

## Course\_Planning

Table ACADEMIC_STAFF			
Idx	Name	Data Type	Description
Represents academic staff members involved in teaching and administration			
* Pk	ACADEMIC_STAFF_ID	BIGINT	An identifying number for the teacher.
*	FIRST_NAME	VARCHAR(50)	First name of the teacher e.g. "Jürgen"
*	LAST_NAME	VARCHAR(50)	Last Name of the Teacher e.g. "Nonnast"
	ACADEMIC_STAFF_COMMENT	VARCHAR(255)	Optional instructor comments.
*	FACULTY_SHORT_NAME	CHAR(3)	faculty to which the academic staff member belongs
*	IS_PROF	BOOLEAN	indicates whether the academic staff member is a professor
Indexes			
Type	Name	On	Description
Unq	UNQ_TEACHER_ID	ACADEMIC_STAFF_ID	Teaching Id has to be UNQ
Pk	PK_ACADEMIC_STAFF	ACADEMIC_STAFF_ID	
Foreign Keys			
Type	Name	On	Description
	FK_ACADEMIC_STAFF_FACULTY ( FACULTY_SHORT_NAME ) ref FACULTY ( FACULTY_SHORT_NAME )		

Table COURSE			
Idx	Name	Data Type	Description
Represents a course offered within a degree program			
* Pk	DEGREE_SHORT_NAME	CHAR(3)	shortname of a degree e.g. SWB
	COURSE_COMMENT	VARCHAR(255)	comments for the course
* Pk	SUBJECT_NR	VARCHAR(20)	FK from Subject
Indexes			
Type	Name	On	Description
Pk	PK_COURSE	DEGREE_SHORT_NAME, SUBJECT_NR	
Unq	UNQ_SUBJECT_NR	SUBJECT_NR	
Foreign Keys			
Type	Name	On	Description
	FK_DEGREE_PROGRAM ( DEGREE_SHORT_NAME ) ref DEGREE_PROGRAM ( DEGREE_SHORT_NAME )		
	FK_COURSE_SUBJECT ( SUBJECT_NR ) ref SUBJECT ( SUBJECT_NR )		

Table COURSE_ASSIGNMENT			
Idx	Name	Data Type	Description
Represents the assignment of academic staff to courses in a specific semester			
* Pk	COURSE_ASSIGNMENT_TERM	VARCHAR(10)	The scheduled start term for the course offering (e.g. SS26)
* Pk	ACADEMIC_STAFF_ID	BIGINT	the id of the teacher for the course
*	TEACHING_HOURS	BIGINT	the workload for the teacher
* Pk	SUBJECT_NR	VARCHAR(20)	The number of the subject e.g. 1051003
* Pk	DEGREE_SHORT_NAME	CHAR(3)	short name for the degree e.g. SWB
Indexes			
Type	Name	On	Description
Pk	PK	COURSE_ASSIGNMENT_TERM, ACADEMIC_STAFF_ID, SUBJECT_NR, DEGREE_SHORT_NAME	

## Table COURSE\_ASSIGNMENT

### Foreign Keys

Type	Name	On	Description
	FK_ACADEMIC_STAFF ( ACADEMIC_STAFF_ID ) ref ACADEMIC_STAFF ( ACADEMIC_STAFF_ID )		
	FK_COURSE_ASSIGNMENT_COURSE ( SUBJECT_NR, DEGREE_SHORT_NAME ) ref COURSE ( SUBJECT_NR, DEGREE_SHORT_NAME )		

### Constraints

Name	Definition	Description
CNS_TEACHING_HOURS	TEACHING_HOURS >= 0	
CNS_COURSE_ASSIGNMENT_TERM	(COURSE_ASSIGNMENT_TERM LIKE 'WS%' OR COURSE_ASSIGNMENT_TERM LIKE 'SS%')	

