STULP – Support Tool for University Lecture Planning

Zeit	Montag	Dienstag	Mittwoch	Donnerstag	Freitag
7-9					
9-11	**Analysis**		**RA** C1		
11-13	**Modellierung** L1	**Modellierung** L1	**ITS - ZÜ** ??? **ITS** **???**	**Analysis**	**GP+PS** L1
13-14	**BuK - ZÜ** L2	**SE** - ZÜ (C1) **GP+GPS** - ZÜ (L1)		**Analysis** - ZÜ	**Stochastik**
14-16	**BuK ??** L2	**GP+PS** L1	**GP+PS** L1	**BuK** C1	
16-18			**Stochastik**		

Requirements to be met:

→ Check for completeness of offered lectures

→ Map all lectures to time slots and to rooms

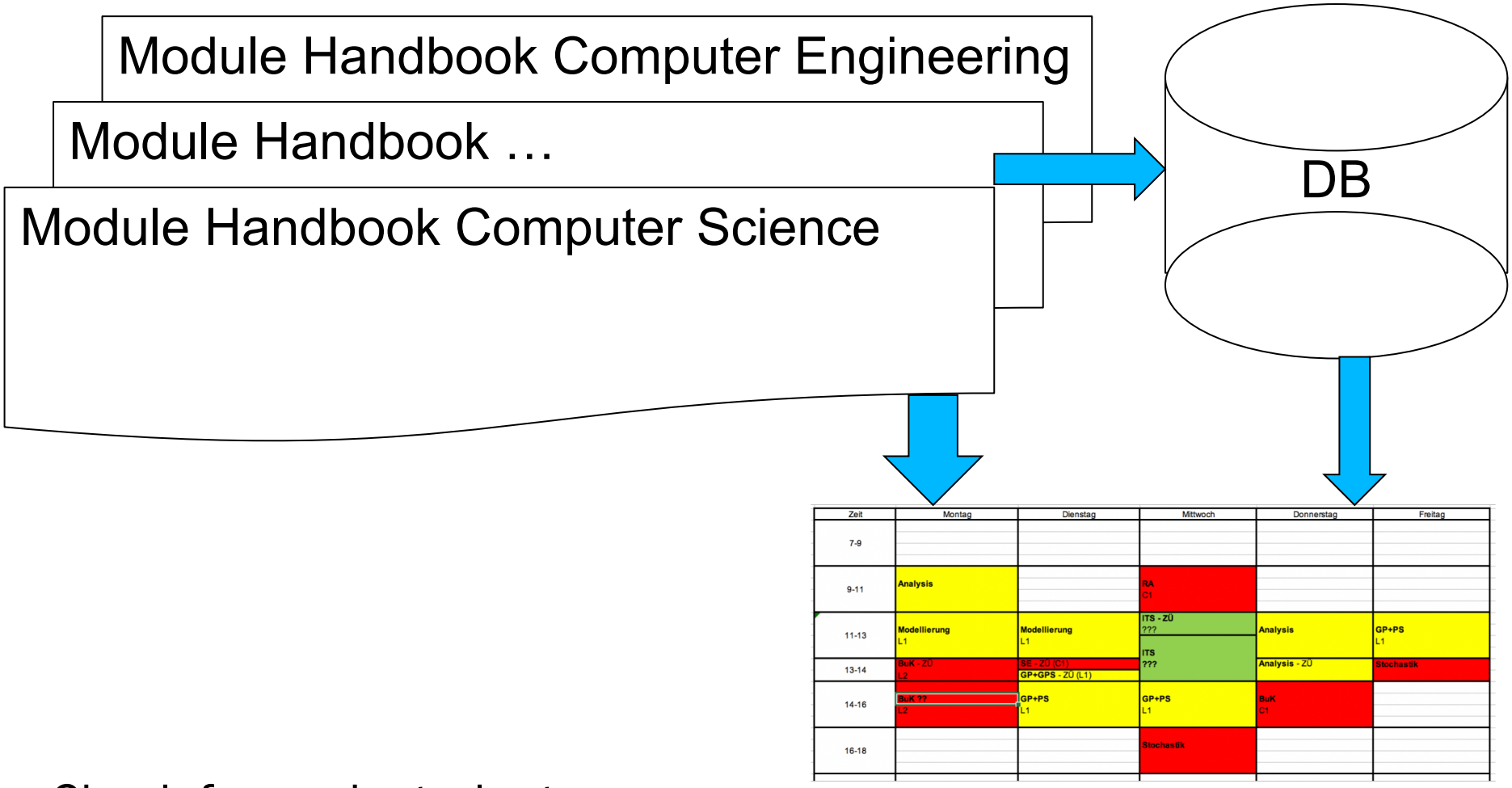
→ Check for conflicts and re-plan

→ Generate plans for different purposes

→ Consider different student groups, e.g.

