The university have one or more Campuses where each campus has one or several buildings and each building is composed of many rooms that could be a classroom, a lab, a conference room, an office, etc. Each classroom or a lab has a capacity and is associated with a set of facilities that could be an overhead projector, computers, etc.

University – has – Campus

Campus – has – Buildings

Building – has – Room

GenericRoom – isa – Room

ClassLabRoom – isa – Room

ClassLabRoom – has – Facility

The university has several departments where each department offers a different set of courses. It also has several instructors and students who are associated with particular departments. Each department can have one chairman and one or more programs.

University – has – Department

Department – offers – Course

Program – isOfferedBy – Department [Department -> chairman]

Instructor – hiredBy – Department

Student – belongsTo – Department

Students can be admitted as graduate students or undergraduate students. Total credits required for undergraduate and graduate can vary from one program to another. The default number of credits required for undergraduate programs are 90 credits and for graduate programs are 44 credits. Students can be registered into one or more programs. Each student is assigned an advisor for each program he/she is enrolled in to coordinate the courses over the term of study.

UndergraduateStudent – isa – Student

GraduateStudent – isa – Student

UndergraduateProgram – isa – Program (required credits 90)

GraduateProgram – isa – Program (required credits 44)

Student – registersIn – Program [registersIn -> advisor]

A student can register in a course only if he/she got a passing grade in all the prerequisite courses for the course to be registered. A passing grade is at least D-. Each term, many sections of the same course could be offered. An instructor may teach more than one section in more than one department in the same term. However, students are restricted to register in only one section of the same course in a given term.

Course – hasPrerequisite – Course

Course – has – Section

Instructor – teaches – Section

Student – isRegisteredIn – Section (student registers in AT MOST one section

Sections are assigned to different classrooms and different time slots. One instructor cannot be assigned to two sections in a conflicting time-slots. Also, one student cannot take two different classes in a conflicting time-slots.

Section – isIn – ClassLabRoom

Section – isAt – TimeSlot (no overlapping registration or teaching)

Section(ID, Course, SectionID, Type, totalDuration)

Graduate students may or may not have supervisors depending upon whether they are enrolled in a course based graduate program or enrolled in a thesis based graduate program. Students enrolled in a Thesis based program can apply for research funding if available under their supervisor. Only graduate students with GPA 3.0 and above are eligible to apply for research funding.

CourseGraduateProgram – isa – GraduateProgram

ThesisGraduateProgram – isa – GraduateProgram

ThesisGraduateProgram – isSupervisedBy – Instructor

ResearchFunding – isOwnedBy - Instructor

Thesis

Graduate students who have a GPA of 3.2 and above are eligible to apply for teaching assistantship for a maximum of two graduate and/or undergraduate courses. A teaching assistant can be assigned to tutorial sessions, lab instructors and assignment markings. However, the total work hours of a teaching assistant cannot exceed a maximum of 260 hours per academic year.

TeachingAssistanceship (ID, GraduateStudentID, SectionID) (GraduateStudentID min gpa 3.2)

Information about Students include ID, First Name, Last Name, SSN, phone, email, home address (civic number, city, province, and postal code).

Student – isa – Person

Also, a list of degrees received in the past whether from the same university, other universities, CEGEP or Secondary school (include the name of the institution, date received, name of degree, and overall average).

Person – hasA - Degree

Degree (PersonID, Institution, DateReceived, NameOfDegree, OverallAverage)

Information about teaching assistants include history of assignments and contracts. • Information about Instructors include ID, First Name, Last Name, SSN, phone, email, home address (civic number, city, province, and postal code).

Instructor – isa – Person

Person (ID, FirstName, LastName, SSN, Phone, Email, HomeAddressId)

Address (ID, CivicNumber, Street, City, Province, PostalCode)

Also, information about Faculty members and graduate students include a list of University degrees received in the past whether from the same university, other universities, a list of experiences in the industry, a list of publications and a list of awards achieved with details of each of these items.

Also the salary history must be recorded for full time faculties and a list of all contracts for part time faculties and teaching assistants such as contract date, amount of the contract and the course name and section for the contract.

FullTimeInstructor – isA – Instructor

PartTimeInstructor – isA – Instructor