## Table SUBJECT

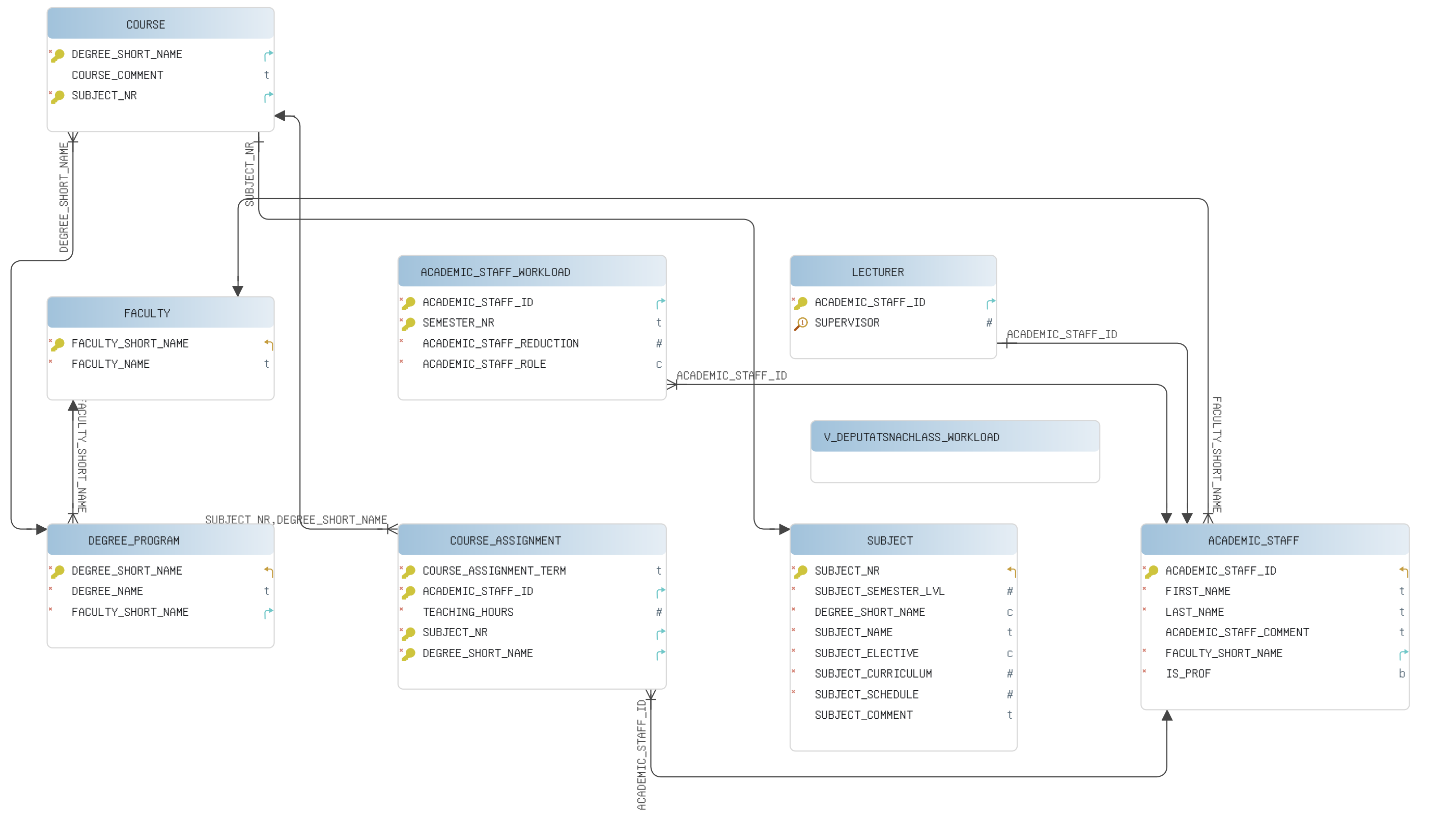
Idx	Name	Data Type	Description
"Represents a course subject offered within a degree program."			
* PK	SUBJECT_NR	VARCHAR(20)	SPO code, e.g. ''1053007-SWB"
*	SUBJECT_SEMESTER_LVL	BIGINT	Semester Number
*	DEGREE_SHORT_NAME	CHAR(3)	Degree Short Name e.g SWB
*	SUBJECT_NAME	VARCHAR(30)	Module name e.g IT Security
*	SUBJECT_ELECTIVE	CHAR(1)	Elective Type e.g (P/W/Z)
*	SUBJECT_CURRICULUM	BIGINT	required volume
*	SUBJECT_SCHEDULE	BIGINT	the actual planned volume
	SUBJECT_COMMENT	VARCHAR(255)	comments for the subject

