

## SQL Queries Screens hot

### 1. --1.What are the core requirements and elective courses for these programs

```

select
p.ProgramName,
CASE
  When CoreCourseFlag = 'NO' THEN 'Elective Course' ELSE 'Core Course' end AS 'Courses
Type',
[Name] 'Course Name',
Prerequisite 'Prerequisite'
from DimCourse c JOIN DimProgram p
ON c.ProgramSK = p.ProgramSK
    
```

The screenshot shows the Microsoft SQL Server Enterprise Manager interface. The left pane displays the 'Object Explorer' with the 'GraduateDataModel' database selected. The right pane shows a query window with the following SQL query:

```

--1.What are the core requirements and elective courses for these programs
select
p.ProgramName,
CASE
  When CoreCourseFlag = 'NO' THEN 'Elective Course' ELSE 'Core Course' end AS 'Courses
Type',
[Name] 'Course Name',
Prerequisite 'Prerequisite'
from DimCourse c JOIN DimProgram p
ON c.ProgramSK = p.ProgramSK
    
```

The query results are displayed in the 'Results' pane, showing a table with the following data:

ProgramName	Courses Type	Course Name	Prerequisite
1 Master of Science in Information Systems	Core Course	Application Engineering Development	NO
2 Master of Science in Data Architecture and Man...	Core Course	Data Warehousing and Business Intelligence	Data Management and data design
3 Bachelors of Science	Elective Course	Data Management and data design	NO
4 Master of Science in Bioengineering	Elective Course	Business Analysis	NO
5 Master of Science in Electrical and computer engi...	Elective Course	Web Engineering	NO

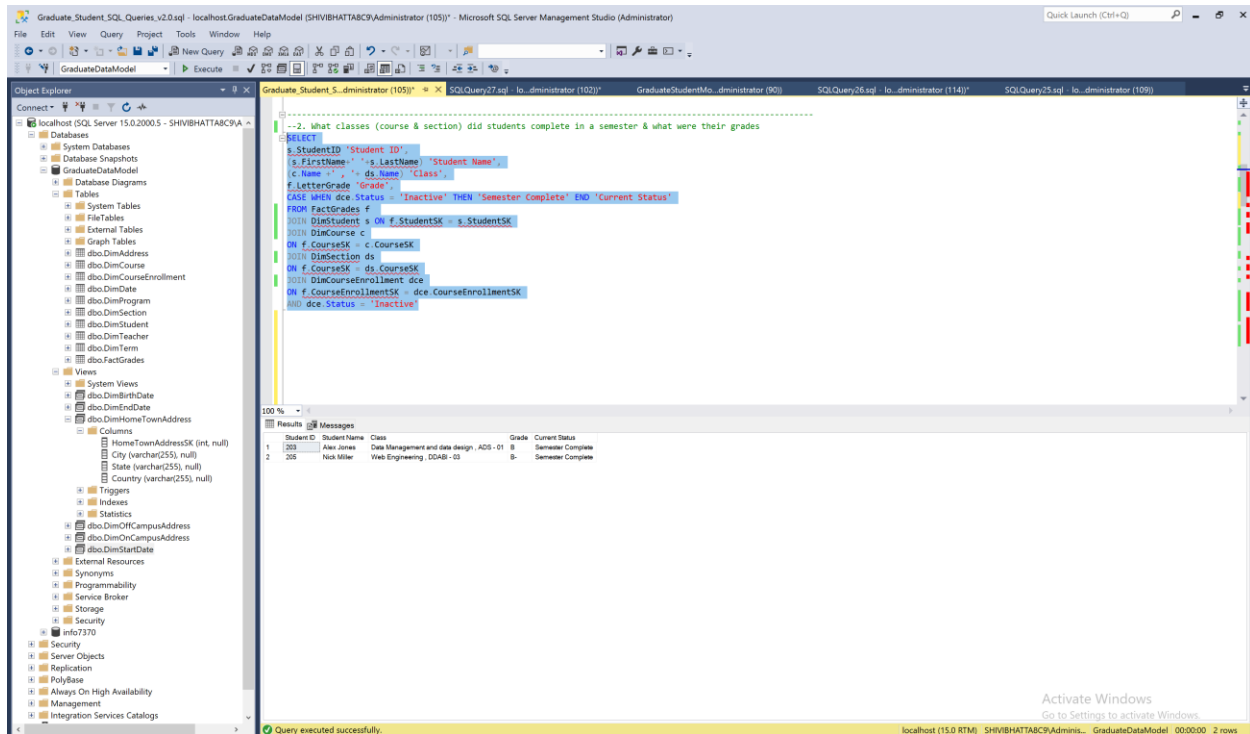
The status bar at the bottom indicates 'Query executed successfully.' and '5 rows'.

