2016 Executive-Level Employers' Panel Report

IT University of Copenhagen

Process
The panel completes the report, based on the most recent reports of the Programme-Specific Employers' Panels. The report is used as input to the Education Group's yearly Education Portfolio Report and as input to a yearly discussion among ITU's Board of Directors.
The document is public information.

Context

At ITU, a study programme is said to be *ideal*, if

1) it attracts a large number of well-qualified students; and
2) the academic contents and the teaching are both world-class; and
3) it gives the students the competences needed for the future job market.

Elaborating on 3), every student should acquire some "employment ticket" during their time at ITU, i.e., they should learn something which is difficult and in demand in the labour market.

Goals from Development Contract 2015-2017
The IT University of Copenhagen will reduce the average excess of study time for its MSc graduates in 2015 with 0.5 month compared to 2011; 1 month in 2016 compared to 2011 and 1.6 months in 2017 compared to 2011, where the average excess of study time for MSc graduates was 11.6 months.

The unemployment rates of MSc graduates graduating from the IT University of Copenhagen from the 4th to the 7th quarter after graduation, will in 2015 be at most 14 per cent; in 2016 at most 13 per cent and in 2017 at most 12 per cent.

The number of IT-University of Copenhagen MSc graduates graduating from 0 to 10 years ago and working in the private sector must be at least 75 per cent of the employed graduates. This applies to every year of the contract period.

The number of admitted MSc students, who qualified at a Danish educational institution other than the IT University of Copenhagen, must be at least 230. This applies to every year of the contract period.

By the end of 2015, ITU will have formulated a strategy for how the university exploits that its MSc students have many different qualifying degrees. By the end of 2017, ITU will have formulated and put into practice the strategy's action plans; processes and procedures.

The Profile of Global Competences and related activities of the bachelor and MSc programmes are evaluated each year of the contract period and a plan of action is made for the following year. These plans must be approved by the Head of Studies.

Quality Standards

1) Recruitment and Admission of Students
2) Teaching and Learning Activities
3) Graduates' Careers

Budget 2016

Budget 2016 was based on the following assumptions concerning admission (after early drop out):

BSc DMD	66
BSc GBI	60
BSc SWU	140
MSc DDK	143
MSc DIM	165
MSc Games	50
MSc SDT	110
Master ILM	65
Master IND	40*
Master SEN	35*
Total (MSc + BSc)	734
Total	874

*Due to the low numbers of applicants, IND and SEN did not admit students in 2016. Student intake on the programmes has been discontinued and the programmes will be phased out.

Primary Quality Data

2016

	BSc			MSc				Master (part-time)			ITU total
	DMD	GBI	SWU	DDK	DIM	Games	SDT	ILM	IND	SEN	
Number of applicants (BSc: All applicants, MSc: 1st priority only)	334	400	431	574	691	216	400	78			3143
Number of students offered admission	73	77	157	179	243	78	200	61			1081
Number of students admitted after early dropout	64	66	143	136	154	58	131	54			817
Number of admitted MSc students who qualified at another Danish institution than ITU				100	99	26	56				281
Dropout after one year (%)	11.6	3,5	19,1	4.4	4.1	5.9	16.7	2,6	4,3	4,2	8,6
VIP/DVIP ratio	2.42	1,90	2,76	3,08	5,96	5,01	13,35	1,42	1,76	3,28	3,49
Average score, course evaluation (6 is max)	4.72	4,72	4,93	4,61	4,59	4,90	4,77	4,64	4,75	4,60	4,74
Average score, programme evaluation (6 is max)	5,24 (n=5)	4,88 (n=5)	4,20 (n=1)	4,44 (n=9)	4,44 (n=10)	3,70 (n=6)	4,88 (n=8)	5,80 (n=1)	4,80 (n=1)	4,60 (n=1)	4,59 (n=47)
Average score, thesis evaluation (6 is max)	5,70 (n=5)	5,40 (n=5)	5,83 (n=1)	5,00 (n=9)	5,33 (n=10)	4,06 (n=6)	5,33 (n=8)	5,17 (n=1)	5,17 (n=1)	4,83 (n=1)	5,15 (n=47)
Average score, project evaluation (6 is max)	(n=0)	(n=0)	5,83 (n=1)	5,75 (n=2)	5,83 (n=1)	3,33 (n=1)	5,42 (n=4)	(n=0)	(n=0)	(n=0)	5,35 (n=9)
Completion within curriculum schedule + one year (%)	72	75	62	73	68	79	60				BSc: 70 MSc: 69
Average delay, compared to curriculum schedule (months)	3,3	3,6	3,0	7,3	8,8	3,9	8,2				10,6
Number of graduates	63	63	43	151	87	68	108	49	10	5	647
Unemployment rate				16	9	27	7				14
Private sector employment the past 10 years (%)											77