### Indexes

Type	Name	On	Description
Pk	SUBJECT_NR	SUBJECT_NR	

### Constraints

Name	Definition	Description
CNS_SUBJECT_ELECTIVE	SUBJECT_ELECTIVE IN ('P', 'W', 'Z')	
CNS_SUBJECT_CURRICULUM_AND_SCHEDULE	SUBJECT_CURRICULUM >= 0 AND SUBJECT_SCHEDULE >= 0	



## Lecture\_Planning

Table ACADEMIC_STAFF			
Idx	Name	Data Type	Description
Represents academic staff members involved in teaching and administration			
* Pk	ACADEMIC_STAFF_ID	BIGINT	An identifying number for the teacher.
*	FIRST_NAME	VARCHAR(50)	First name of the teacher e.g. "Jürgen"
*	LAST_NAME	VARCHAR(50)	Last Name of the Teacher e.g. "Nonnast"
	ACADEMIC_STAFF_COMMENT	VARCHAR(255)	Optional instructor comments.
*	FACULTY_SHORT_NAME	CHAR(3)	faculty to which the adademic staff member belongs
*	IS_PROF	BOOLEAN	indicates whether the academic staff member is a professor
Indexes			
Type	Name	On	Description
Unq	UNQ_TEACHER_ID	ACADEMIC_STAFF_ID	Teaching Id has to be UNQ
Pk	PK_ACADEMIC_STAFF	ACADEMIC_STAFF_ID	
Foreign Keys			
Type	Name	On	Description
	FK_ACADEMIC_STAFF_FACULTY ( FACULTY_SHORT_NAME ) ref FACULTY ( FACULTY_SHORT_NAME )		

Table ACADEMIC_STAFF_WORKLOAD			
Idx	Name	Data Type	Description
Represents the workload and workload reductions of academic staff per semester.			
* Pk	ACADEMIC_STAFF_ID	BIGINT	An identifying number for the teacher
* Pk	SEMESTER_Nr	VARCHAR(8)	semester which the role start e.g. SS26
*	ACADEMIC_STAFF_REDUCTION	DECIMAL(5,2)	the workload he or she get credited for the role
*	ACADEMIC_STAFF_ROLE	CHAR(10)	the special role name
Indexes			
Type	Name	On	Description
Pk	PK_ACADEMIC_STAFF_WORKLOAD	SEMESTER_Nr, ACADEMIC_STAFF_ID	
Foreign Keys			
Type	Name	On	Description
	FK_ACADEMIC_STAFF ( ACADEMIC_STAFF_ID ) ref ACADEMIC_STAFF ( ACADEMIC_STAFF_ID )		
Constraints			
	Name	Definition	Description
	CNS_ACADEMIC_STAFF_REDUCTION	ACADEMIC_STAFF_REDUCTION >= 0	

Table COURSE			
Idx	Name	Data Type	Description
Represents a course offered within a degree program			
* Pk	DEGREE_SHORT_NAME	CHAR(3)	shortname of a degree e.g. SWB
	COURSE_COMMENT	VARCHAR(255)	comments for the course
* Pk	SUBJECT_Nr	VARCHAR(20)	FK from Subject
Indexes			
Type	Name	On	Description
Pk	PK_COURSE	DEGREE_SHORT_NAME, SUBJECT_Nr	
Unq	UNQ_SUBJECT_Nr	SUBJECT_Nr	

