Departments(<u>name</u>, abbr) Unique abbr

Programs(name)

Students(<u>idnr</u>, name, login, program) program → programs.name Unique login Unique (idnr, program)

Courses( $\underline{code}$ , name, credits, department) department  $\rightarrow$  Departments.name credits >= 0

 $\begin{aligned} & \text{Branches}(\underline{\text{program}}, \underline{\text{name}}) \\ & \text{program} \rightarrow \text{Programs.name} \end{aligned}$ 

Classifications(name)

 $\begin{aligned} & \text{LimitedCourses}(\underline{code}, \text{ capacity}) \\ & \text{code} \rightarrow \text{Courses.code} \\ & \text{capacity} > 0 \end{aligned}$ 

 $\begin{aligned} & \mathsf{DepartmentWork}(\underline{\mathsf{department}}, \underline{\mathsf{program}}) \\ & \mathsf{department} \to \mathsf{Departments}.\mathsf{name} \\ & \mathsf{program} \to \mathsf{Programs}.\mathsf{name} \end{aligned}$ 

$$\begin{split} & StudentBranches(\underline{student}, program, branch) \\ & student \rightarrow Students.idnr \\ & (branch, program) \rightarrow Branches(name, program) \\ & program \rightarrow Students.program \end{split}$$

$$\label{eq:mandatoryBranch} \begin{split} & \mathsf{MandatoryBranch}(\underline{branch},\,\underline{program},\,\underline{course}) \\ & (\mathsf{branch},\,\mathsf{program}) \to \mathsf{Branches}(\mathsf{name},\,\mathsf{program}) \\ & \mathsf{course} \to \mathsf{Courses.code} \end{split}$$

 $\begin{aligned} & \mathsf{MandatoryProgram}(\underline{\mathsf{program}}, \underline{\mathsf{course}}) \\ & \mathsf{program} \to \mathsf{Programs}. \\ & \mathsf{name} \end{aligned}$ 

course → Courses.code

Registered(<u>student, course</u>) student → Students.idnr course → Courses.code

Taken(<u>student</u>, <u>course</u>, grade) student → Student.indr course → Courses.code grade = {'U', '3', '4', '5'}

 $\begin{aligned} & WaitingList(\underline{course}, \underline{student}, position ) \\ & student \rightarrow Student.idnr \\ & course \rightarrow Courses.code \\ & unique(course, position) \\ & position >= 0 \end{aligned}$ 

Prerequisites(<u>course</u>, <u>prerequisite</u>)
course → Courses.code
prerequisite → Courses.code
course!= prerequisite

 $\begin{aligned} & \text{Classification}) \\ & \text{course} \rightarrow \text{Courses.code} \\ & \text{classification} \rightarrow \text{Classifications.name} \end{aligned}$