„I would never trade in the old class schedule for the Block Plan“

Reorganizing the teaching schedule in BSc IT Security at the University of Applied Sciences, St. Pölten

HRK | International Engineering Conference | 2012

Dr. Christiane Metzger

Prof. Dr. Rolf Schulmeister

Prof. (FH) Johann Haag

FACHHOCHSCHULE KIEL
University of Applied Sciences

UH

/fh/// st.pölten

Initial Situation

- „Battle“ for students‘ resources
  - lecturers who demand more engagement from students exhaust their resources, while other lecturers go away emtpy handed
  - students learn only what is requested in exams
  - projected workload does not concur with real workload
- Dissatisfaction with self study activities
  - workload peaks due to concurrently placed assignments
  - generous deadlines provoke procrastination
- Goals of the curriculum were only partly achieved

Block Plan

Reorganizing the Lesson Plan

winter semester 2011/12

26.09.2011 → 19.02.2012

Mathematics	Network engineering	Operation systems 1	Law	Programming	*Christmas break*	Operation systems 2	Law	*Free period*
26.09.-21.10.	24.10.-11.11.	14.-30.11.	01.-02.12	05.-21.12.	*22.12.-08.01.*	09.-25.01.	26.-27.01.	*28.01.-19.02.*

- duration of blocks reflects size of modules in ECTS
- seat time stayed almost the same
- English taught in weekly lessons

Support Actions

- Decision for reorganization by the staff in January 2011
- Support by external experts in didactic issues
- 2 on-site workshops
- Mentoring by an intern body (SKILLS)
- Support by a tutor for the whole period
- Time budget study of the students‘ workload

Effects on Workload

Time Budget Method

Studenten

Fachhochschule Sankt Pölten GmbH

ZeitBudgetTool

» Logout

Erfassungsbogen von Christiane Metzger vom 23.02.2012 ?

Start	Dauer	Studium & Freizeit	Lehrveranstaltungstyp	Arbeitsform	Zweck	Tätigkeit	Medien	Optionen
07:30 Uhr	1:00 Stunden	Private Zeit						
08:30 Uhr	0:30 Stunden	An- und Abfahrt zur FH						
09:00 Uhr	1:30 Stunden	Einführung Netzwerke und verteilte Systeme	Vorlesung	Anwesenheit in Lehrveranstaltungen				
10:30 Uhr	0:15 Stunden	Freies studienbezogenes Gespräch						
10:45 Uhr	2:30 Stunden	Einführung Netzwerke und verteilte Systeme	Übung/Labor	Selbststudium (studentische Arbeitsgruppe)	Unterrichtsnachbereitung	praktische Aufgabe(n) im Labor lösen	mit IT-Medien	
13:15 Uhr	1:00 Stunden	Private Zeit						
14:15 Uhr	1:30 Stunden	Einführung Netzwerke und verteilte Systeme	Übung/Labor	Anwesenheit in Lehrveranstaltungen				
15:45 Uhr	0:15 Stunden	Studium: Organisation						
16:00 Uhr	0:30 Stunden	An- und Abfahrt zur FH						
16:30 Uhr	1:00 Stunden	Private Zeit						
17:30 Uhr	2:00 Stunden	Hobby						
19:30 Uhr	3:45 Stunden	Private Zeit						

Workload Variables

- seat time
- self study time
- time for organizational issues (copy documents, investigation on internship…)
- informal conversation about learning/study programme
- time for student self-administration
- time for internship
- time for excursions

