

Master Programme in Wind Power Project Management – Assessment panel report – executive summary

The Master Programme in Wind Power Project Management is an educational programme of substantial social and environmental significance, and a 120-credit programme is being developed. Producing electrical power with renewable energy sources such as hydro, solar and wind power is essential if we want to maintain today's living standards and at the same time reduce carbon dioxide emissions worldwide. Today, wind power produces 14% of Sweden's electricity, and many wind turbines are under construction. In three years, over 25% of Swedish electricity generation will be from wind power. The target is set at 100% renewable energy by 2040, which will mean at least 40% wind power.

As the need for knowledgeable and well-trained personnel in Sweden increases, so does the need for project planners, service technicians, and operations analysts. Moreover, planning, construction, operation, decommissioning all need to be optimised. A similar development can be observed in several European countries and in many parts of the rest of the world. The master programme is producing professionals for a global market with growth rates in installed capacity from year to year in the order of 10-15%. The total number of employees worldwide in renewable energy is estimated at 11 mio (2018) of which 10% is in wind energy. The number of employees has grown by 50% over the last 6 years

One of the programme's greatest challenges the issue of how to develop the competence of its highly dedicated teaching staff to improve the conditions for teachers on the programme, and consequently their performance. The cross-cultural communication skills among teachers (as well as students, possibly) need strengthening to facilitate teaching a diverse student population. Routines for quality development could include retreats for staff and course development, as well as pedagogical training for its teaching staff on-site.

Under the headings Quality Development and Pedagogy and Promotion and Marketing below are listed areas for development and some recommendations.

Quality development and pedagogy

- Improved routines for quality development could include retreats for staff and course development.
- Strengthen cross-cultural communication skills among teachers and students.
- Consider a pass/fail grading scale for less substantial course components to help students prioritise rationally.

- All goals (especially non-technical goals) should be communicated with better clarity to its students.
- Close collaboration between Uppsala University and programme management to make certain that the teaching staff have the resources and support needed for them to maintain and develop what is already outstanding work.
- On-site pedagogical training for the programme's teaching staff on-site.

Promotion and marketing

- Make references to rankings on the programme web page, as the international ranking of Uppsala University is very important to international students and affects their decision about where to study.
- Draw attention to the number of industry professionals among the guest lecturers in promotional material as well as to the students' desirability on the work market
- Update the information on the homepage to reflect the worldwide urgency of a transition to a renewable energy system.
- Update and diversify the promotional information on the web page to make certain that all disciplines, from engineering to economics to environmental studies are clearly represented in that information.
- Be clear about the multidisciplinary nature of the programme, which currently encourages engineers to apply, although the programme is not an engineering programme, which may deter non-engineering students.
- Attempt to attract more students from non-engineering backgrounds by revising the promotional and informational material online.
- Enlist students in an overhaul of the information on the web page to make the material there more inclusive.
- Use the experience of international students and alumni to spread the word about the programme in their home countries.
- Prioritise and improve the marketing of the programme.

The Composition of the Evaluation Panel

- Ola Carlson, Professor, Chalmers
- Niels-Erik Clausen, Associate Professor, Danmarks Tekniske Universitet
- Christer Larsson, Senior Lecturer, Uppsala University. Convener
- Jenny Longworth, Industry Representative, Kjeller Vindteknikk AB
- Emma Uddin, Student Representative, Kungliga Tekniska Högskolan