Study Wind Power on Gotland

MSc Wind Power Project Management
The worldwide demand for renewable energy has been increasing and wind energy is poised to fulfill a significant portion of this demand. New challenges occur when turbines are built in complex terrains, as wind farms become larger, and when the wind farms have greater impacts on both surrounding communities and the electrical grid. The Wind Energy Group at Uppsala University addresses all these aspects, covering wind mapping to social acceptance and planning issues. At Uppsala University Campus Gotland we focus specifically on issues related to establishment of wind energy, project development, wind turbine wakes and wind farm optimization.

On Campus Gotland we train around 120 fulltime students every year, both through distance courses and with traditional classroom education. On Campus Gotland we’ve offered the Master Programme in Wind Power Project Management (WPPM) for four years and our graduates are ready to join any stage of a wind power project. Our programme cooperates closely with the wind industry to develop new ideas and to try and bridge the gap between theory and practice. The competencies to become a successful project manager, including technical knowledge, communication and planning skills, are incorporated in our curriculum with its multidisciplinary focus!

As EU wind energy experts predict, the demand for individuals with both the knowledge and skills to support wind power development, operation and maintenance will continue growing. These employees will work in a green and globally oriented industry whose goal is to improve the way we produce the energy the world needs. Would you like to join this exciting environment?

Stefan Ivanell
Associate Professor
Director Wind Energy
Uppsala University Campus Gotland
Addressing the skills gap

Project management, project development and multidisciplinary skills

- Project management
- Energy resource assessment
- Spatial planning/consenting
- Policy/regulatory analysis
- Project development and project management
- Legal experts
- Communications

Source: TPWind survey

Graduate’s evaluation of WPPM

Results from ‘Alumni Career Survey’

- I would recommend the WPPM studies to new students.
- The WPPM studies have opened doors to new (job) opportunities for me.
- The educational experience of WPPM gave me the opportunity to obtain/develop skills necessary to perform my current job.
- I felt that I was given the advising that I needed and wanted.
- My teachers were knowledgeable, accessible and helpful when I needed them.
Academic background before WPPM

- Engineering, Technical studies and Sciences: 83%
- Business and Management: 31%
- Economics: 22–24
- Other: 3%
- 26–30: 12%
- 31–35: 3%
- Over 36: 7%

Age
- 22–24: 17%
- 26–30: 31%
- 31–35: 31%
- Over 36: 21%

Gender balance
- Male: 53%
- Female: 47%

Internship and employment

- Did you participate in an internship during the WPPM programme?
  - Yes: 21.9%
  - No: 78.1%

After graduation/thesis completion, how long did it take you to find a job?
- 0–3 months: 18%
- 4–12 months: 20%
- More than a year: 7%
- Unemployed: 55%
This Master programme really leaves you the freedom to find your own passions and get the depth you want.

Jon Bonnis
Class 2013 - 2014

The university academic staff were very knowledgeable and helpful. Some of the external guest lecturers in 2010-2011 were extremely impressive.

Keith Lynch
Class 2010 - 2011

I'm very pleased with the overall level of education, development approach, educational style and efficiency of knowledge provided.

Konstantina Stamouli
Class 2011 - 2012

This educational experience gave me the opportunity to obtain and develop skills necessary to perform my current job. Since I started working in the wind energy sector, my horizons have broadened and opened up.

Vendula Braunova
Class 2012 - 2013
Describe your current job.

Currently, I am a wind engineer working for a consultancy company. We work with wind farms in the range from 50 kW up to 1.5 MW. We are active in the initial site identification, up to installation, and maintenance. Every day I am dealing with all the aspects that I was studying in the Master’s. We also investigate whether the site is suitable to install a wind turbine, we deal with all the local authorities involved, we look at landscape issues and ecology aspects. We deal with the grid operators and discuss how to connect the wind turbines to the grid. In a nutshell, the Master’s has really been useful because I am doing exactly what I was studying for.

So, if I didn’t have the degree, I wouldn’t have this job.

Was there anything that should have been included in the programme? Anything you missed?

One of the things that would be nice to have in the programme as well.

What was the most important and mind-expanding part of your learning experience?

My academic experience on Gotland was one of the most important and mind-expanding experiences. First of all, the programme that I found that offered both the technical and managerial competencies. The programme also offered some of the soft skills, for example project management and team skills that complement the technical side.

Another reason was the international aspect of the Master’s. It was interesting to do a programme that was overseas with exposure to new culture and students from all over the world. Of course, in the beautiful setting of Visby.

Overall, I think the learning experience was really great. I was forced to work with people from different cultures. These days that’s important because different cultures work in a different way and you need to learn how to work with these people, given the increasingly international background of many companies.

Of course, in the beautiful setting of Visby.

Tell us about your academic and professional background.

My educational background is in business, and I have a Bachelor degree in international management and as a part of that degree programme I studied in Spain for a semester. At that point, I was introduced to the world of renewable energy. I decided to pursue a career in renewables. Additionally, I worked for a couple of years in the geothermal industry. I would have to choose to study WPPM on Gotland?

Once I decided to pursue a career specifically in wind power, I looked at programmes that would fit my needs, which was a challenge because most of the programmes were focused only on the technical aspects. This was the only programme that I found that offered both the mix of the technical and managerial competencies. The programme also offered some of the soft skills, for example project management and team skills that complement the technical side.

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Please describe your current job.

Currently, I am a project manager on the business development team for a renewable energy developer and owner. I am focused on the development of wind and solar power projects, utility-scale projects. I am mainly involved in two things. Firstly, I am responsible for development of solar and wind power projects, basically starting from scratch. We are developing projects in Canada and US, a lot of ground in just one year.