Data Quality

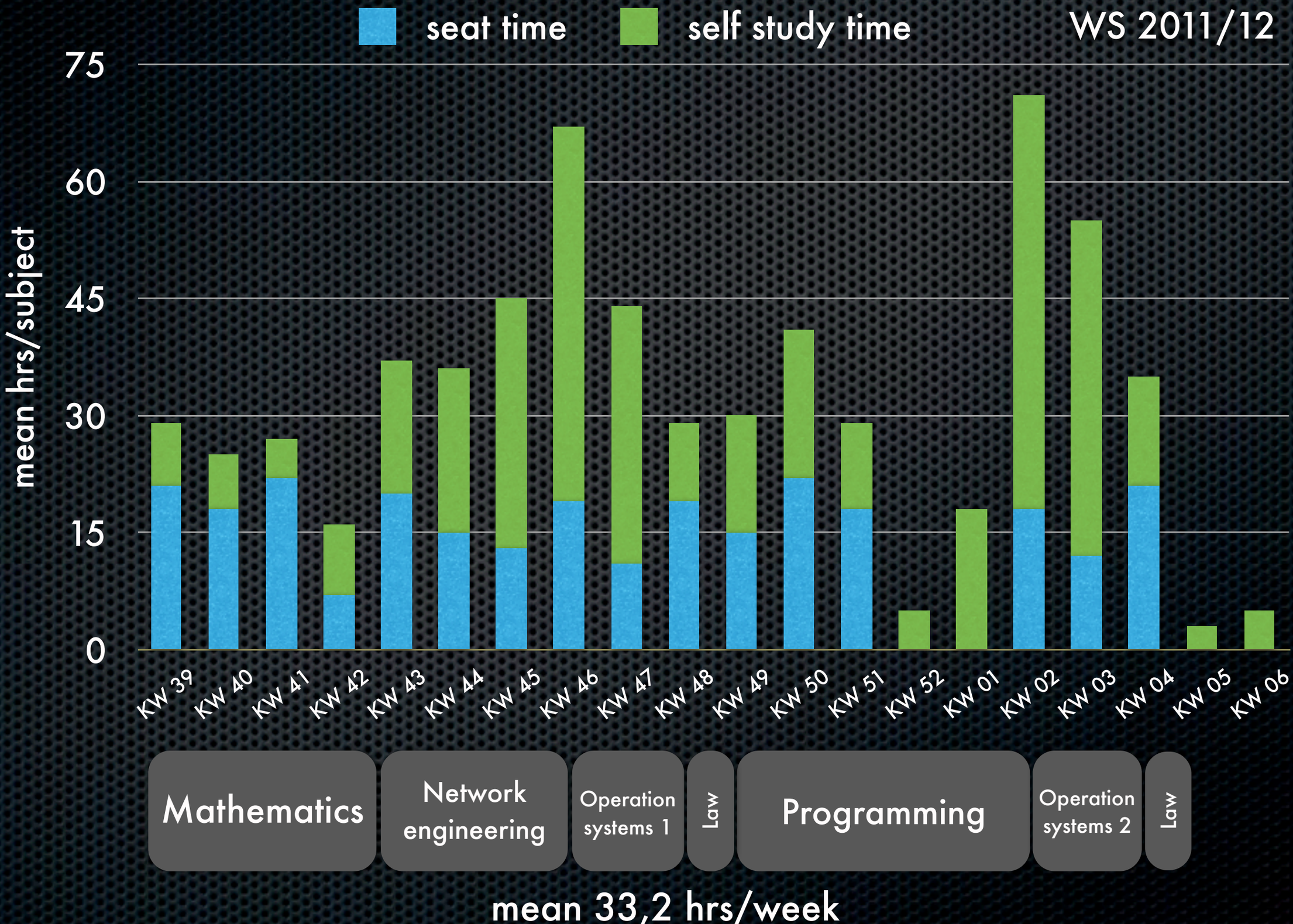
Entries until 5 pm the following day

A completed sheet is not available anymore

