Student Information System Physical Data Model

CONSTRAINT
CHECK
VALID PHONE
NUMBER FORMAT

CONSTRAINT
CHECK
VALID EMAIL
FORMAT

CONSTRAINT
CHECK
LETTER GRADE IN
("A+","A","A-",etc...)

CONSTRAINT
CHECK
PROV IN ("AB", "BC", "SK",
"MB", "NB", "NL", "NT",
"NS", "NU", "ON", "PE",
"QC", "YT")

CONSTRAINT
CHECK
POSTAL CODE
VALID FORMAT

CONSTRAINT
CHECK
VALID PHONE
NUMBER FORMAT

CONSTRAINT
CHECK
VALID EMAIL
FORMAT

SIS_STUDENT

PK	student_id	NUMBER
NN	first_name	NVARCHAR2(50)
NN	last_name	NVARCHAR2(50)
CK	phone_number	NCHAR(12)
NN	status	NVARCHAR2(2)
NN	status_date	DATE
CK	email	NVARCHAR2(100)

SIS_STUDENT_CREDENTIAL

PK, FK	student_id	NUMBER
PK, FK	credential#	NUMBER
NN	start_date	DATE
	completion_date	DATE
CK	credential_satus	NCHAR(1)

SIS_CREDENTIAL

PK	credential#	NUMBER
NN	school_associated	NVARCHAR2(30)
NN	name	NVARCHAR2(50)
CK	type	NVARCHAR2(2)

CONSTRAINT
CHECK
TYPE IN ("MI",
"FT", "CT", "DP",
"AD", "D")

CONSTRAINT
CHECK
CREDENTIAL STATUS IN
("A", "G", "E")

SIS_CREDENTIAL_COURSE

PK, FK	credential#	NUMBER
PK, FK	course_code	NCHAR(7)
CK	type_flag	NUMBER(1)

CONSTRAINT
CHECK
TYPE FLAG IN (1, 2)

SIS_STUDENT_COURSE_RECORD

PK, FK	CRN	NUMBER(5)
PK, FK	semester_code	NUMBER(6)
FK	course_code	NCHAR(7)
PK, FK	student_id	NUMBER(15)
CK	letter_grade	NVARCHAR2(2)

SIS_SCHEDULED_COURSE

PK	CRN	NUMBER(5)
PK	semester_code	NUMBER(6)
FK	course_code	NCHAR(7)
CK	section_code	NCHAR(1)

CONSTRAINT
CHECK
SEMESTER CODE
VALID FORMAT

CONSTRAINT
CHECK
VALID COURSE CODE
FORMAT

CONSTRAINT
CHECK
0.5 <= CREDITS <= 9

SIS_INSTRUCTIOR

PK	instructor_id	NUMBER
NN	first_name	NVARCHAR2(50)
NN	last_name	NVARCHAR2(50)
NN	address	NVARCHAR2(100)
NN	city	NVARCHAR2(40)
CK	prov	NCHAR(2)
CK	postal_code	NCHAR(6)
CK	phone_number	NCHAR(12)
CK	email	NVARCHAR2(100)

CONSTRAINT
CHECK
SECTION CODE IN
("A", "B", "C", "D",
"F", "I")

SIS_COURSE

PK, CK	course_code	NCHAR(7)
NN	name	NVARCHAR2(100)
CK	num_of_credits	NUMBER(2,1)

CONSTRAINT
CHECK
COURSE NOT ITS OWN
PREREQUISITE

SIS_SCHEDULED_COURSE_INSTRUCTOR

PK, FK	CRN	NUMBER(5)
PK, FK	semester_code	NUMBER(6)
PK, FK	instructor_id	NUMBER

SIS_COURSE_PREREQUISITE

PK	prerequisite_course_code	NCHAR(7)
PK, FK	course_code	NCHAR(7)