



Default Diagram

Entity DEPARTMENT

Idx	Name	Data Type	Description
Stores the different faculties/departments of the university.			
* Pk	D_NAME	VARCHAR(100)	Unique name of the faculty or department.
Indexes			
Type	Name	On	Description
Pk	pk_DEPARTMENT	D_NAME	
Relationships			
Type	Name	On	Description
	fk_DEPARTMENT_TEACHER (D_NAME) ref TEACHER (FK_D_NAME)		
	fk_DEPARTMENT_STUDY_PROGRAM (D_NAME) ref STUDY_PROGRAM (FK_D_NAME)		
	fk_DEPARTMENT_SERVICE_REQUEST (D_NAME) ref SERVICE_REQUEST (FK_REQUESTING_D_NAME)		
	fk_DEPARTMENT_SERVICE_PROVIDE_0 (D_NAME) ref SERVICE_REQUEST (FK_PROVIDING_D_NAME)		

Entity DEPUTAT_ACCOUNT

Idx	Name	Data Type	Description
Tracks the baseline workload and carryovers from previous semesters.			
* Pk	ACC_ID	INT	Unique ID for the teacher"s account per semester.
	FK_T_ID	INT	Reference to the teacher whose balance is being tracked.
	FK_SP_ID	INT	The semester to which this balance record belongs.
	ACC_BASELINE_HOURS	DECIMAL(4,2)	The target workload (e.g., 18.0 for professors) before reductions.
	ACC_CARRYOVER	DECIMAL(4,2)	Workload balance carried over from the previous semester (positive or negative).
Indexes			
Type	Name	On	Description
Pk	pk_DEPUTAT_ACCOUNT	ACC_ID	

Entity LECTURER

Idx	Name	Data Type	Description
Specialization of TEACHER. For external lecturers (Lehrbeauftragte).			
* Pk	T_ID	INT	Primary key and Foreign Key referencing TEACHER (1:1 specialization for external lecturers).
	L_STREET_ADDRESS	VARCHAR(255)	Specific home or office address of the external lecturer (if required).
	L_SUPERVISOR	INT	Reference to the supervising professor (nullable).
Indexes			
Type	Name	On	Description
Pk	pk_LECTURER	T_ID	
Relationships			
Type	Name	On	Description
	fk_LECTURER_PROFESSOR (L_SUPERVISOR) ref PROFESSOR (T_ID)		

Entity OFFERING

Idx	Name	Data Type	Description
The concrete instance of a subject in a specific semester. Handles group splitting.			
* Pk	O_ID	INT	Unique ID for a specific subject instance in a semester.

Entity OFFERING

	FK_S_ID	INT	
	FK_SP_ID	INT	
	O_PLANNED_HOURS	INT DEFAULT 1	Actual planned hours. Can change per Semester
Indexes			
Type	Name	On	Description
Pk	pk_OFFERING	O_ID	
Relationships			
Type	Name	On	Description
	fk_OFFERING_OFFERING_ASSIGNMENT (O_ID) ref OFFERING_ASSIGNMENT (FK_O_ID)		

Entity OFFERING_ASSIGNMENT

Idx	Name	Data Type	Description
The bridge between a teacher and a specific offering. Defines who teaches how much.			
* Pk	OA_ID	INT	Unique ID for the link between teacher and course.
	FK_O_ID	INT	Reference to the specific course offering in a semester.
	FK_T_ID	INT	Reference to the person who will teach this course.
	OA_ASSIGNED_HOURS	DECIMAL(4,2)	The actual teaching load (Dozenten-Wochenstunden) assigned to this person. The specific workload hours (DWS) assigned to this individual teacher.
	OA_ACTUAL_HOURS	DECIMAL(4,2)	Actual weekly hours delivered for this offering in the semester.
	OA_ROLE	VARCHAR(50)	The role of the teacher in this course (e.g., Main Lecturer, Tutor).
Indexes			
Type	Name	On	Description
Pk	pk_OFFERING_ASSIGNMENT	OA_ID	

