

# 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(15)
NN	start_date	DATE
NN	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)

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)

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

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

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

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

**CONSTRAINT**  
CHECK  
TYPE FLAG IN (1, 2)

**CONSTRAINT**  
CHECK  
SEMESTER CODE  
VALID FORMAT

**CONSTRAINT**  
CHECK  
VALID COURSE CODE  
FORMAT

**CONSTRAINT**  
CHECK  
0.5 <= CREDITS <= 9

SIS_INSTRUCTOR		
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(1,1)

**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)