## 2. What classes (course & section) did students complete in a semester & what were their grades

```

SELECT
s.StudentID 'Student ID',
(s.FirstName+' '+s.LastName) 'Student Name',
(c.Name + ' , ' + ds.Name) 'Class',
f.LetterGrade 'Grade',
CASE WHEN dce.Status = 'Inactive' THEN 'Semester Complete' END 'Current Status'
FROM FactGrades f
JOIN DimStudent s ON f.StudentSK = s.StudentSK
JOIN DimCourse c
ON f.CourseSK = c.CourseSK
JOIN DimSection ds
ON f.CourseSK = ds.CourseSK
JOIN DimCourseEnrollment dce
ON f.CourseEnrollmentSK = dce.CourseEnrollmentSK
AND dce.Status = 'Inactive'

```



Query executed successfully.

Student ID	Student Name	Class	Grade	Current Status
200	Alan Jones	Data Management and data design , ADS - 01	B-	Semester Complete
205	Nick Miller	Web Engineering , DOAB - 03	B-	Semester Complete

3. What were the enrollment and drop dates if applicable for students in each class in a semester

```
SELECT distinct c.Name AS CourseName, ds.StartDate as 'Enrollment Date', de.EndDate 'Drop Date', dt.semester, (c.Name + ' , ' + dst.[Name]) 'Class'
FROM DimCourseEnrollment e
join DimCourse c on e.CourseEnrollmentSK = c.CourseEnrollmentSK
left join DimStartDate ds on ds.StartDate = e.EnrollmentStartDateSK
left join DimEndDate de on de.EndDate = e.EnrollmentEndDateSK
inner join DimTerm dt on dt.TermSK = c.TermSK
inner join DimSection dst on dst.courseSK = c.CourseSK
```

The screenshot shows the Microsoft SQL Server Management Studio interface. The query editor contains the following SQL query:

```
-- 3. What were the enrollment and drop dates if applicable for students in each class in a semester
SELECT distinct c.Name AS CourseName, ds.StartDate as 'Enrollment Date', de.EndDate 'Drop Date', dt.semester, (c.Name + ' , ' + dst.[Name]) 'Class'
FROM DimCourseEnrollment e
join DimCourse c on e.CourseEnrollmentSK = c.CourseEnrollmentSK
left join DimStartDate ds on ds.StartDate = e.EnrollmentStartDateSK
left join DimEndDate de on de.EndDate = e.EnrollmentEndDateSK
inner join DimTerm dt on dt.TermSK = c.TermSK
inner join DimSection dst on dst.courseSK = c.CourseSK
```

The Results pane shows the following data:

	CourseName	Enrollment Date	Drop Date	semester	Class
1	Application Engineering Development	2020-02-10	2021-02-03	Spring 2020	Application Engineering Development, BgData-01
2	Business Analysis	2020-08-10	2020-10-10		Web Click to select the whole column
3	Data Management and data design	2020-06-10	2020-08-10	Fall 2017	Data Management and data design, ADS -01
4	Data Warehouse and Business Intelligence	2020-04-10	2020-06-10	Summer 2014	Data Warehouse and Business Intelligence, AED -01
5	Web Engineering	2020-10-10	2021-02-03	Summer 2014	Web Engineering, DQAB-03

The status bar at the bottom indicates: Query executed successfully. localhost (15.0 RTM) SHIVBHATTARCPAdminis... GraduateDataModel 00:00:00 5 rows

4.

Who were the teachers in each class above

```

select c.Name as 'Course Name', CONCAT(t.FirstName, ' ', t.LastName) as 'Professor Name'
, (c.Name + ' ' + dst.[Name]) 'Class'
from DimCourseEnrollment e
join DimCourse c on e.CourseEnrollmentSK = c.CourseEnrollmentSK
join DimTeacher t on t.TeacherSK = c.TeacherSK
inner join DimSection dst on dst.courseSK = c.CourseSK

```

The screenshot shows the Microsoft SQL Server Enterprise Manager interface. The left pane displays the 'Object Explorer' for the 'GraduateDataModel' database. The right pane shows a SQL query window with the following query:

```

-- 4. Who were the teachers in each class above
select c.Name as 'Course Name', CONCAT(t.FirstName, ' ', t.LastName) as 'Professor Name'
, (c.Name + ' ' + dst.[Name]) 'Class'
from DimCourseEnrollment e
join DimCourse c on e.CourseEnrollmentSK = c.CourseEnrollmentSK
join DimTeacher t on t.TeacherSK = c.TeacherSK
inner join DimSection dst on dst.courseSK = c.CourseSK

```

The query results are displayed in the 'Results' pane, showing 5 rows of data:

Course Name	Professor Name	Class
Application Engineering Development	Richard Sherman	Application Engineering Development - BigData 01
Data Warehouse and Business Intelligence	Yusuf Gbale	Data Warehouse and Business Intelligence - ADS - 01
Data Management and data design	Khal Bugara	Data Management and data design - ADS - 01
Business Analytics	Nicholas Brown	Business Analytics - ADS - 02
Web Engineering	Jessica Pike	Web Engineering - ADS - 03

The status bar at the bottom indicates 'Query executed successfully.' and 'localhost (15.0 RTM) SHVIBHATTARCP/Admin... GraduateDataModel 00:00:00 5 rows'.

