

Minutes Meeting in Employers' Panel for Computer Science

When: Monday 30. September 2024 at 16.00 – 19.30, in Scrollbar, IT University of Copenhagen, Rued Langgaards Vej 7, 2300 København S.

Comments to those minutes may be made within 20 working days after receiving the minutes.

If no comments are given, minutes are considered approved without further notice.

No comments received.

Minutes approved.

Participants:

Members of the panel: Anne Hauberg Aakjer (chair), Galina Ianchina, Maiken Lykke, Daniel Schiermer, Jacob Benjamin Cholewa, Torben Wind Meyhoff, Ender Yüksel, Sebastian Winslow, Jinhong Brejnholt, Lasse Lund Sten Jensen, Pernille Hertel

From ITU: Peter Sestoft, Dan Witzner Hansen, Louise Meier Carlsen, Michele Coscia, Marco Carbone, Patrick Bahr, Luca Aiello, Thore Husfeldt, Per Bruun Brockhoff, Mette Holm Smith, Marc Kellaway, Mahsa Varshosaz (guest), Paolo Tell (guest), Allette Bjørn Bundgaard (minutes).

Agenda:

1. **Presentation.**

As many panel members are new, everybody presented themselves.

2. **Follow-up on earlier recommendations / Peter**

Nothing pending.

3. **Status on study programs (applications, admissions, employment, etc.).**

Peter presented the background history of ITU and added details on the study programs under the CS Employers' Panel - Please see attached slides, and key words below.

BSc programs:

The number of applicants for BSWU declined over the last past years. Students are required an average of 6 in math and maybe this counts for some of the decline.

For BDS the number of applicants have grown since the start of the program in 2017. BDS is in English and attracts international applicants.

BSWU and BDS are now the second and fourth most popular IT-programs in Denmark.

MSC programs:

Some international BDS students aim for KCS but cannot take BSWU due to the Danish language

requirement. Thus, they get admitted to BDS and apply for KCS after the bachelor graduation.

A high number of international graduates from ITU stay in Denmark after graduation and enter the Danish job market.

4. Status on “Kandidatreformen” /Peter

A normal MSc program in Denmark is 120 ECTS and takes 4 semesters to complete.

“Kandidatreformen” operates with two new types of master programs:

- a) Industrial part time MSc (Erhvervskandidat): 120 ECTS, takes 8 semesters to complete. The students must have a relevant job on the side (25 hours per week),
- b) Short master (Kort kandidat): 75 ECTS, takes 2 semesters + the summer period to complete.

Per presents the status of the national set up:

“Kandidatudvalget” is due with a report by the end of October.

Some general issues are still unclear and important stakeholders as Dansk Industri and Dansk Erhverv ask for clarifications and solutions on the general level.

The political parties discuss the mode of calculation as to the number of masters to be converted to either Industrial part time MSc or short masters.

The Industrial Part time MSc scheme is not new, it has been possible to design such programs for several years but the number of such programs in Denmark has not scaled over time. Yet, the aim is for the number to grow.

Question from panel:

Will the number of IT-students in Denmark decrease?

Answer from ITU: This is not possible to predict yet.

4.2. Presentation of (very) draft Industrial MSc in Advanced Software Development/ Mahsa Varshosaz and Paolo Tell

ITU decided to design two new industrial part time MSc programs (120 ECTS) in response to “Kandidatreformen”:

- a) **Industrial master in Analytics and AI** in the Business corner of the ITU triangle
- b) **Industrial Master in Advanced Software Engineering (EKASE)** in the Computer Science corner of the ITU triangle

Mahsa and Paolo give a short presentation of the outlines of the EKASE program so far to add some context to the plans. They welcome questions from the panel:

Requirements:

The EKASE program will be 120 ECTS over 4 years (half time study). Students must have a relevant job 25 hours/week.

Target applicants:

BScs in software engineering, computer science, informatics, computer engineering, robotics etc.

Timeline:

The programme should enter pre-qualification in spring 2025. The first cohort of 15 students will

start in autumn 2026. The admission capacity will increase by 2030.

Additionally, a 75 ECTS short master program will be designed to act as fall-back program for students that for some reason cannot complete the industrial part time programme. By design, students can fall-back on the short master anytime during their studies.