Entity POSITION

Idx	Name	Data Type	Description
Defines university positions that can carry a teaching reduction.			
* Pk	PO_ID	INT	Unique identifier for a position.
*	PO_NAME	VARCHAR(100)	Short name of the position (e.g., Dean, Program Director).
Indexes			
Type	Name	On	Description
Pk	pk_POSITION	PO_ID	
Relationships			
Type	Name	On	Description
	fk_POSITION_POSITION_SEMESTER (PO_ID) ref POSITION_SEMESTER (FK_PO_ID)		

Entity POSITION_ASSIGNMENT

Idx	Name	Data Type	Description
Assignment of professors to positions for a specific semester.			
* Pk	PA_ID	INT	Unique identifier for a position assignment.
* Unq	FK_PS_ID	INT	Reference to the position offering in a semester.
* Unq	FK_P_ID	INT	Reference to the assigned professor.
*	PA_REDUCTION_HOURS	DECIMAL(4,2)	Teaching reduction hours granted to this professor for the position.
Indexes			
Type	Name	On	Description
Pk	pk_POSITION_ASSIGNMENT	PA_ID	

Entity POSITION_ASSIGNMENT

Unq unq_POSITION_ASSIGNMENT FK_PS_ID, FK_P_ID

Entity POSITION_SEMESTER

Idx	Name	Data Type	Description
Tracks whether a position is required in a specific semester.			
* Pk	PS_ID	INT	Unique identifier for a position offering in a semester.
* Unq	FK_PO_ID	INT	Reference to the position definition.
* Unq	FK_SP_ID	INT	Reference to the semester in which the position is available.
Indexes			
Type	Name	On	Description
Pk	pk_POSITION_SEMESTER	PS_ID	
Unq	unq_POSITION_SEMESTER	FK_PO_ID, FK_SP_ID	
Relationships			
Type	Name	On	Description
	fk_POSITION_SEMESTER_POSITION_ASSIGNMENT (PS_ID) ref POSITION_ASSIGNMENT (FK_PS_ID)		

Entity POSTAL_CODE

Idx	Name	Data Type	Description
3NF: Separates ZIP and City to avoid transitive dependencies.			
* Pk	ZIP	VARCHAR(10)	Postal code serving as the primary key.
*	CITY	VARCHAR(100)	City name associated with the ZIP (3NF normalization)
Indexes			
Type	Name	On	Description
Pk	pk_POSTAL_CODE	ZIP	
Relationships			
Type	Name	On	Description
	fk_POSTAL_CODE_TEACHER (ZIP) ref TEACHER (FK_ZIP)		

Entity PROFESSOR

Idx	Name	Data Type	Description
Specialization of TEACHER. Only for staff with professor status.			
* Pk	T_ID	INT	Primary key and Foreign Key referencing TEACHER (1:1 specialization).
	P_ROOM	VARCHAR(50)	Dedicated office room number for the professor.
Indexes			
Type	Name	On	Description
Pk	pk_PROFESSOR	T_ID	
Relationships			
Type	Name	On	Description
	fk_PROFESSOR_POSITION_ASSIGNMENT (T_ID) ref POSITION_ASSIGNMENT (FK_P_ID)		

Entity SEMESTER_PLANNING

Idx	Name	Data Type	Description
Defines the planning period (e.g., WS1516) and its status.			
* Pk	SP_ID	INT	Internal unique identifier for the planning period.
*	SP_TERM	VARCHAR(20)	Human-readable term name, e.g., WS1516 or SS16.

Entity SEMESTER_PLANNING

SP_VERSION_NR	INT	
SP_IS_FINAL	BOOLEAN DEFAULT FALSE	Flag indicating if the planning for this semester is locked.
Indexes		
Type	Name	On Description
Pk	pk_SEMESTER_PLANNING	SP_ID
Relationships		
Type	Name	On Description
	fk_SEMESTER_PLANNING_OFFERING (SP_ID) ref OFFERING (FK_SP_ID)	
	fk_SEMESTER_PLANNING_DEPUTAT_ACCOUNT (SP_ID) ref DEPUTAT_ACCOUNT (FK_SP_ID)	
	fk_SEMESTER_PLANNING_SERVICE_REQUEST (SP_ID) ref SERVICE_REQUEST (FK_SEMESTER)	
	fk_SEMESTER_PLANNING_POSITION_SEMESTER (SP_ID) ref POSITION_SEMESTER (FK_SP_ID)	