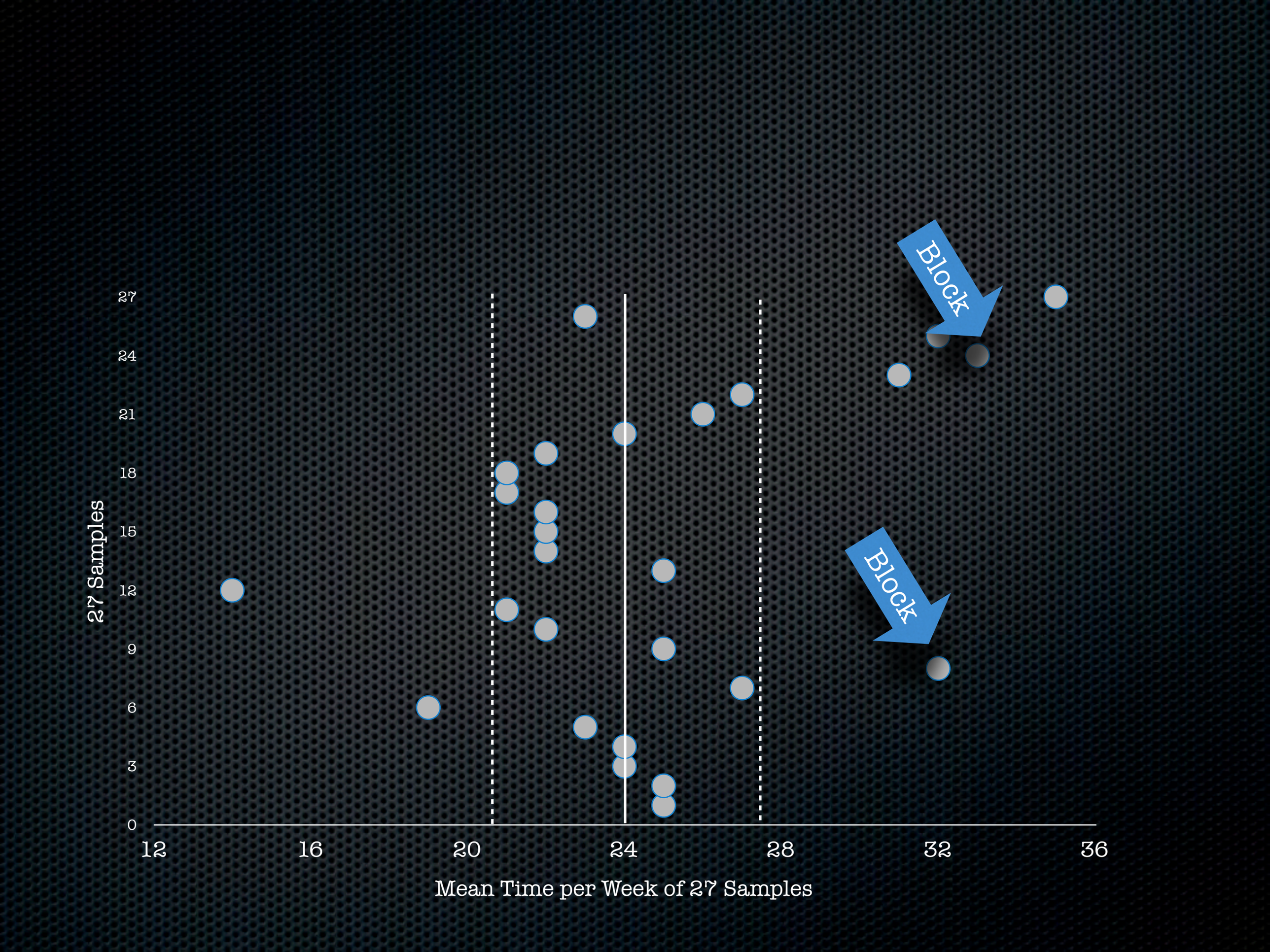
Check regarding completeness

+ plausibilty on a daily basis

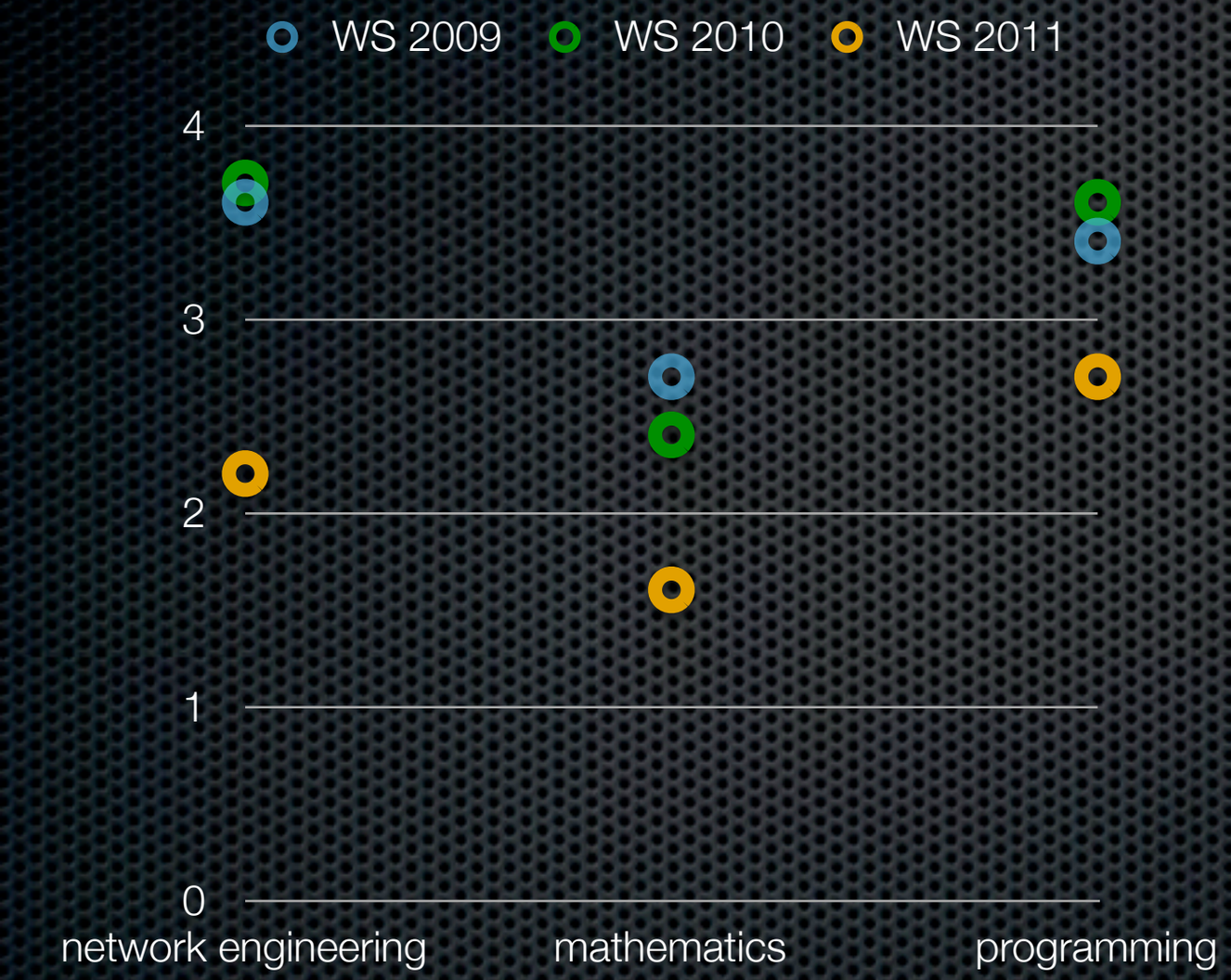
- registered time: 15-16 hrs/day (ø sleeping time)
- smallest documented time slot: 15 min
- survey period: 2011-09-26 to 2012-02-12 daily
- complete cohort