2015											
	BSc			MSc				Master (part-time)			ITU total
	DMD	GBI	SWU	DDK	DIM	Games	SDT	ILM	IND	SEN	
Number of applicants (BSc: All applicants, MSc: 1st priority only)	355	327	317	449	643	224	374				2689
Number of students offered admission	78	72	100	179	175	72	161				837
Number of students admitted after early dropout	69	57	89	136	123	51	102	39	23	24	713
Number of admitted MSc students who qualified at another Danish institution than ITU				112	69	15	43				239
Dropout after one year (%)	16	9	18	6	16	6	13	6	3	5	12
VIP/DVIP ratio	1.3	1.5	2.0	2.2	3.5	3.3	43.7	2.2	1.3	1.7	2.6
Average score, course evaluation (6 is max)	4.7	4.62	4.79	4.82	4.7	4.77	4.73	4.91	4.71	4.74	4.75
Completion within curriculum schedule + one year (%)	66	61	79	73	75	75	53				BSc: 68 MSc: 69
Average delay, compared to curriculum schedule (months)	3.1	1.7	5.2	11.6	7.3	5.6	10.3				12.6
Number of graduates	53	45	64	143	106	64	93	24	8	3	603
Unemployment rate				17.3	5	14.3	3.2				10.7
Private sector employment the past 10 years (%)											78

2014											
	BSc			MSc				Master (part-time)			ITU total
	DMD	GBI	SWU	DDK	DIM	Games	SDT	ILM	IND	SEN	
Number of applicants (BSc: All applicants, MSc: 1st priority only)	404	367	318	434	444	176	354				2497
Number of students offered admission	89	74	100	191	152	104	177				887
Number of students admitted after early dropout	81	66	92	154	98	70	120	65	18	15	779
Number of admitted MSc students who qualified at another Danish institution than ITU				129	54	40	80				313
Dropout after one year (%)	30	18	15	7	6	7	4	5	0	8	10
VIP/DVIP ratio	1.2	1.4	2.7	2.4	1.8	5.1	7.3	3.1	*	2.8	2.5

Average score, course evaluation (6 is max)	4.8	4.7	4.85	4.82	4.54	4.68	4.85	4.96	5.04	4.85	4.79
Completion within curriculum schedule + one year (%)	79	75	76	62	72	75	50				BSc: 77 MSc: 63
Average delay, compared to curriculum schedule (months)	1.7	2.8	3.5	10.4	8.4	7.3	9.4				11.5
Number of graduates	58	39	39	130	89	52	86	17	8	6	524
Unemployment rate				18.6	8.1	14	14.9				15
Private sector employment the past 10 years (%)											78

*Only VIP taught

Overall Match with Current Needs

Based on the reports from the Programme-Specific Employers' Panels and your own impressions of ITU's portfolio of study programmes, how would you describe the overall match between current needs for competences on the Danish job market and the portfolio?

- The panel believes there is generally a good match between the different programmes and the industry needs. However, the unemployment rate of DKK graduates is concerning. It is believed that the unemployment is due to the current specializations offered. Hence, it is recommended to look further into the numbers and to revise the specializations.

- Generally, the focus on global competencies is satisfactory (global courses, international students, possibility to study abroad). However, the global focus is considered to be too vague when it comes to DMD/DDK. It should be clearer what subject areas in the curriculum will be able to strengthen the global profile and how, and the benefits of the exchange programs should be described in more detail.

- Regarding ILM and DMD/DDK, there is a need for greater depth in the curriculum:

    - ILM: Continue offering elective courses that can give the students in depth knowledge within specific subjects.
    - DMD/DDK: There is a need for less breadth in the curriculum. The students need to have actual specializations and not just areas of interest. Furthermore, the different courses should not be repeating themselves, which currently is the case.

What changes to the balance in the portfolio, if any, would you recommend in order to optimize the match?

- It is recommended that ITU revises the specializations of DDK based on the feedback and evaluation that the programme-specific employers' panel has given at the last panel meeting. Among other recommendations, communication and social media should not be part of the curriculum – as there are other educations better specialized for this.

What are the most important current needs (max. three) that are not covered by ITU's portfolio of study programmes?

- The programme-specific employers' panel for ILM sees a need in the market for educating consultants and vendors working with IT in small and midsized Danish companies and organizations. Hence, it is recommended that ITU establishes an elective course around the SME market.

- The programme-specific employers' panel for SWU/SDT requests more focus on method/process topics around IT development and "legacy" development to ensure the students are familiarized with e.g. project management, requirement management, and testing on basic level.

  Furthermore, the panel emphasizes that it's important to consider the "sustainability" when choosing specializations at ITU as *hype* topics is very fast in both increase and decline.

Overall Match with Needs in 3-5 years' time

It takes some years before pervasive changes to a study programme is reflected in the competences of the graduates. Looking 3 to 5 years ahead, what current trends do you think are likely to give a substantially different pattern of competence needs from the one that exists today?

