



Internet Ecosystem and Evolution

Some Introductory Words

Gábor Rétvári, Zalán Heszberger

Course information



- Gábor Rétvári – retvari@tmit.bme.hu

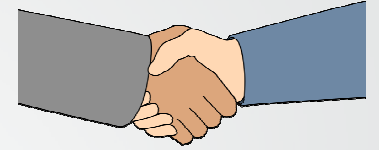


- Zalán Heszberger – heszi@tmit.bme.hu

- Homepage: https://www.tmit.bme.hu/internet_english
- Neptun code: VITMMA00

What and How Should We Teach?

Getting to Know Each Other



- Please give us a short introduction of yourself:
 - What program are you attending currently? (e.g. Erasmus, BME specializations etc.)
 - What are your previous experiences/studies?
 - What topics are you interested in?
 - Do you like practical things like programming or you would better study more theory?
 - What are you interested in more? Technical details of the operation of the Internet or derivations of the technological things: e.g. from social, economic or legal domains instead?
 - Do you prefer labs over theory classes?
 - How do you study? Just reading the ppt slides or you better try everything on your computer?
 - Do you have any previous knowledge about the course?
- More practical questions:
 - Do you have a notebook to use on the lab sessions?
 - Is there anything that prevents you from attending at the theory or lab sessions?

Requirements for the Fulfillment of the Course



- Grading is at the end of the semester by written and oral tests
- There will be a midterm test on march 21, 2017.
- Theory classes on every Tuesday: 8:15-9:45 (or 8:30??-9:45)
- Labs: Thursday 8:15-9:45 (or 8:30??-9:45) only every second week!
- Attending at the practice sessions is mandatory, a maximum of 2 sessions may be missed
- During labs we will solve practical tasks together
- During the semester there will be tasks for 5 homeworks
- If you solve the homeworks till the corresponding deadlines you get 2 bonus points each
- On the last session of the semester: second test or pre-exam (if midterm test passed)
- How to study? – It is recommended to take notes on theory classes as it will be the bases of labs and also the homework
- All presentations will be uploaded to the homepage of the course at the end of sessions

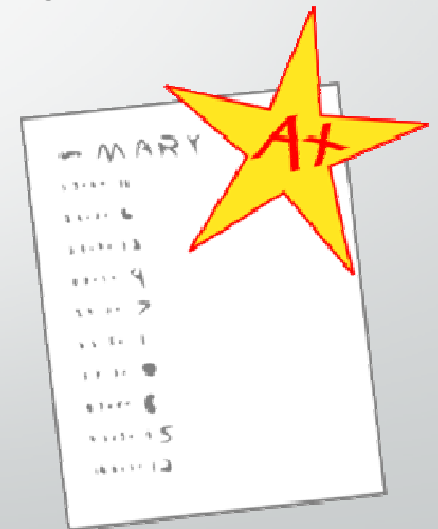
Topics on Labs (depending on how we progress)

1. Installing of emulation environment on student's laptops
2. Subnet addressing calculation, manipulation of IP packets
3. Getting familiar with Internet routing and monitoring databases
4. Building a simple network
5. Configuring the BGP protocol
6. Setting up complex BGP functions
7. Visiting the Budapest Internet Exchange at Victor Hugo str.



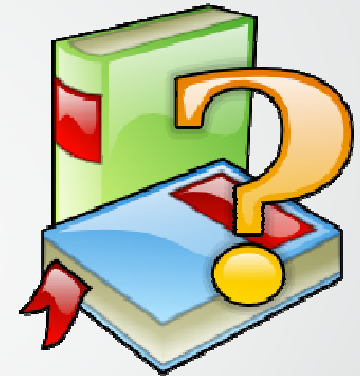
Assessment and Grading Procedures

- The exam at the end of the semester contains a written and an oral test
- The exam has a theory and also a practice part
- At the practice part you will be asked to modify a given network configuration on your notebook (the configuration is derived from the homeworks)
- Scoring:
 - Total score: 100 points
 - Theory part: 40 points
 - Practice part: 60 points
 - Sum of Bonuses: 10 points
 - Grading: 51 - grade 2, 65- grade 3, 78- grade 4, 91-grade 5 (excellent)

