Teaching portfolio

1. Teaching CV: A list of any lecturing and supervision tasks, including specification of academic fields, scope, level (bachelor, master, continuing education, PhD) as well as any external examiner tasks.

Educating students at undergraduate and graduate levels PhD students as well as professionals from the industry and public authorities provides the basis for enhancing sustainable societal developments.
For this reason I engage in teaching activities not only at higher educational and research institutions but also in support of continuing education in collaboration with the industry and public authorities at both national and international scales.
During my career, I have been giving courses for students and professionals in Denmark, Switzerland, Mexico, China, Brazil, Italy, Portugal, Austria, Germany, Norway, Sweden, France, Singapore, Thailand and Spain.
It is my philosophy that teaching should be founded on general subject matter expertise, experience from engineering consulting and advise, as well as forefront research insights. Moreover, it is my experience that the learning objectives are most clearly and coherently achieved if there is full alignment between the teacher's perspectives to the taught subjects and the teaching material provided to the students.
Following this line of thinking, I have developed my own course material for courses at undergraduate level in Basic Statistics and Probability as well as at graduate and PhD level on Risk and Safety in Civil Engineering. An underlying philosophy of my courses is to highlight the relevance and significance of statistics, probability and risk assessments for engineering decision making, with an emphasis on the underlying theoretical foundation. To facilitate that my teaching achieves the largest possible impact I have published my teaching material and to the extent possible made it available also on the internet. From past teaching assignments at ETH Zürich in Switzerland my lectures on basic statistics and probability theory are available as video streaming (link to video streams), my lecture notes on Risk and Safety in Engineering are available upon request (mfn@civil.aau.dk) and my lecture notes on Basic Statistics and Probability Theory have been published by Springer (link to book).
My past and present teaching assignments include:
Systems Engineering (at AAU Risk Centre in Esbjerg) – at undergraduate level
Basic Statistics and Probability Theory – at undergraduate level
Risk and Safety in Civil Engineering – at graduate, PhD and continuing education levels
Decision Analysis in Engineering – at graduate level
Linear Finite Element Methods – at graduate level
Non-linear and Dynamic Finite Element Methods – at graduate level
Specialized PhD courses on issues of risk and safety:
- Applied statistics and probability theory in engineering
- Probabilistic Structural Dynamics
- Bayesian Probabilistic Nets
- Excursions of random fields
- The Finite Element Method and the Analysis of Systems with Uncertain Properties,
- Robustness, Resilience and Sustainability of critical infrastructure
Master of Advanced Studies (continuing education) in: Management of Risks due to Natural Hazards
Specialized (continuing education) courses on:
- Risk Based Inspection Planning for Offshore Structures
- Risk Based Inspection Planning for FPSO/FSO oil and gas production facilities
- Reliability and risk assessment in engineering
Certification course on risk and safety for technical systems – continuing education
- decision theory, general methods of risk assessment, basic probability and statistics,
theory and application of Bayesian probabilistic nets, methods of structural reliability,
case studies)
I have been supervising a larger number of BSc and MSc thesis projects and been main PhD supervisor of 20 PhD students of which 7 are now university professors.
Presently I am main supervisor for 1 PhD student at AAU, co-supervising 1 PhD student at DTU and 4 PhD students at international level (UK, China and Portugal).

2. Study administration: A list of any study administration tasks, e.g. study board membership, head of studies or semester or course coordinator, accreditation, etc.

Extensive experience from ETH and DTU

3. University pedagogy qualifications: A list of any completed courses in university pedagogy, PBL courses, workshops, academic development projects, collegial guidance and supervision, etc.

ETH teachers training

4. Other qualifications: Conference attendance, editorials, presentations, etc. relating to education, 'University Teaching Day', etc.

See under 1.

5. Teaching activity development and teaching materials: A list of any contributions to the development of new modules, teaching materials, study programmes, e-learning, collaboration with external business partners, etc.

See under 1.

6. Teaching awards you may have received or been nominated for.

Nominated best PhD supervisor at ETH (2nd place)

7. Personal reflections and initiatives: Here you may state any personal deliberations as regards teaching and supervision, any wishes and plans for further pedagogic development, plans for following up on feedback/evaluations from students, etc.

See under 1.

8. Any other information or comments.

Type your answer here...