Table COURSE

## Foreign Keys

Type	Name	On	Description
	FK_DEGREE_PROGRAM ( DEGREE_SHORT_NAME ) ref		
	DEGREE_PROGRAM ( DEGREE_SHORT_NAME )		
	FK_COURSE_SUBJECT ( SUBJECT_NR ) ref		
	SUBJECT ( SUBJECT_NR )		

Table COURSE\_ASSIGNMENT

Idx	Name	Data Type	Description
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Represents the assignment of academic staff to courses in a specific semester

* PK	COURSE_ASSIGNMENT_TERM	VARCHAR(10)	The scheduled start term for the course offering (e.g. SS26)
* PK	ACADEMIC_STAFF_ID	BIGINT	the id of the teacher for the course
*	TEACHING_HOURS	BIGINT	the workload for the teacher
* PK	SUBJECT_NR	VARCHAR(20)	The number of the subject e.g 1051003
* PK	DEGREE_SHORT_NAME	CHAR(3)	short name for the degree e.g. SWB

## Indexes

Type	Name	On	Description
Pk	PK	COURSE_ASSIGNMENT_TERM, ACADEMIC_STAFF_ID, SUBJECT_NR, DEGREE_SHORT_NAME	

## Foreign Keys

Type	Name	On	Description
	FK_ACADEMIC_STAFF ( ACADEMIC_STAFF_ID ) ref		
	ACADEMIC_STAFF ( ACADEMIC_STAFF_ID )		
	FK_COURSE_ASSIGNMENT_COURSE ( SUBJECT_NR, DEGREE_SHORT_NAME ) ref		
	COURSE ( SUBJECT_NR, DEGREE_SHORT_NAME )		

## Constraints

Name	Definition	Description
CNS_TEACHING_HOURS	TEACHING_HOURS >= 0	
CNS_COURSE_ASSIGNMENT_TERM	(COURSE_ASSIGNMENT_TERM LIKE 'WS%' OR COURSE_ASSIGNMENT_TERM LIKE 'SS%')	

Table DEGREE\_PROGRAM

Idx	Name	Data Type	Description
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Represents an academic degree program offered by a faculty

* PK	DEGREE_SHORT_NAME	CHAR(3)	shortname of a degree e.g. SWB
*	DEGREE_NAME	VARCHAR(30)	fullname of a degree e.g. Softwaretechnik und Medieninformatik
*	FACULTY_SHORT_NAME	CHAR(4)	which faculty it belongs to e.g. IT

## Indexes

Type	Name	On	Description
Unq	UNQ_DEGREE_SHORT_NAME	DEGREE_SHORT_NAME	
Pk	PK_DEGREE_PROGRAM	DEGREE_SHORT_NAME	

## Foreign Keys

Type	Name	On	Description
	FK_DEGREE_PROGRAM_FACULTY ( FACULTY_SHORT_NAME ) ref		
	FACULTY ( FACULTY_SHORT_NAME )		

Table FACULTY

Idx	Name	Data Type	Description
Represents an academic faculty or department within the university.			
* Pk	FACULTY_SHORT_NAME	CHAR(4)	short name for a faculty e.g. IT
*	FACULTY_NAME	VARCHAR(30)	fullname of a faculty Informationstechnik
<b>Indexes</b>			
Type	Name	On	Description
Pk	PK_FACULTY	FACULTY_SHORT_NAME	

Table LECTURER

Idx	Name	Data Type	Description
A non-permanent teaching staff member, standardized in this document under the designation 'lecturer'.			
* Pk	ACADEMIC_STAFF_ID	BIGINT	academic staff id of the lecturer
Unq	SUPERVISOR	BIGINT	academic staff id of the supervisor of the lecturer
<b>Indexes</b>			
Type	Name	On	Description
Pk	PK_LECTURER	ACADEMIC_STAFF_ID	This attribute acts as the primary key while maintaining a foreign key reference to the parent Teacher table
Unq	UNQ_SUPERVISOR_PROFESSOR	SUPERVISOR	
<b>Foreign Keys</b>			
Type	Name	On	Description
	FK_ACADEMIC_STAFF ( ACADEMIC_STAFF_ID ) ref ACADEMIC_STAFF ( ACADEMIC_STAFF_ID )		