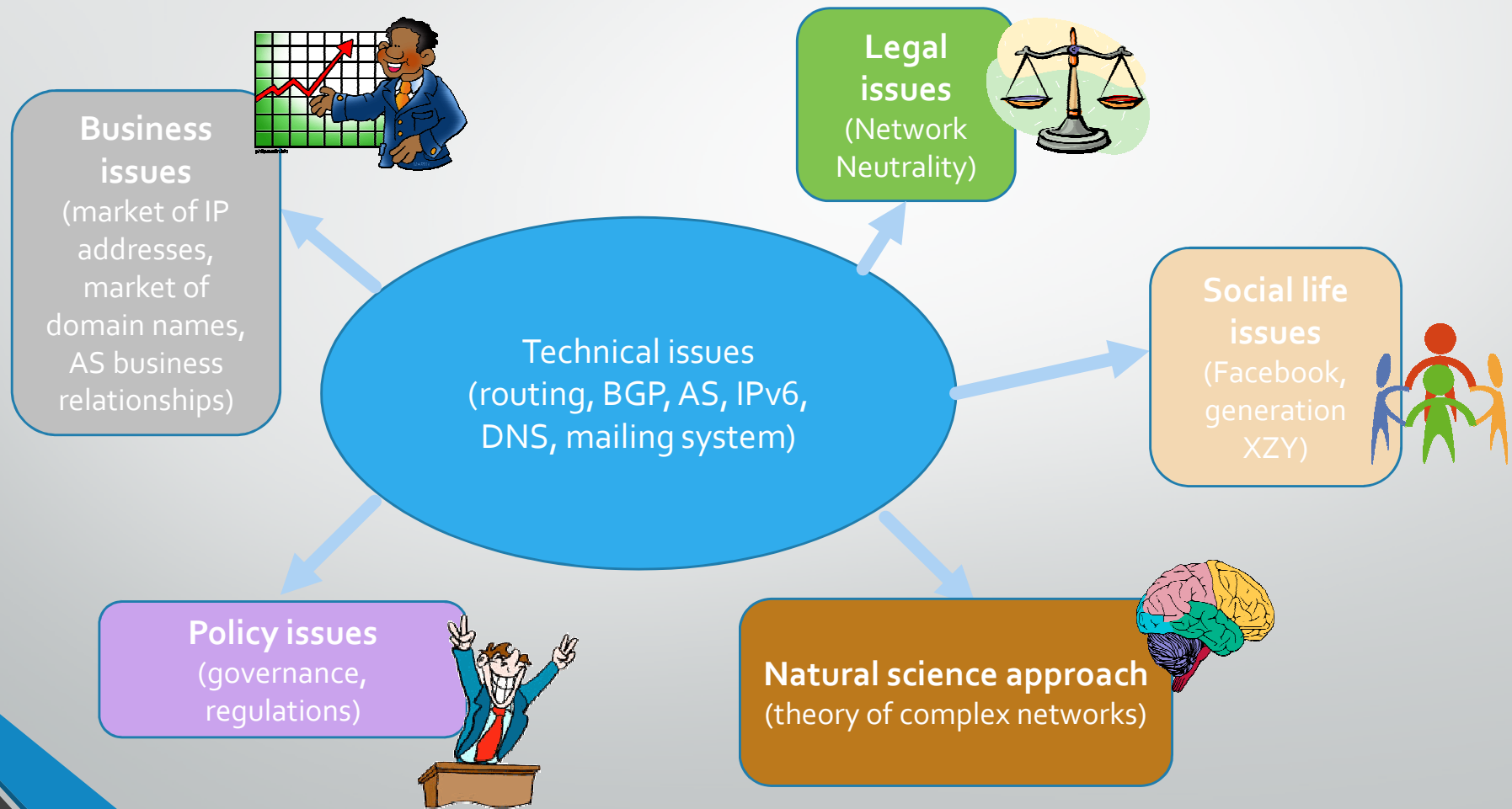


Content of the Course

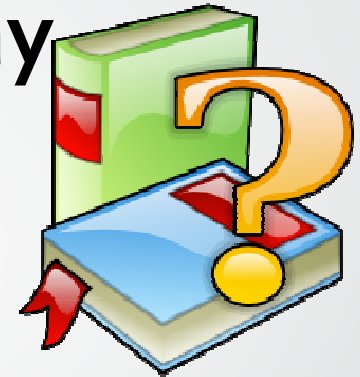
1. Introduction of the course, Internet as a life space
2. The architecture of the Internet, domain level routing
3. Operation of routing devices
4. How to regulate the Internet and how to operate
5. Global systems (governance, IPv6, DNS, email)
6. Deep Web, Dark Web, darknet
7. Internet as a complex networked entity: evolution and dynamics of networks – a natural science approach



Connection Map of Topics on the Course: Internet Influenced Social Domains



Preparation for the Lab this Thursday



Please read the instructions at the homepage of the course belonging to the first lab session and install all the stuff onto your notebook that is described there!

That way, hopefully, we will have time to deal with the real questions!