5.

5. What were the classes taught each semester

```
with courseEnrollment as (
```

```
Select
```

```
dsd.CalendarYear, ce.CourseEnrollmentSK
```

```
from DimCourseEnrollment ce
```

```
join DimStartDate dsd on dsd.StartDate = ce.EnrollmentStartDateSK
```

```
)
```

```
select
```

```
t.Semester as 'Term'
```

```
, ce.CalendarYear as 'Year'
```

```
, STRING_AGG(c.Name, ' , ') as 'Course Offerings'
```

```
from DimCourse c
```

```
join courseEnrollment ce on ce.CourseEnrollmentSK = c.CourseEnrollmentSK
```

```
join DimTerm t on t.TermSK = c.TermSK
```

```
group by t.Semester, ce.CalendarYear
```

The screenshot shows the Microsoft SQL Server Enterprise Manager interface. The left pane displays the 'Object Explorer' with the 'GraduateDataModel' database selected. The right pane shows a SQL query window with the following query:

```
--5. What were the classes taught each semester

with courseEnrollment as (

Select
dsd.CalendarYear, ce.CourseEnrollmentSK
from DimCourseEnrollment ce
join DimStartDate dsd on dsd.StartDate = ce.EnrollmentStartDateSK
)

select
t.Semester as 'Term'
, ce.CalendarYear as 'Year'
, STRING_AGG(c.Name, ' , ') as 'Course Offerings'
from DimCourse c
join courseEnrollment ce on ce.CourseEnrollmentSK = c.CourseEnrollmentSK
join DimTerm t on t.TermSK = c.TermSK
group by t.Semester, ce.CalendarYear
```

The bottom pane shows the 'Results' tab with the following data:

Term	Year	Course Offerings
Summer 2014	2014	Warehouse and Business Intelligence
Fall 2017	2017	Data Warehouse and data design
Summer 2014	2018	Web Engineering
Winter 2019	2018	Business Analysis
Fall 2017	2019	Data Management and data design
Winter 2019	2019	Business Analysis
Spring 2020	2020	Application Engineering Development
Summer 2014	2020	Web Engineering

The status bar at the bottom indicates 'Query executed successfully.' and '8 rows'.

6.

What teachers taught classes in a degree program in a semester  
with courseEnrollment as (

```

Select distinct
d.CalendarYear
,ce.CourseEnrollmentSK
from DimCourseEnrollment ce
join DimStartDate d on d.StartDate = ce.EnrollmentStartDateSK
)

select distinct

t.Semester as 'Term'
,ce.CalendarYear as 'Year'
,STRING_AGG(CONCAT(te.FirstName, ' ', te.LastName) , ' , ') as 'Teacher Name' ,
dp.ProgramName
from DimCourse c
join DimTeacher te on te.TeacherSK = c.TeacherSK
join courseEnrollment ce on ce.CourseEnrollmentSK = c.CourseEnrollmentSK
join DimTerm t on t.TermSK = c.TermSK
inner join DimProgram dp on dp.ProgramSK = c.ProgramSK
group by t.Semester,ce.CalendarYear, dp.ProgramName

```

The screenshot shows the Microsoft SQL Server Management Studio interface. The left pane displays the 'Object Explorer' with the 'GraduateDataModel' database selected. The central pane shows a SQL query titled 'SQLQuery27.sql' with the following text:

```

--6. What teachers taught classes in a degree program in a semester
with courseEnrollment as (

Select distinct
d.CalendarYear
,ce.CourseEnrollmentSK
from DimCourseEnrollment ce
join DimStartDate d on d.StartDate = ce.EnrollmentStartDateSK
)

select distinct

t.Semester as 'Term'
,ce.CalendarYear as 'Year'
,STRING_AGG(CONCAT(te.FirstName, ' ', te.LastName) , ' , ') as 'Teacher Name' ,
dp.ProgramName
from DimCourse c
join DimTeacher te on te.TeacherSK = c.TeacherSK
join courseEnrollment ce on ce.CourseEnrollmentSK = c.CourseEnrollmentSK
join DimTerm t on t.TermSK = c.TermSK
inner join DimProgram dp on dp.ProgramSK = c.ProgramSK
group by t.Semester,ce.CalendarYear, dp.ProgramName

```

The right pane shows the 'Results' tab with 8 rows of data:

