

Teaching portfolio

1. Teaching CV: A list of teaching and supervision tasks, including specification of academic fields, scope, level (bachelor, master, continuing education, PhD). Please state the teaching method used (e.g. lecture, class teaching, exercises, supervision, examination, coexamination, distance teaching, internet-based teaching and evaluation of teaching). Please also indicate the language of instruction.

Giulio's teaching mainly occurred within the Master program in automotive engineering (MPAUT)/mobility engineering (MPMOB) at Chalmers University of Technology. Giulio taught in the courses Active Safety (course code TME192, taught in English) during period 2014 – 2023, the course Vehicle and Traffic Safety (course code TME202, taught in English) during the period 2016 – 2022, the course Engineering of Automotive Systems (course code TME121, taught in English) during the period 2017 – 2020, and the course Automotive Engineering Project (course code TME180, taught in English) during the period 2018 – 2021. Giulio was also involved in the Massive Open Online Course (MOOC) Road Traffic Safety in Automotive Engineering within the micromaster in Emerging Automotive Technologies taught in English during 2018 at Chalmers University of Technology and in the PhD course on Analysis and Modelling Road User Behaviour delivered for the IDEA League during 2020 – 2022, taught in English. Giulio's teaching focuses on human factors in the context of traffic safety, with a focus on the analysis and modelling of road user behaviour. With respect to supervision, Giulio has supervised 5 students in Bachelor's theses, 21 students in Master's theses and been involved in the supervision of 3 PhD students.

2. Study/programme administration and management: Experience in programme management and coordination. A list of study administration tasks, e.g. study board membership, chair of study board, semester or course coordinator, accreditation tasks, etc. Experience in planning teaching activities. Experience in programme development. Participating in committees and commissions etc. on education issues.

Director of MPAUT (2019 – 2022) and director of MPMOB (2020 – 2023): in these roles, I have been responsible for developing and planning the Master programmes, ensuring that they meet the predetermined objectives, for monitoring the quality (e.g., evaluation of courses) and for enabling possibilities for students to influence. The number of students in each academic year has been between 50 and 60 for MPAUT and between 70 and 90 for MPMOB.

3. Formal pedagogical training: A list of completed courses in university pedagogy, PBL courses, workshops, academic development projects, collegial guidance and supervision, etc. Written assessment from the course in university pedagogy for assistant professors. Participation in conferences on pedagogy and didactics. Please enclose any documentation of the above, such as course certificates, references, etc

Writing for publication and for constructive alignment, 3 ECTS (2015), to learn about the different steps of the writing process and on the tools to facilitate the writing process for students; University Teaching and Learning, 3 ECTS (2016), to obtain insight on the different approaches to teaching, on the methods to increase students' participation and to receive feedback about my lectures; Supervision of research, 3 ECTS (2016), to gain knowledge on the recruitment of students, on the improvement of communication with students and on the promotion of students' independence; Enhancing learning through writing, 5 ECTS (2018), to master the use of constructive alignment for all the aspect of my teaching (e.g., definition of learning outcomes, conception of final assessment); Diversity and inclusion for learning in higher education, 2 ECTS (2018), to understand the needs of different students (e.g., students with special needs) and on how to address them during my lectures; Coaching - an approach in supervision of doctoral students (2020), to receive an introduction about the different methods for coaching; Basic course with focus on PBL (2023), to get introduced to the Project Based Learning teaching at Aalborg University. In 2019, I received the Diploma of Higher Education from the division of Engineering Education Research.

4. Other qualifications: Conference contributions and attendance, contributions to debates, scientific articles on pedagogical issues etc. Peer supervision, editorials, mentoring experience or other types of competence development activities.

Type your answer here...

5. Pedagogical development and research: Development of new courses, teaching materials, teaching methods, examination types or other types of pedagogical development.

Didactic and pedagogical research. Cooperation with external collaboration partners.

Type your answer here...

6. References on your teaching skills from superiors or colleagues. Teaching evaluations and any teaching awards received.

Type your answer here...

7. Personal reflections and initiatives: Here you may state any personal deliberations as regards teaching and supervision, any wishes and plans for further pedagogical development, plans for following up on student feedback/evaluations, etc. Personal reflections on your own pedagogical practice, including objectives, methods and implementation. This should include an analysis and a reasoned description of your pedagogical activities in relation to your pedagogical understanding and student learning. Thoughts on the teaching method at Aalborg University (which is largely based on group-organised project work and problem-based learning)

During the development of a course, a whole teaching module or a lecture, I consider the constructive alignment theory as a guide (Biggs, 1996): constructive alignment aims to ensure that the material taught supports the students in meeting the objectives of a course/module/lecture. The constructive alignment materializes in several aspects of the course/module/lecture, including the definition of the learning objectives, the preparation of the lecture, the construction of the assignments and the creation of the final assessment. For the definition of the learning objectives of a course/module/lecture, I use the Bloom taxonomy (Bloom, 1956) as inspiration. The Bloom taxonomy provides a hierarchical structure for the levels of learning and supports the teacher in the development of the learning objectives, the material for the course and the final assessment.

Looking at the six stages of teaching described by Kugel (1993), my aim as a teacher is to plan and organize my teaching and supervision to support the students to become independent learners. This aim implies that students should become active learners rather than passive recipients of the material taught. During my lectures, I attempt to boost the interest of the students by ensuring an interactive environment through videos, drawing diagrams, and writing important concepts on the blackboard, anecdotes about my professional experience and questions. Besides, I support the reflection and learning process of the students through online quizzes every 45-minutes lectures (using the software Mentimeter), 5-minutes group exercises during the 90-minutes lectures and recap at the end of the lecture to summarize the most important concepts described in the lecture.

The development of my teaching requires reflection on the teaching practice, and students' feedback is a necessary element of this reflection process (McLean, 2007). To receive feedback, I ask the students to answer some questions, using the "minute paper" at the end of lectures. As well, in the final survey for the evaluation of the course, I include some questions about the overall impression of my lecture, about how I encouraged questions from the students and their participation, as well as the appropriateness of my teaching style to reach the learning outcomes. During the pedagogical course University Teaching and Learning, I also had the opportunity to receive feedback about my teaching from peers through one colleague attending one of my lectures.

As part of teaching development, I also support the internationalization of the curricula of courses where I teach. The internationalization of the curricula is an important step to achieve enhanced interactions between home and international students in university campuses (Leask, 2009).

8. Any other information or comments.

References: Biggs, J. (1996). Enhancing teaching through constructive alignment. *Higher education*, 32(3), 347-364; Bloom, B. S. (1956). Taxonomy of educational objectives: The classification of educational goals. Cognitive domain; Kugel, P. (1993). How professors develop as teachers. *Studies in higher education*, 18(3), 315-328; Leask, B. (2009). Using formal and informal curricula to improve interactions between home and international students. *Journal of studies in international education*, 13(2), 205-221; McLean, J. (2007). Reflecting on your teaching. *Teaching at the University of Manitoba: A handbook*, 5-9.