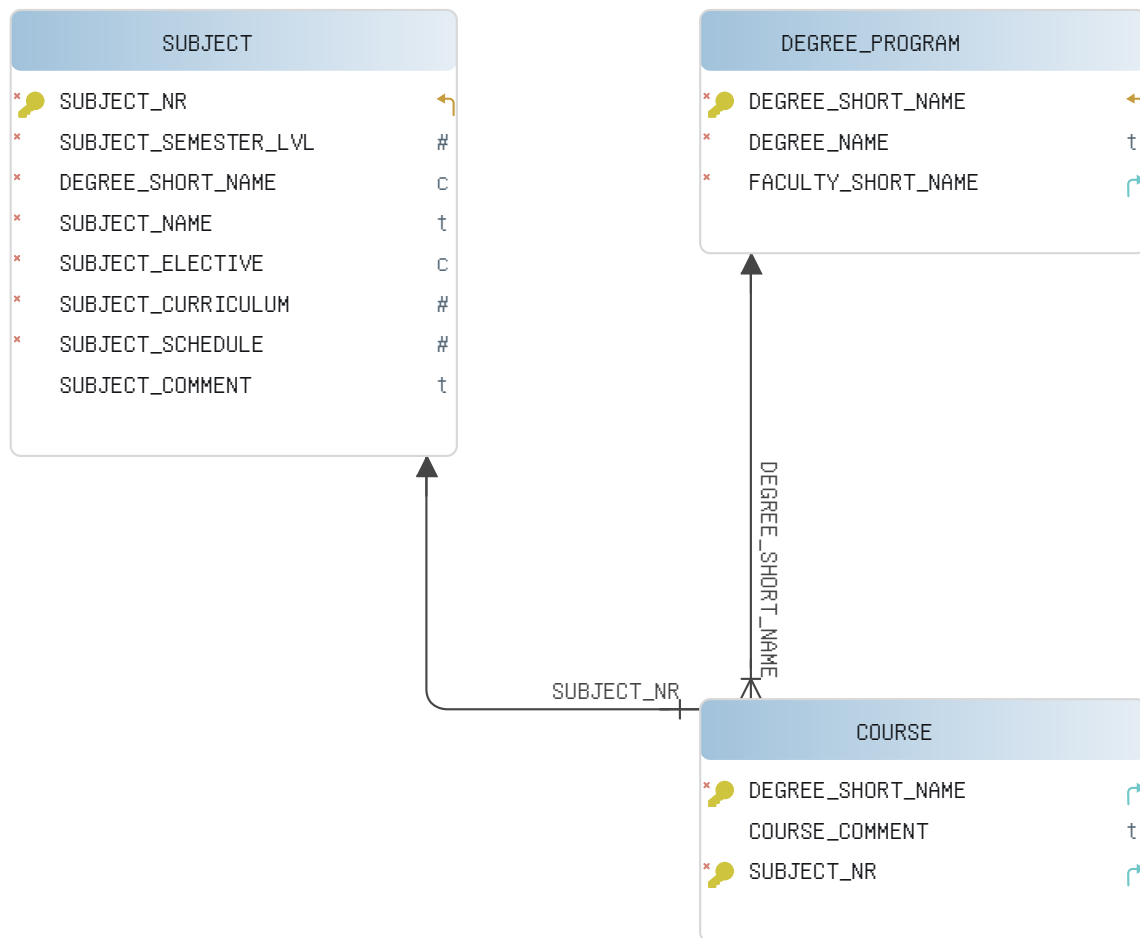
Table SUBJECT

Idx	Name	Data Type	Description
"Represents a course subject offered within a degree program.			
* Pk	SUBJECT_NR	VARCHAR(20)	SPO code, e.g. ''1053007-SWB"
*	SUBJECT_SEMESTER_LVL	BIGINT	Semester Number
*	DEGREE_SHORT_NAME	CHAR(3)	Degree Short Name e.g SWB
*	SUBJECT_NAME	VARCHAR(30)	Module name e.g IT Security
*	SUBJECT_ELECTIVE	CHAR(1)	Elective Type e.g (P/W/Z)
*	SUBJECT_CURRICULUM	BIGINT	required volume
*	SUBJECT_SCHEDULE	BIGINT	the actual planned volume
	SUBJECT_COMMENT	VARCHAR(255)	comments for the subject
<b>Indexes</b>			
Type	Name	On	Description
Pk	SUBJECT_NR	SUBJECT_NR	
<b>Constraints</b>			
Name	Definition	Description	
CNS_SUBJECT_ELECTIVE	SUBJECT_ELECTIVE IN ('P', 'W', 'Z')		
CNS_SUBJECT_CURRICULUM_AND_SCHEDULE	SUBJECT_CURRICULUM >= 0 AND SUBJECT_SCHEDULE >= 0		

## View V\_DEPUTATSNACHLASS\_WORKLOAD

```
CREATE OR REPLACE VIEW SCHEMA_MAIN.V_DEPUTATSNACHLASS_WORKLOAD AS
SELECT
  w.SEMESTER_NR          AS SEMESTER_NR,