Entity SERVICE_REQUEST

Idx	Name	Data Type	Description
Captures when one faculty needs a subject to be taught by another (Import/Export).			
* Pk	SR_ID	INT	Unique ID for a specific service negotiation record.
	FK_S_ID	INT	Reference to the subject being requested as a service.
	FK_REQUESTING_D_NAME	VARCHAR(100)	The department that needs the service (Import).
	FK_PROVIDING_D_NAME	VARCHAR(100)	The department that provides the teacher (Export).
*	SR_HOURS	DECIMAL(4,2)	The weekly hours (SWS) requested for this service.
	SR_STATUS	VARCHAR(50) DEFAULT 'Requested'	Current state of the request: Requested, Approved, or Rejected.
	FK_SEMESTER	INT	The semester for which this service is valid.
	SR_NOTES	TEXT	Internal comments regarding the service agreement.
Indexes			
Type	Name	On	Description
Pk	pk_SERVICE_REQUEST	SR_ID	

Entity STUDY_PROGRAM

Idx	Name	Data Type	Description
Represents degree programs like "Software Engineering" (SWB).			
* Pk	ST_NAME	VARCHAR(100)	Unique name of the degree program (e.g., "Informatik", "Wirtschaftsingenieurwesen")
	FK_D_NAME	VARCHAR(100)	Links the degree program to its managing faculty.
Indexes			
Type	Name	On	Description
Pk	pk_STUDY_PROGRAM	ST_NAME	
Relationships			
Type	Name	On	Description
	fk_STUDY_PROGRAM_SUBJECT (ST_NAME) ref SUBJECT (FK_ST_NAME)		

Entity SUBJECT

Idx	Name	Data Type	Description
Abstract modules from the study regulations (StuPO) with their target hours.			
* Pk	S_ID	INT	Unique subject number as defined in the StuPO.

Entity SUBJECT

*	S_NAME	VARCHAR(255)	
	S_STUPO_HOURS	DECIMAL(4,2)	Standard weekly hours (SWS) as defined by study regulations.
*	S_SEMESTER	INT	Valid values: 1-7
	FK_ST_NAME	VARCHAR(100)	
	S_NOTES	VARCHAR(100)	Notes for the subject
*	S_TYPE	VARCHAR(1)	Decides if it is an P (Pflichtfach), Z (Zusatzfach) oder W (Wahlfach)

Indexes

Type	Name	On	Description
Pk	pk_SUBJECT	S_ID	

Relationships

Type	Name	On	Description
	fk_SUBJECT_OFFERING (S_ID) ref OFFERING (FK_S_ID)		
	fk_SUBJECT_SERVICE_REQUEST (S_ID) ref SERVICE_REQUEST (FK_S_ID)		

Entity TEACHER

Idx	Name	Data Type	Description
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General staff table. Contains all persons who can teach.

* Pk	T_ID	INT	
	T_NAME	VARCHAR(100)	Unique ID for the staff member.
	T_LASTNAME	VARCHAR(100)	
	FK_D_NAME	VARCHAR(100)	Reference to the staff member's home department.
	FK_ZIP	VARCHAR(10)	Reference to address data (3NF: Moved out of teacher table).
	T_NOTES	TEXT	
*	T_IS_ACTIVE	BOOLEAN	gives the information about the teacher if he is still hired or not

Indexes

Type	Name	On	Description
Pk	pk_TEACHER	T_ID	

Relationships

Type	Name	On	Description
	fk_TEACHER_PROFESSOR (T_ID) ref PROFESSOR (T_ID)		
	fk_TEACHER_LECTURER (T_ID) ref LECTURER (T_ID)		
	fk_TEACHER_OFFERING_ASSIGNMENT (T_ID) ref OFFERING_ASSIGNMENT (FK_T_ID)		
	fk_TEACHER_DEPUTAT_ACCOUNT (T_ID) ref DEPUTAT_ACCOUNT (FK_T_ID)		