Term	Year	Teacher Name	ProgramName
Fal 2017	2017	Khal Bugras	Bachelors of Science
Fal 2017	2018	Khal Bugras	Bachelors of Science
Spring 2020	2020	Richard Sherman	Master of Science in Information Systems
Summer 2014	2014	Yusuf Othak	Master of Science in Data Architecture and Man...
Summer 2014	2018	Jessica Pike	Master of Science in Electrical and computer engi...
Summer 2014	2020	Jessica Pike	Master of Science in Electrical and computer engi...
Winter 2019	2018	Nicholas Brown	Master of Science in Bioengineering
Winter 2019	2019	Nicholas Brown	Master of Science in Bioengineering

The status bar at the bottom indicates 'Query executed successfully.' and 'localhost (15.0 RTM) SHIVBHATABCPAdmin... GraduateDataModel 00:00:00 8 rows'.

7.

--7. Who are the students enrolled in a degree program and attributes such as ID, email, date of birth (DOB), hometown, campus/off-campus address if applicable, etc

SELECT

```
s.FirstName+' '+s.LastName 'Student Name',
ISNULL(p.ProgramName, 'Not Enrolled in degree Program') as 'Degree Program',
s.Email,
ofa.City+' '+ofa.State+', '+ofa.Country 'Off Campus Address',
oca.City+' '+oca.State+', '+oca.Country 'On Campus Address',
hta.City+' '+hta.State+', '+hta.Country 'HomeTownAddress Address',
s.Phone,
d.BirthDate 'Date Of Birth'
FROM DimStudent s JOIN DimProgram p ON
s.ProgramSK = p.ProgramSK
JOIN DimBirthDate d ON s.BirthDateSK = d.BirthDateSK
JOIN DimOffCampusAddress ofa ON ofa.OffCampusAddressSK = s.OffCampusAddressSK
JOIN DimOnCampusAddress oca ON oca.OnCampusAddressSK = s.OnCampusAddressSK
JOIN DimHomeTownAddress hta ON hta.HomeTownAddressSK = s.HomeTownAddressSK
```

The screenshot shows the Microsoft SQL Server Management Studio interface. The query editor displays the following SQL query:

```
--7. Who are the students enrolled in a degree program and attributes such as ID, email, date of birth (DOB), hometown, campus/off-campus address if applicable, etc

SELECT
s.FirstName+' '+s.LastName 'Student Name',
ISNULL(p.ProgramName, 'Not Enrolled in degree Program') as 'Degree Program',
s.Email,
ofa.City+' '+ofa.State+', '+ofa.Country 'Off Campus Address',
oca.City+' '+oca.State+', '+oca.Country 'On Campus Address',
hta.City+' '+hta.State+', '+hta.Country 'HomeTownAddress Address',
s.Phone,
d.BirthDate 'Date Of Birth'
FROM DimStudent s JOIN DimProgram p ON
s.ProgramSK = p.ProgramSK
JOIN DimBirthDate d ON s.BirthDateSK = d.BirthDateSK
JOIN DimOffCampusAddress ofa ON ofa.OffCampusAddressSK = s.OffCampusAddressSK
JOIN DimOnCampusAddress oca ON oca.OnCampusAddressSK = s.OnCampusAddressSK
JOIN DimHomeTownAddress hta ON hta.HomeTownAddressSK = s.HomeTownAddressSK
```

The Results pane shows the following data:

Student Name	Degree Program	Email	Off Campus Address	On Campus Address	HomeTownAddress Address	Phone	Date Of Birth
Gold Schmidt	Master of Science in Information Systems	gschmidt@university.edu	Boston Massachusetts, United States	Boston Massachusetts, United States	Boston Massachusetts, United States	2081891874	2020-02-10
Phat Williams	Master of Science in Data Architecture and Man...	phatwilliams@university.edu	Seattle Washington, United States	Seattle Washington, United States	Seattle Washington, United States	2061608932	2020-04-10
Alex Jones	Bachelor of Science	alexjones@university.edu	Norfolk Virginia, United States	Norfolk Virginia, United States	Norfolk Virginia, United States	4088979461	2020-04-10
Blair Brown	Master of Science in Bioengineering	blairbrown@university.edu	New York New York, United States	New York New York, United States	New York New York, United States	3337854881	2020-08-10
Nick Miller	Master of Science in Electrical and computer engi...	nickmiller@university.edu	Los Angeles California, United States	Los Angeles California, United States	Los Angeles California, United States	8272143879	2020-10-10
Mica Seth	Not Enrolled in degree Program	seth@university.edu	Seattle Massachusetts, United States	Seattle Massachusetts, United States	Seattle Massachusetts, United States	7184653219	2021-02-03

The status bar at the bottom indicates: Query executed successfully. localhost (15.0 RTM) SHIVBHATTABCPAdminis... GraduateDataModel 00:00:00 6 rows