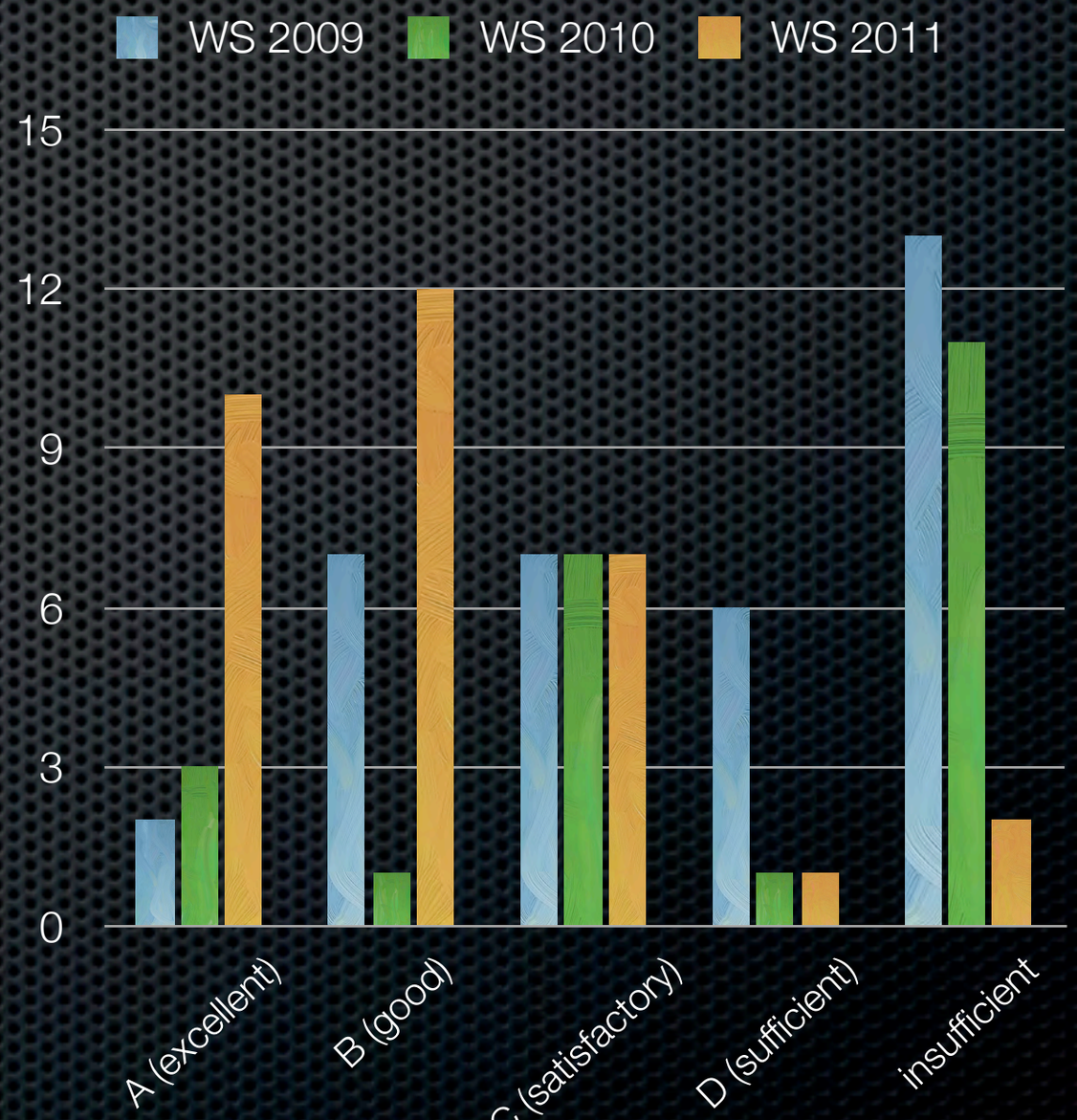

seat time
self study time
WS 2011/12
mean hrs/subject
75
60
45
30
15
0
KW 39
KW 40
KW 41
KW 42
KW 43
KW 44
KW 45
KW 46
KW 47
KW 48
KW 49
KW 50
KW 51
KW 52
KW 01
KW 02
KW 03
KW 04
KW 05
KW 06
Mathematics
Network engineering
Operation systems 1
Law
Programming
Operation systems 2
Law
mean 33,2 hrs/week