CS 1st year with minor math, CS 2nd year with minor economy, …

Checking for conflicts of mandatory courses



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Check for each student group:

- Are all mandatory lectures offered and planned?
- Do mandatory lectures offered for any student group overlap?

Are rooms too small or over-booked?

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Freitag

GP+PS
L1

Stochastik

Freitag

GP+PS
L1

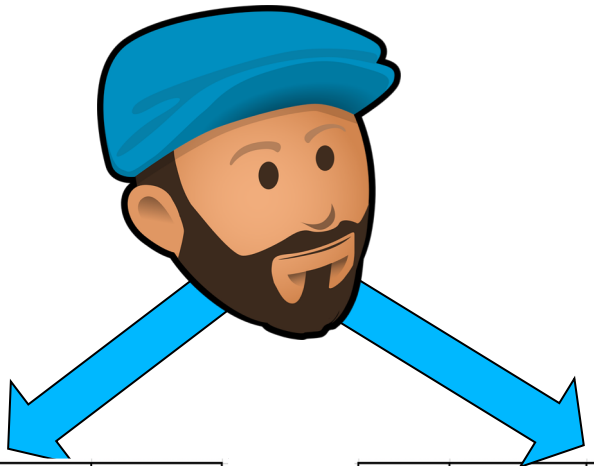
Stochastik

How to solve room conflicts?

How to adjust room sizes in last minute planning?

Develop room assignment strategies

Are teachers booked for overlapping lectures?



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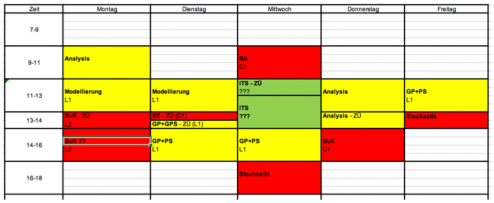
→ do multiple lectures planned for a professor overlap?
→ do lecture times overlap with other duties?
→ do we have enough non-overlapping
exercise time slots for student teachers?

STULP - Avoiding weak conflicts



Does the plan unnecessarily restrict choices?

→ e.g., avoid conflicts of courses in same focus area

→ e.g., avoid conflicts of mandatory courses with optional courses

→ plan exercises, such that there are good choices

→ regard majors and minors

Find a good work load balance during the week for all lecturers and for all student groups (CS 1st year with minor math, …):

→ e.g. distribute work load equally during the week

→ regard time to change lecture rooms (e.g. Fürstenallee/Campus)

→ minimize needed daily travel between Fürstenallee and Campus

→ avoid unnecessarily long gaps between lectures

STULP – Simplify and minimize re-planning

Improve course collection

Re-use of previously offered lectures and previous plans

Support last-minute changes of plans, e.g. because of

→ additional or cancelled lectures

→ too small rooms

→ last-minute time changes

STULP – Collaborative and distributed planning

Help to coordinate distributed planning:

