparation, design and maintenance of the assembly and production processes, taking into account known assembly and production processes and time data
- Involvement in the optimization of procedures and processes as well as the creation of requirement specifications and layouts
- Perform feasibility studies for assembly and production processes
- Supporting ongoing industrialization projects, such as the implementation of the new diesel generation as per the EU7 regulation