Effects on student engagement, grades, failure and retention


Block
Block
27
24
21
18
15
12
9
6
3
0
27 Samples
12
16
20
24
28
32
36
Mean Time per Week of 27 Samples

Grades & Failure





Lecturers‘ impressions

Staff Feedback

- Higher workload due to short feedback time-limits
- higher Motivation due to:
  - closer contact with students
  - higher sense of responsibility for learning process
  - better participation of students
- Pro: more time for research before and after course block

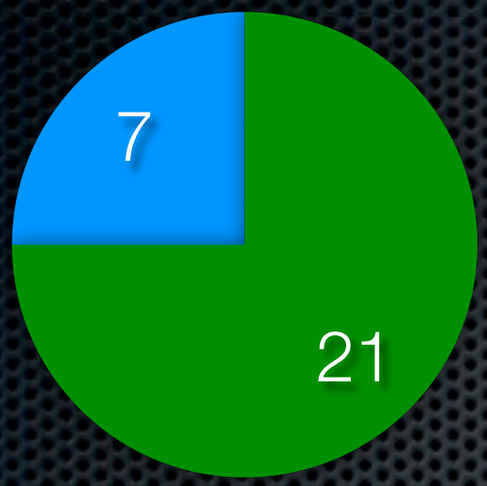
Prof. Johann Haag, St. Pölten

„The Block Plan is for lecturers more intensive and demanding, but if you recognize the student engagement, then you are thrilled and like the students you will never trade in the old class schedule for the Block Plan“