Questions and comments:

- 1) Panel: 25 job hours requirement seems to be a lot for studying 50-50% ratio?
ITU: requirement is set by the ministry. Thus, ITU cannot change this.
- 2) Panel: What is the course Ethics in Software Engineering?
ITU: The course focus on the ethical dimensions of developing software.
- 3) Panel: Will students receive SU for those programs?
ITU: No because they are working on the side.
- 4) Panel: Presently, students in study jobs work 25 hours per week and study full time on the side. For the companies, this seems to be more attractive than employing an industrial master for 25 hours per week and this person studying half time on the side. The latter takes double the to graduate.
ITU: It is still unsure if the study time can be shorter than 4 years.
- 5) Panel: Industrial master students will get competences from the job during the time of study. It is important for employers that those capabilities are included into the later courses at the study program.
ITU: point taken. Some of this may already be provided in the elective courses where students have space to take courses that correspond with their interests, former competences, and experiences.
- 6) Panel: If ITU plan to reuse the current courses instead of designing new, how will this fit with the separate goal to advertise the industrial part time master as designed for students who plan to become CEOs?
It might be better to stick to just advertising to one group if this will be the reality. Students may be disappointed and leave if they do not meet what they expect form the advertisement.
- 7) Panel: Large companies have trainee programmes. Have you considered cooperating with those. It might make the programme even better?
- 8) Panel: What about the existing programs?
ITU: We want to design something different.
The business skills are included in the other industrial part time MSc program.
- 9) Panel: Will the courses be for single subject students (Åbent Universitet) also?
ITU: Presently, the framework for the existing "Erhvervskandidat" apply also to the industrial part time MScs. The question is what is possible regarding the new programs.
- 10) Panel: Today student job payment is rather low. Students accept this because it is not an ordinary job. For the new programme payment might ned to be higher to make it attractive.
- 11) Panel: The programme might be attractive for companies retaining employees in the company.
- 12) Panel: Topics like outsourcing, insourcing, inshore, outshore, regulations and legals will hopefully be included in programme.

- 13) Panel: Do you expect students to already have a job to start
 ITU: the present national framework requires students to present a signed job contract when starting the program.
- 14) Panel: It should be easy to distinguish between the part time MSc and the short MSc. Either by title or something else.
- 15) ITU: We need commitments from companies to ensure that students will be able to register for the programme, and to ensure the alignment between companies and programme.
- 16) ITU: A cut in the intake on the “old” MSc probably raises the demand from companies to the Industrial programmes.
- 17) Panel: We appreciate that the level of the new programmes is still 120 ECTS.
- 18) ITU: Will companies prefer graduates from the “old” MSc when hiring?
- 19) If students quit the part time job and fall back on the short master – will this influence the reputation of the short master?

5. **Suggestions and recommendations:**

Panel: What has come from the discussion on Generative AI (GenAI) from last meeting?

ITU: a) We conducted a survey among students about their use of GenAI, which revealed many interesting aspects.

b) An ITU GenAI project is in the pipeline.

c) Introduction of an new exam systems to prevent students’ access to GenAI during exams.

d) We welcome input from employers as to the use of GenAI in jobs.

Panel: Employees in general are very good at using GenAI but lack the background skills as to what GenAI is good for and what not.

6. **How does the difference between BSc in Software Development/MSc in Computer Science and BSc in Data Science/MSc in Data Science respectively show in their Global Competence Profiles (GCP)/ Head of Programs**

Luca explains why GCPs are similar (or very close to) across the programs KDS/BDS, BSWU/KCS
 The GCP is a document students can use when planning or applying for jobs in international environments on a global level.

The GPC is not a diploma, and thus, the aim is not to explain level and courses. This is why level and subjects in the GCP can be similar regardless of level on the programs.

Luca asks for the panel’s suggestions and comments to the GCP:

Panel: Maybe it should not focus entirely on the global perspective. International students in Denmark probably need details to use when entering the Danish job market.

ITU: Is GCP relevant for employers?

Panel: Not really.

7. **Any other business.**

Proposal for next meeting: How is GenAI used in companies.