Secondly, I am working with the markets where we want to go, what the policies are and what the resource is like in various states and provinces and what the interconnection options are. Secondly, I am involved in acquisitions of existing projects that mainly means projects that have been developed, but not yet constructed. We also investigate the project’s financial, technical, legal, regulatory aspects, trying to find any areas that might be key risks and alleviate those with the goal of owning the project.

That’s what I do. I certainly use the knowledge acquired in the course of the Master programme.

Project Manager,
Originations and Developments, Algonquin Power and Utilities Corp.
My name is ERIC KAMPHUES and I’m a director of MECAL Independent eXperts, which is a part of the MECAL group. MECAL is an engineering and consultancy involved in multiple stages of wind power. The business unit I’m in charge of acts as a technical advisor in all life stages of wind farms. We’re looking for the possibilities to improve the investments for owners of wind farms.

Why are you positive to cooperation with our programme?

We’ve had very good experiences with the programme. There is a good fit between our company and MECAL’s Master’s programme. The work that we do is similar; we’re involved in all stages of wind power projects, as is being taught during the programme, both onshore and offshore. We’re also always looking for new talents and we do research together with a university to look for new possibilities and approaches.

What can we provide your company to have students doing theses and internships?

We’re looking for the results of the students’ research. We have new ideas regularly and students with the university’s support are a great way to get in-depth and search for new employees. Moreover, we’re very happy to have motivated students from different parts of the world that are dedicated to what they’re studying. Of course, we’re also very happy to search for away students with the university’s support are a great way to get in-depth and search for new employees. Moreover, we’re very happy to have motivated students from different parts of the world that are dedicated to what they’re studying. We’re looking for the results of the students’ research. We have new ideas regularly and students with the university’s support are a great way to get in-depth and search for new employees. Moreover, we’re very happy to have motivated students from different parts of the world that are dedicated to what they’re studying.

What is your experience of hiring graduates from our programme?

We’ve had three students from the programme so far. There’s still a gap between theory and practice. You hear this often and that’s also the case for the programme. That’s why we like to be involved as bridging that gap matters. There can also be a downside when the students come from outside Europe. There are some constraints and it’s not easy to organize work permits. Of course, it’s easier said than done.

Please share some insights on how it is to have graduates from this programme, both posi- tives and negatives.

If you’re looking for the best paying jobs, then wind power might not be the best option to consider. There are better paid jobs with oil and gas and it take a while for wind power to earn money as well. The economy as a whole is extremely complex not only technically, but also organizationally, legally and financially. This helps it be an exciting business to work in.

Please describe the learning experience, teachers, classmates, courses.

It was a wonderful year. It was such a broad range of teachers in this wind power programme, all of us had different educational backgrounds. Some of them came from the project management part and told us how to negotiate, told us about legal stuff, construction and who you need to talk to. We had engineers and people very skilled in judging the wind power in different areas and how to calculate the power of the wind. All these backgrounds that these teachers presented to us was a perfect mixture.

The students that attended this programme when I did, which was 2011 – 2012, came from all over the world. It was such a nice experience to meet different people from the States, from most of Europe, from Pakistan, from Asia. People had also different professio- nal and educational backgrounds, all of us had a few years of working experience. Of course, we had a lot of engineers, but not only. People from non-technical backgrounds, such as the economic or law background also attended the courses and I found it interesting. How has this education helped you?

It was an ego-boost for me to see that I managed to take part in this Master’s programme. Even if I didn’t have that technical back- ground, with lots of hard work I managed to finish those courses as well. As one of our teachers put it, you have a very steep learning curve and I totally agree with him. I now live and work on Gotland, I’m a manager of the operation and maintenance of a part of the infrastructure here on the island. A very useful part of the course was to always look carefully through your contract to know what is in it. Thank you, Richard! That has been very useful to me.
NIKOLAOS tell us about your academic and professional background.

My academic background starts with a Baccalaureate degree in physics at the University of Crete continuing with a Master’s degree at Uppsala University Campus Gotland, namely Wind Power Project Management (WPPM). Further on, at the moment I am pursuing an industrial PhD with a software company called WindSim and Uppsala University.

Why did you choose to study WPPM on Gotland?

I wanted to explore what the project management aspect is. During my Bachelor degree I didn’t get any interaction with business, management, and finance. That’s what I really wanted to look into and get more hands-on experience in wind power in the course of the Master programme.

How would you describe the learning experience? Could you tell us about your classmates, teachers, the courses?

The professors were highly qualified and the courses were hands-on, we learned to use softwares such as WindPro, WAsP and WindSim. And now I’m employed by WindSim. In the courses, you’d learned general knowledge about wind power. Of course, we had limited time, that is one year, so going into depth in each subject was up to us. Everyone was free to choose how deep they’d look into the details.

Of course, I made a lot of contacts. It was a multicultural environment, so I really learned how to evolve and move in the multicultural setting. My classmates were from all over the world, from Asia, the United States, Europe. It was an eye-opening experience.

Can you tell us more about your MSc. thesis? What was your topic and what motivated you to choose the topic?

My thesis was a wind resource assessment comparison of a complex terrain employing two types of software, WindPro and WindSim. Generally, I’m interested in the wind resource assessment so that’s why I chose it. Plus, I managed to work in a company in Greece while I was doing my thesis, so I got more experience in the industry. When the Master’s programme was finished, one of my professors proposed to me to start an industrial PhD. Industrial PhD is when you do your PhD but at the same time you’re employed in a company. And here I am, I must have fit their description.
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