TEK Graduate Survey
A national level yearly feedback survey for M.Sc. (Tech) graduates

HISTORY
Answer rate (%) 2012-2018

83 %

COLLABORATION
1. Data Collection
2. Data Compilation & Results
3. Sharing the Results

RESULTS

SURVEY THEMES
1. Basics
2. Studies
3. Skills and expertise: Importance and development
4. Support and guidance
5. Master’s Thesis
6. Working along the studies
7. Employment
8. Satisfaction with the studies

RESOURCES: tek.fi/vastavalmistuneet

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YEARLY CYCLE OF COLLABORATION

Universities utilize the results to support quality assurance and decision making
- From program level to strategic level
- Universities

"The Results Road-Show" (Mar - Fall)
- Workshops with each of the universities
- What does the results tell for us?
- Supporting education QA function of the universities
- TEK & Universities

National Seminar (Mar)
- Raising the discussion of the Finnish engineering education focus and quality
- TEK & Universities

Survey Design (Fall)
- Decisions of the survey design for the next calendar year
- Responsible: Directory Board

Survey Preparation (Fall - Dec)
- Preparing the online survey for universities
- Providing Ready-to-Use links
- TEK

Delivery (Calendar year)
- Delivering the survey for the graduates
- Survey as a part of the "Graduation Roadmap"
- Universities

Data collection (Cal year)
- TEK responsible of the continuous data intake
- Universities have a real-time access to their data
- TEK & Universities

Results (Jan-Mar)
- Creating the basic result materials
- Printed booklet
- Interactive visualization
- TEK

Data Compilation (Jan)
- Compilation of survey data as a whole (n>2000)
- TEK

Sharing the Results

Data Collection

Data Compilation & Results

RESOURCES: tek.fi/vastavalmistuneet
TEK GRADUATE SURVEY: ANSWER RATE (%) 2012-2018

<table>
<thead>
<tr>
<th>Year</th>
<th>2012 (%)</th>
<th>2013 (%)</th>
<th>2014 (%)</th>
<th>2015 (%)</th>
<th>2016 (%)</th>
<th>2017 (%)</th>
<th>2018 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>53%</td>
<td>60%</td>
<td>58%</td>
<td>72%</td>
<td>68%</td>
<td>78%</td>
<td>82%</td>
</tr>
</tbody>
</table>

TEK GRADUATE SURVEY: ANSWERS (N) 2012-2018

<table>
<thead>
<tr>
<th>Year</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>1226</td>
<td>1459</td>
<td>1526</td>
<td>1914</td>
<td>2120</td>
<td>2312</td>
<td>2014</td>
</tr>
</tbody>
</table>
Employment at the time of graduation 2011-2018

- **Other**: 4%, 6%, 8%, 9%, 6%, 5%, 5%, 4%
- **Seeking for a job**: 18%, 20%, 25%, 25%, 27%, 25%, 21%, 18%
- **Already employed / Aware of forthcoming employment (incl. Doctoral studies)**: 78%, 74%, 67%, 66%, 67%, 68%, 71%, 76%

7. I am satisfied with the education that I have received.

- I somewhat agree: 29%
- I agree: 64%

TULOKSIA & VISUALISAATIO:
tek.fi/vastavalmistuneet

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WHAT ABOUT THE FUTURE?

How to cope?
How to make the future a bit easier to cope with?
The Future of Jobs Report 2018

Job families in decline and on the rise

Top 5 Trends
Global Risks Report

1. Changing climate
2. Rising cyber dependency
3. Increasing polarization of societies
4. Rising income and wealth disparity
5. Increasing national sentiment

WHAT IS THE FOURTH INDUSTRIAL REVOLUTION?

The Fourth Industrial Revolution builds upon the innovation of the Third Industrial Revolution to revolutionize societies all over the globe such as:
- Artificial Intelligence
- Internet of Things
- Self-driving Vehicles
- Nanotechnology
- Renewable Energy
- Quantum Computing
- Biotechnology

Because of this explosion of new fields, new markets will emerge which will require a new set of skills for employment. Increasingly smart robots will take over some jobs, and jobs that didn’t exist before will be in demand.

Source: Future of Jobs Report, World Economic Forum
INSPIRATION & EMPOWERMENT
1. Know-how of own field
2. Knowledge of the research of own field
3. Knowledge of the history and...
4. Mathematics and natural science
5. Practical application of theories
6. Working independently
7. Sustainable development
8. Basics of business operations
9. Entrepreneurial capacities
10. Problem solving
11. Information retrieval
12. International work environment
13. Project management
14. Time management and of prioritizing
15. Developing own working life skills
16. Career management capacities
17. Written communication
18. Visual communication
19. Digitalization and utilization of data
20. Oral communication
21. Leadership
22. Team working
23. Social skills
24. Self-knowledge
25. Self-confidence
26. Creativity
27. Critical thinking
28. Analytical thinking
29. Ethicality

ALL n=1783

1=Not at all (important)
2=Very little
3=Little
4=Somewhat
5=Much
6=Very much
(7=Cannot answer)
What we see, if we compare the future skill forecasts with the TEK Graduate Survey results?

Are we doing the right thing?
2022 Skills Outlook

Growing
1. Analytical thinking and innovation
2. Active learning and learning strategies
3. Creativity, originality and initiative
4. Technology design and programming
5. Critical thinking and analysis
6. Complex problem-solving
7. Leadership and social influence
8. Emotional intelligence
9. Reasoning, problem-solving and ideation
10. Systems analysis and evaluation

Declining
1. Manual dexterity, endurance and precision
2. Memory, verbal, auditory and spatial abilities
3. Management of financial, material resources
4. Technology installation and maintenance
5. Reading, writing, math and active listening
6. Management of personnel
7. Quality control and safety awareness
8. Coordination and time management
9. Visual, auditory and speech abilities
10. Technology use, monitoring and control

The Core
- Math & Natural Sciences
- Team working
- Analytical thinking
- Substance knowledge of own field
- Information retrieval

Development of expertise & skills from STUDIES; STABILITY
- Entrepreneurial capacities
- Leadership
- Basics of business operations
- Creativity
- Project management
- Oral communication
- Time management & prioritizing

2011 2015 2018
Development of expertise & skills from STUDIES; CHANGE TRENDS

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INSPIRATION & EMPOWERMENT & HARD WORK
TEK GRADUATE SURVEY 2018
INTERACTIVE VISUALIZATION OF THE RESULTS

www.tek.fi/vastavalmistuneet