**1) List all the schools are located in ‘Toronto Campus’, and sort them by school name.**

SELECT name as “School Name”

FROM SCHOOL

Where campus LIKE ‘%Toronto% ‘

ORDER BY name;

**2) List all the programs provided by ‘science faculty’.**

SELECT p.title as “Program Title”

FROM PROGRAM p

INNER JOIN SCHOOL s

ON p.school = s.name

WHERE s.faculty LIKE ‘Science’;

**3) Give all the names of the lecturers who are the members of the committee and sort by their name.**

SELECT name as Member

FROM LECTURER l

INNER JOIN LECTURER\_COMMITTEE lc

ON l.id = lc.lecturer\_id

WHERE lc.committee\_name LIKE ‘Advisory’ && lc.faculty LIKE ‘Science’

ORDER BY l.name;

**4) List all supervisor’s names and the names of the lecturers they manage. Please sort by supervisor name and lecturer name.**

SELECT t1.name as Supervisor, t2.name as Subordinate

FROM LECTURER t1

JOIN LECTURER t2

ON t1.id = t2.supervisor;

**5) Give all the lecturers who are not the members of the committee.**

SELECT name as “Lecturer Name”

FROM LECTURER t1

LEFT JOIN LECTURER\_COMMITTEE t2

ON t1.id = t2.lecturer\_id

WHERE t2.lecturer\_id IS NULL;

**6) Give the total number of courses for each program.**

SELECT program as “Program Code”, COUNT(code) as “Total Courses”

FROM COURSE

GROUP BY program;

**7) Give all the lecturers with the courses they are teaching. Sort by lecturer name.**

SELECT name as “Lecturer Name”, s.course\_code as “Course Code”

FROM LECTURER l

INNER JOIN SECTION s

On l.id = s.lecturer\_id

WHERE l.id = s.lecturer\_id

ORDER BY l.name;

**8) Give all the course titles and their corresponding prerequisite course titles.**

SELECT c.title as “Course Title”, c2.title as “Prerequisite Title”

FROM COURSE c

LEFT JOIN PREREQUISITE pr

ON c.code = pr.course\_code

LEFT JOIN COURSE c2

ON pr.prerequisite\_code = c2.code;

**9) Give the top 5 courses which have more students involved.**

SELECT c. title as “Course Title”, s.course\_code as “Course Code”, COUNT(sc.section\_id) as “Student Count”

FROM SECTION s

INNER JOIN STUDENT\_COURSE sc

ON s.id = sc.section\_id

INNER JOIN COURSE c

ON c.code = s.course\_code

GROUP BY s.course\_code

ORDER BY COUNT(sc.section\_id) DESC

LIMIT 5;

**10) Give any students and the Prerequisites they need to take based on classes they are enrolled in currently.**

SELECT s.name as Name, pr.prerequisite\_code as ‘Missing Class’, pr.course\_code as ‘Required by’

FROM STUDENT s

INNER JOIN STUDENT\_COURSE sc

ON s.id = sc.student\_id

INNER JOIN SECTION sn

ON sn.id = sc.section\_id

INNER JOIN PREREQUISITE pr

ON sn.course\_code = pr.course\_code

WHERE (s.id, pr.prerequisite\_code) NOT IN

(SELECT sc.student\_id, sn.course\_code FROM SECTION sn

INNER JOIN STUDENT\_COURSE sc

ON sc.section\_id = sn.id);

**11) Add a Lecturer.**

INSERT INTO LECTURER VALUES (“<id>”, “<supervisor\_id>”, “<title>”, “<office\_room>”, “<school>”, “<name>”);

**12) Update Lecturer with respect to school.**

UPDATE LECTURER SET school = <school name> WHERE id = “<id>”;

**13) Add Section that the new lecturer is teaching**

INSERT INTO SECTION VALUES (“<id>”, “<lecturer\_id>”, “<course\_code>”, “<building>”, “<room>”, “<time>”, “<day>”, “<year>”, “<semester>”);

**14) Delete a Lecturer.**

DELETE FROM LECTURER WHERE id = ‘<lecturer id>’;