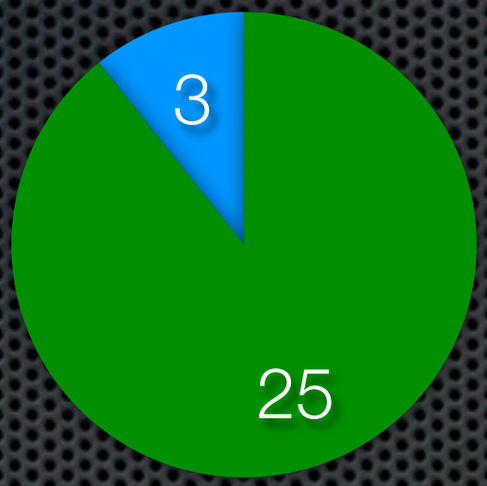
Students‘ impressions

I fully agree I predominantly agree I partly agree I do not agree

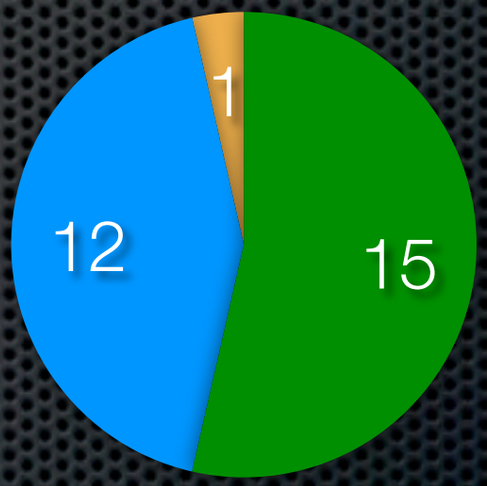
All in all the term suits me



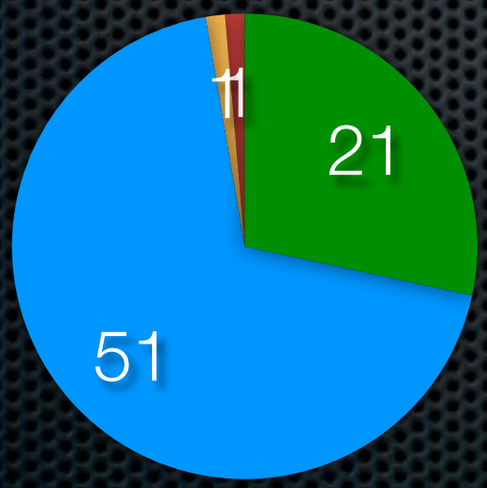
I'm satisfied with what I've learned



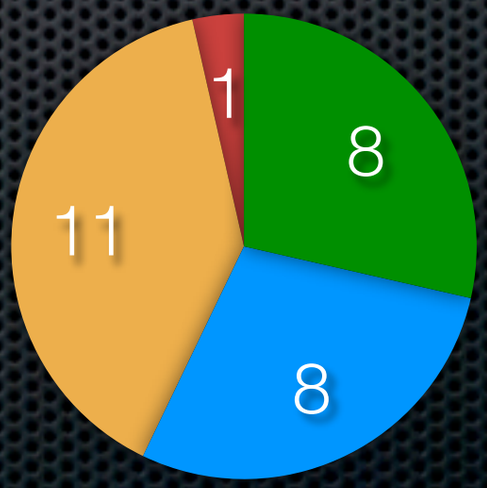
I realized the relevance of the subject matter for my future profession



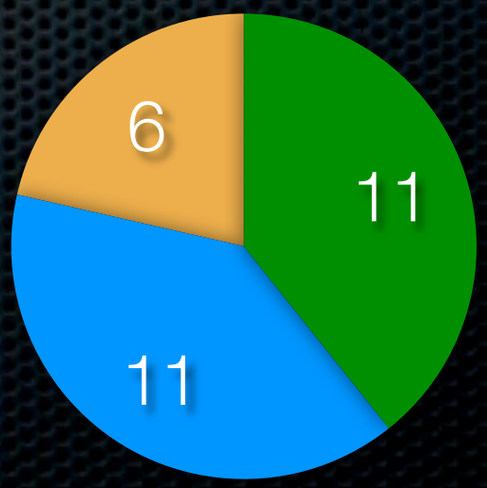
I knew what I had to do during self-study phases



Lecturers and tutors offered enough assistance during self-study phases



There was sufficient feedback for what had been done during self-study phases.



Absolutely retain the Block Plan. With some slight modifications maybe concerning the self study *(he mentions the situation that was too long)*. With this exception the Block Plan is the best system I know. You may concentrate on one topic, and you really learn something. thumbs up !

I was surprised how well the Block Plan functioned. You could concentrate on one subject at a time and did not have to rack one's brain about other topics. I liked the tests at the end of each module, the exam is then easier, because you learned the previous week only in this domain. Some things may be improved however :-)

I would never trade in the old class schedule for the Block Plan. The Block Plan facilites many tasks, knowledge is more sustainable. I do not believe I would have successfully finished the first term without a second chance if we had the old class schedule.

If directly asked, if I want to stick to the Block Plan model, I would not hesitate to answer YES.

Block Plan Design

Consecutive, exclusive execution of modules integrating self study

Individual Variables (motivation)

- anxiety
- emotion regulation
- responsability
- competence expectancy
- distraction
- prokrastination
- staying the course
- self congruent & persistent target tracking

→

Didactic Components

focussing on one **topic at a time**

↓

Self study {

task

↓

application

↓

feedback

↓

exam
at the end of each module plus acceptance of self study-output as examination achievement

→

Consequences & Effects

- no competition among modules
- continuous self study
- sustainable knowledge and skills by integrating learning and application
- reduction of anxiety by
  - feedback zum individuellen Lernstand
  - experiencing competence & success
  - certainty to be well prepared because of continuous engagement
  - accompanying exams
  - social integration in groups
- no cumulation of tests at the end of the term

In the case of IT Security:

- better grades
- less failure
- earlier drop-out
- improved retention