- Automation
- The internet of things

What competences do you think will be less in demand 3 to 5 years from now?

- Outsourcing

What competences do you think will be more in demand 3 to 5 years from now?

- The ability to handle complex issues, whether it is technical integrations, cultural differences or organizational complexities
- Big data/BI/machine learning
- Security

Does the panel have concerns relating to the quality of portfolio of study programmes?

- As mentioned above, it is recommended that ITU revises the curriculum and specializations of DMD and DDK to strengthen the student's profiles and employment rate.

Does ITU follow up on the recommendations made by the Employers' Panels?

Based on your reading of the reports of the Programme-Specific Employers' Panels and your own experience with ITU, does the university follow up on recommendations given by the Employers' Panels?

- Generally, the panels are very satisfied with ITU's effort and think there is a solid interest in receiving and implementing the recommendations given by the panels.
- The programme-specific employers' panel for DMD/DDK welcomes the new revision of DDK, but is dissatisfied that it has been put in place without the panel. The interest in using the panel, working with the feedback from the panel, and receiving e.g. the survey produced by the panel has been sorely missed. Furthermore, the role of the panel is misunderstood by the delegates from the University. The role is to evaluate – not drive – changes.

Summative analysis of ITU's Portfolio of Study Programmes

Strengths	Weaknesses
• GBI: Provides good general knowledge of coding and databases and an understanding of IT and business processes. • DIM: Focus on navigating complexity in technology and organizations. • GAMES: The new programme has become more data driven and practical and seems to be widely accepted by most stakeholders. • DMD: Very good introduction to the field of digital media and interaction. • DDK: All corporations are in need of user centered and digital candidates. • ILM: A structure that matches the student's resources. Great combination of internal and external presentations.	• GBI: Missing understanding of the complexity in IT-landscapes incl. integration and data management. • DIM: Broad curriculum can result in weak focus and specializations. • GAMES: We have yet to see the results of the study programme implementation. • DMD: The programme is too academic and weak. • DDK: The graduates are too general and have too little focus – this is in particular due to the weak specializations. Furthermore, there is too much overlap with DMD curriculum. • ILM: Hard balance between general management principles and specific IT management. Furthermore, there is a risk that the programme will be addressing too many and different target groups.
Opportunities	**Threats**
• GBI: Change agents that come with an understanding of context and general methods in a global perspective. • DIM: Solution and result focused graduates with the ability to execute in complex settings. • DMD: there should be a lot more focus on getting the students out in the real world and solve real problems through internships or case partners. • DDK: Split of the students with/without the DMD to create domain masters e.g. healthcare vs. UX/design specialist. • ILM: Increased demand of candidates with understanding of both IT and business.	• GBI/DIM: Other educations that are more specialized i.e. focused on data science. • DMD: Other universities are very strong in specialized fields, e.g. Aalborg University in Service Design. • DDK: Not defining the new specializations clearly enough and choosing subject matters that are interesting but not design oriented. • ILM: The lack of research-based material in IT management with relevance for the programme will make it difficult to achieve the objectives.

Overall, ITU's study programmes give the students the competences needed for the future job market (select one and delete the rest):
1: strongly disagree
2: disagree
3: disagree somewhat
4: agree somewhat
5: agree
6: strongly agree

Average from Employers' Panel Reports = 4,7 (2+4+5+4+6+6+6)

Recommendations

- SWU/SDT: Look abroad for inspiration for designing the SDT master to ensure that it will stand on its own and not be a discount version of the Advanced Computing master. Furthermore, ensure good job-profiles for options for the candidates and e a strong communication plan.
- SWU/SDT and ILM: It is recommended to increase the number of students admitted. More female students are wanted for SWU.
- GAMES: Increase marketing initiatives to communicate new programme and thereby attract the right candidates.
- DMD/DDK: Be careful not to dismiss all humanists due to coding skills as a requirement. Offer a summer course in coding.
- GBI/DIM: Students must keep learning something that is both relevant and difficult and always focus on the ability to handle complex issues.
- GAMES: Develop a temporary measurement system and start collecting data on the programme to be able to track improvements and adjustments.
- DMD/DDK: Establish few but relevant specializations based on input and feedback from the programme-specific employers' panel.
- ILM: Customize programme to both students with and without IT background as the education benefits from diversity. Change the programme name to "Ledelse af IT og digitalisering".

Comments and Suggestions

ILM: The programme-specific employers' panel is happy to see that ITU is already conducting analyzes of the students and their profiles, as this will increase the understanding of the education and its relevance. It is recommended to conduct qualitative analyzes as well. These could include:

- Knowledge from the students before, during, and after the education.
- Knowledge from the student's workplace, as this will give an increased network and insight into future needs.

Date and Signature

Date: 21. MARTS . 2017

Head of Executive-Level Employers' Panel (signed):