  w.ACADEMIC_STAFF_ID    AS ACADEMIC_STAFF_ID,
  st.FIRST_NAME          AS STAFF_FIRST_NAME,
  st.LAST_NAME           AS STAFF_LAST_NAME,
  w.ACADEMIC_STAFF_ROLE   AS STAFF_ROLE,
  w.ACADEMIC_STAFF_REDUCTION AS REDUCTION_HOURS
FROM SCHEMA_MAIN.ACADEMIC_STAFF_WORKLOAD w
JOIN SCHEMA_MAIN.ACADEMIC_STAFF st
  ON st.ACADEMIC_STAFF_ID = w.ACADEMIC_STAFF_ID
;
```





## Timetable\_Export

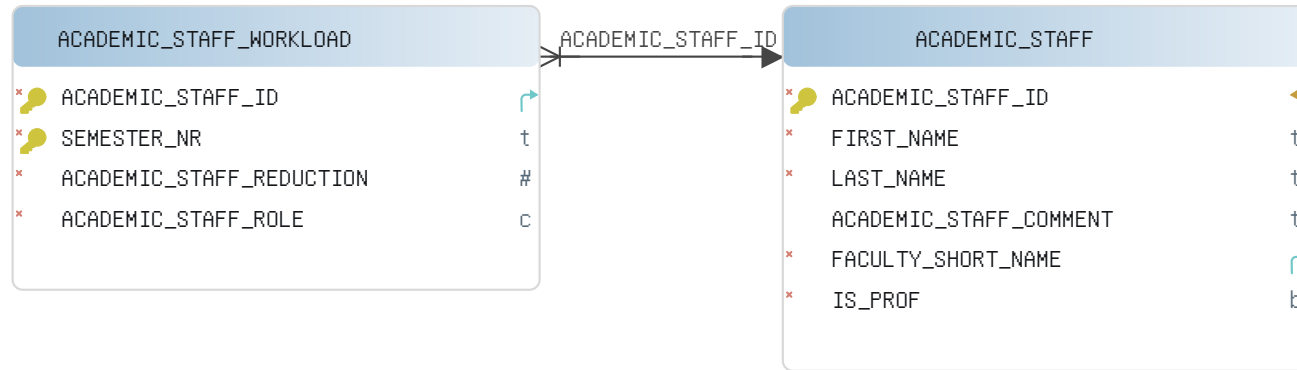
Table COURSE			
Idx	Name	Data Type	Description
Represents a course offered within a degree program			
* Pk	DEGREE_SHORT_NAME	CHAR(3)	shortname of a degree e.g. SWB
	COURSE_COMMENT	VARCHAR(255)	comments for the course
* Pk	SUBJECT_NR	VARCHAR(20)	FK from Subject
Indexes			
Type	Name	On	Description
Pk	PK_COURSE	DEGREE_SHORT_NAME, SUBJECT_NR	
Unq	UNQ_SUBJECT_NR	SUBJECT_NR	
Foreign Keys			
Type	Name	On	Description
	FK_DEGREE_PROGRAM ( DEGREE_SHORT_NAME ) ref DEGREE_PROGRAM ( DEGREE_SHORT_NAME )		
	FK_COURSE_SUBJECT ( SUBJECT_NR ) ref SUBJECT ( SUBJECT_NR )		