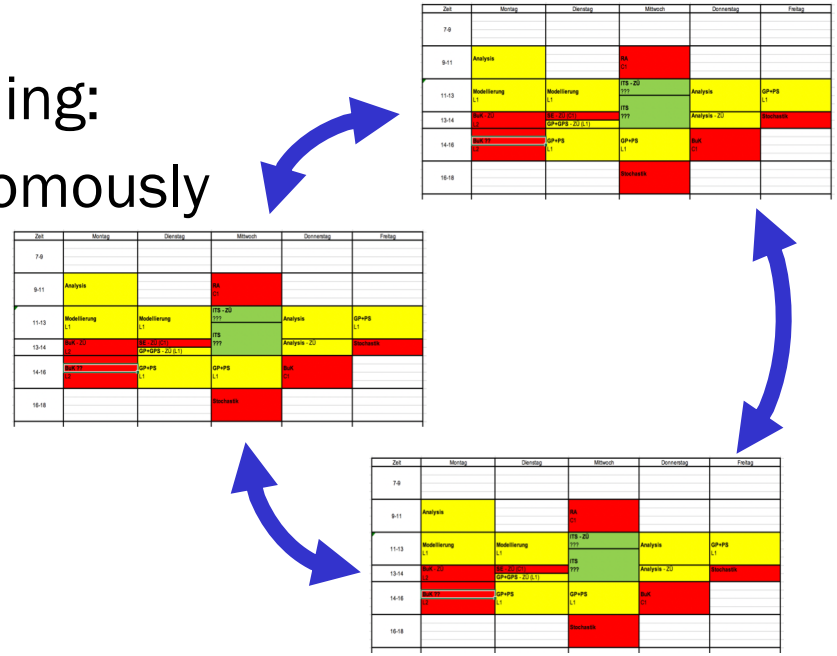
→ different plan owners plan autonomously

→ different planning time frames

→ different planning goals

→ different planning strategies

→ different planning tools



Distributed planning has to share common resources / groups:

→ lecture rooms

→ lecturers

→ multiple different student groups, e.g.

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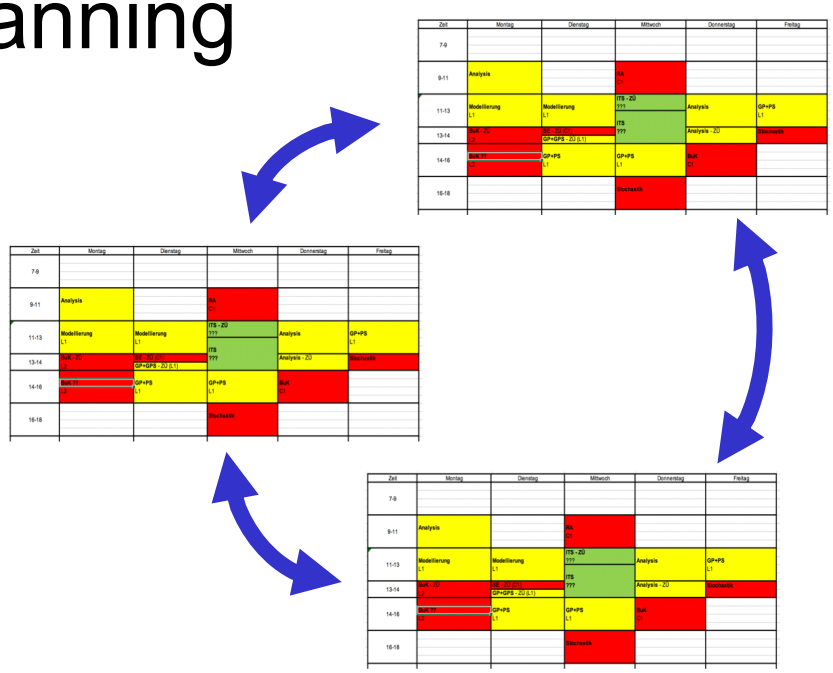
STULP – Flexible planning

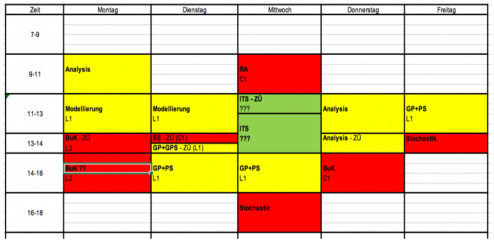


Make planning process flexible,

i.e. be open to

- new student groups
- new versions of module handbook
- multiple regulations in parallel
  (e.g. old ECTS system and new ECTS system)
- changes in cooperation model between plan owners

STULP – Needed skills and requirements



Needed skills:

→ very good programming experience
(this PG focuses on programming)

→ deep understanding of the Java language

→ experience with software design and efficient programming

→ knowledge of relational database systems

Knowledge of web server/client programming is an advantage
(although not required)

Requirements:

→ develop, test and deliver software

→ self-study and present software development / technologies

→ join all meetings (weekly – except holidays, exact dates t.b.a.)