# Education survey comments and take-away

## 

## General

* **T-shape knowledge**
  + some knowledge in all topics (BSc), deep knowledge in one (MSc)
* **motivating** courses and examples
  + make students work beyond their duties (out of interest)
  + extra contributions
    - github, Linux kernel commit, etc.
* talent development
  + extra work with motivated and talented students - student groups
  + challenges
  + mentor network - university and industry
  + support entrepreneurship
* **more practical knowledge**, yet keep systematic thinking
  + programming
  + available tools for problems
  + ability to do reality check
    - ex. pentesting recommendations
  + algorithmic and computational foundations
* programming knowledge
  + program design, individual work
* more connection to the outside world
  + involve them in industry conferences (hacking, xHat)
  + projects (summer internships)
    - take practical problems from industry
    - bring back examples to the university
  + guest lectures from industry
* more references to other subjects - awareness
* **team** is important
  + a senior experts can train junior people (with practice)
  + project-oriented work
* soft skills
  + reporting and presentation
  + career development
  + team and collaborative work
  + time management

## 

## Levels

* BSc
  + challenge: course will be for a mixed set of students with different goals
    - adapt to all backgrounds
  + give a map/mindset for topics - awareness
    - more systemic thinking
    - ability to adapt and learn quickly
    - secure software development methodologies
  + motivate and “heureka moment”
    - more important than technical knowledge
  + BSc is enough to start in an IT sec position - company will train them
  + algorithmic and computational foundations
* MSc
  + security architect - system design
  + security examples across all MSc specials
    - guest lectures from security - show examples to each field
  + challenge: minor will be a mixed set of students with different goals - adapt to all backgrounds
  + correlating with other subjects
    - establish projects with student from other specials

## Topics needed

* IT security management
  + question of economics
  + IT sec audit
  + compliance and regulations
  + disaster recovery and business continuity
* programming and software development
  + language-independent programming skills (but be pro in one)
  + low-level (and high-level) skills
  + secure software development
    - software quality assurance - end-to-end
  + methodologies (in practice)
* algorithmic and computation theory
* operating system knowledge
* enterprise architecture