Table DEGREE_PROGRAM			
Idx	Name	Data Type	Description
Represents an academic degree program offered by a faculty			
* Pk	DEGREE_SHORT_NAME	CHAR(3)	shortname of a degree e.g. SWB
*	DEGREE_NAME	VARCHAR(30)	fullname of a degree e.g. Softwaretechnik und Medieninformatik
*	FACULTY_SHORT_NAME	CHAR(4)	which faculty it belongs to e.g. IT
Indexes			
Type	Name	On	Description
Unq	UNQ_DEGREE_SHORT_NAME	DEGREE_SHORT_NAME	
Pk	PK_DEGREE_PROGRAM	DEGREE_SHORT_NAME	
Foreign Keys			
Type	Name	On	Description
	FK_DEGREE_PROGRAM_FACULTY ( FACULTY_SHORT_NAME ) ref FACULTY ( FACULTY_SHORT_NAME )		

Table SUBJECT			
Idx	Name	Data Type	Description
“Represents a course subject offered within a degree program.			
* Pk	SUBJECT_NR	VARCHAR(20)	SPO code, e.g. ''1053007-SWB"
*	SUBJECT_SEMESTER_LVL	BIGINT	Semester Number
*	DEGREE_SHORT_NAME	CHAR(3)	Degree Short Name e.g SWB
*	SUBJECT_NAME	VARCHAR(30)	Module name e.g IT Security
*	SUBJECT_ELECTIVE	CHAR(1)	Elective Type e.g (P/W/Z)
*	SUBJECT_CURRICULUM	BIGINT	required volume
*	SUBJECT_SCHEDULE	BIGINT	the actual planned volume
	SUBJECT_COMMENT	VARCHAR(255)	comments for the subject
Indexes			
Type	Name	On	Description
Pk	SUBJECT_NR	SUBJECT_NR	
Constraints			

Table SUBJECT

Name	Definition	Description
CNS_SUBJECT_ELECTIVE	SUBJECT_ELECTIVE IN ('P', 'W', 'Z')	
CNS_SUBJECT_CURRICULUM_AND_SCHEDULE	SUBJECT_CURRICULUM >= 0 AND SUBJECT_SCHEDULE >= 0	



V\_COURSE\_PLANNER

V\_TIMETABLE\_OFFERINGS\_EXPORT

## Workload\_Management

Table ACADEMIC_STAFF			
Idx	Name	Data Type	Description
Represents academic staff members involved in teaching and administration			
* Pk	ACADEMIC_STAFF_ID	BIGINT	An identifying number for the teacher.
*	FIRST_NAME	VARCHAR(50)	First name of the teacher e.g. "Jürgen"
*	LAST_NAME	VARCHAR(50)	Last Name of the Teacher e.g. "Nonnast"
	ACADEMIC_STAFF_COMMENT	VARCHAR(255)	Optional instructor comments.
*	FACULTY_SHORT_NAME	CHAR(3)	faculty to which the adademic staff member belongs
*	IS_PROF	BOOLEAN	indicates whether the academic staff member is a professor
Indexes			
Type	Name	On	Description
Unq	UNQ_TEACHER_ID	ACADEMIC_STAFF_ID	Teaching Id has to be UNQ
Pk	PK_ACADEMIC_STAFF	ACADEMIC_STAFF_ID	
Foreign Keys			
Type	Name	On	Description
	FK_ACADEMIC_STAFF_FACULTY ( FACULTY_SHORT_NAME ) ref FACULTY ( FACULTY_SHORT_NAME )		

Table ACADEMIC_STAFF_WORKLOAD			
Idx	Name	Data Type	Description
Represents the workload and workload reductions of academic staff per semester.			
* PK	ACADEMIC_STAFF_ID	BIGINT	An identifying number for the teacher
* PK	SEMESTER_NR	VARCHAR(8)	semester which the role start e.g. SS26
*	ACADEMIC_STAFF_REDUCTION	DECIMAL(5,2)	the workload he or she get credited for the role
*	ACADEMIC_STAFF_ROLE	CHAR(10)	the special role name
Indexes			
Type	Name	On	Description
PK	PK_ACADEMIC_STAFF_WORKLOAD	SEMESTER_NR, ACADEMIC_STAFF_ID	
Foreign Keys			
Type	Name	On	Description
	FK_ACADEMIC_STAFF ( ACADEMIC_STAFF_ID ) ref ACADEMIC_STAFF ( ACADEMIC_STAFF_ID )		
Constraints			
	Name	Definition	Description
	CNS_ACADEMIC_STAFF_REDUCTION	ACADEMIC_STAFF_REDUCTION >= 0	

## View V\_COURSE\_PLANNER

```
CREATE OR REPLACE VIEW SCHEMA_MAIN.V_COURSE_PLANNER AS
SELECT
  ca.COURSE_ASSIGNMENT_TERM AS TERM,
  c.DEGREE_SHORT_NAME       AS DEGREE_SHORT_NAME,
  s.SUBJECT_NR              AS SUBJECT_NR,
  s.SUBJECT_NAME            AS SUBJECT_NAME,
  s.SUBJECT_SEMESTER_LVL    AS SEMESTER_LVL,
  ca.ACADEMIC_STAFF_ID      AS ACADEMIC_STAFF_ID,
  st.FIRST_NAME             AS STAFF_FIRST_NAME,
  st.LAST_NAME              AS STAFF_LAST_NAME,
  ca.TEACHING_HOURS         AS TEACHING_HOURS
FROM SCHEMA_MAIN.COURSE_ASSIGNMENT ca
JOIN SCHEMA_MAIN.COURSE c
  ON c.SUBJECT_NR = ca.SUBJECT_NR
 AND c.DEGREE_SHORT_NAME = ca.DEGREE_SHORT_NAME
JOIN SCHEMA_MAIN.SUBJECT s
  ON s.SUBJECT_NR = c.SUBJECT_NR
JOIN SCHEMA_MAIN.ACADEMIC_STAFF st
  ON st.ACADEMIC_STAFF_ID = ca.ACADEMIC_STAFF_ID
;
```

## View V\_TIMETABLE\_OFFERINGS\_EXPORT

```
CREATE OR REPLACE VIEW SCHEMA_MAIN.V_TIMETABLE_OFFERINGS_EXPORT AS
SELECT
  ca.COURSE_ASSIGNMENT_TERM AS TERM,
  c.DEGREE_SHORT_NAME       AS DEGREE_SHORT_NAME,
  dp.DEGREE_NAME            AS DEGREE_NAME,
  s.SUBJECT_NR              AS SUBJECT_NR,
  s.SUBJECT_NAME            AS SUBJECT_NAME,
  s.SUBJECT_SEMESTER_LVL    AS SEMESTER_LVL,
  s.SUBJECT_SCHEDULE        AS SCHEDULE_HOURS,
  ca.ACADEMIC_STAFF_ID      AS ACADEMIC_STAFF_ID,
  ca.TEACHING_HOURS         AS TEACHING_HOURS
FROM SCHEMA_MAIN.COURSE_ASSIGNMENT ca
JOIN SCHEMA_MAIN.COURSE c
  ON c.SUBJECT_NR = ca.SUBJECT_NR
 AND c.DEGREE_SHORT_NAME = ca.DEGREE_SHORT_NAME
JOIN SCHEMA_MAIN.SUBJECT s
  ON s.SUBJECT_NR = c.SUBJECT_NR
LEFT JOIN SCHEMA_MAIN.DEGREE_PROGRAM dp
  ON dp.DEGREE_SHORT_NAME = c.DEGREE_SHORT_NAME
;
```