

**Data Warehouse User's Group Meeting**  
**October 24, 2002**  
**Presenter: Walter J. Beatty**  
**Phone: (814) 863-0411 Email: [WJBDO@ENGR.PSU.EDU](mailto:WJBDO@ENGR.PSU.EDU)**

**\*\* initially \*\***

"There are times when I run queries against the student semester table and get too many records back from the warehouse. For example, when searching for all students that took a particular course during a range of semesters, I get back all semesters for all students who took the course during any one of the semesters in the range. For each student, I really only want to see the one semester in which the student took the specified course. Using the sigma icon to 'group by' last doesn't help. I have instructions about how to use a Where clause when creating the query, but I've never been able to figure it out. So, if someone could demonstrate using the Where clause (or any other technique) when creating a query to limit the records returned, that would be great.

**\*\* refined \*\***

Here's an example: any student who took Span 001, 002 or 003 in the last three years, and, the number of credits they took during that semester, and, their semester and CGPAs at the end of that semester. I can pull the list of students who took any course in a given semester, no problems. I can't however, use the master list to pull the number of credits for the semester and the GPAs and just get one semester.

I've tried joining my master list of students to stu\_sem on ss# and semester and I never get any records returned. It's like I'm creating a circular reference in Access. When I don't join the two tables on both fields, I get every semester of enrollment for every student, and that's too much information.

So, if someone could demonstrate using the Where clause when creating a query to limit the records returned, that would be great. If you need additional information from me to understand the project I've described above, please don't hesitate to contact me.

**\*\***

ASSUMED GOAL (Initial Issue):?

It is assumed that a user wishes to link transcript (historic enrollment) records to student characteristics such as major or semester standing, which change from term to term. Typically, this query would answer the question "who is taking our courses".

QUERY SPECIFICS:

The solution demo'd will produce a class list of a course offered during a previous term and link students taking that class to their major and semester classification during that term.

Here is the SQL code, since everything would not display on the below screen capture:

```
SELECT dbo_transcript.numb_stud_id AS SSN_TRANS, dbo_student_sem.numb_stud_id AS SSN_SEM,  
dbo_transcript.code_univ_yr_sem AS SEM_TRANS, dbo_student_sem.code_univ_yr_sem AS SEM_SEM,  
dbo_transcript.code_enrl_crse_loc AS campus_trans, dbo_student_sem.code_camp AS campus_sem,  
dbo_transcript.code_crse_key, dbo_transcript.numb_csec AS [section], dbo_transcript.code_enrl_actvy AS status_trans,
```

```

dbo_student_sem.name_stud AS name, dbo_student_sem.code_stud_stat AS status_sem,
dbo_student_sem.code_stud_clsfcnt_yrstm AS sem_clsfcnt, dbo_student_sem.code_stud_majr1 AS major,
dbo_student_sem.*, dbo_student_sem.numb_stud_id
FROM dbo_transcript INNER JOIN dbo_student_sem ON (dbo_transcript.code_univ_yr_sem =
dbo_student_sem.code_univ_yr_sem) AND (dbo_transcript.numb_stud_id = dbo_student_sem.numb_stud_id)
WHERE (((dbo_transcript.code_univ_yr_sem)="199898FA") AND ((dbo_transcript.code_crse_key)="A E 124") AND
((dbo_transcript.numb_csec)="001") AND ((dbo_transcript.code_enrl_actvy) Like "REG*"));

```

QRY\_INITIAL\_QUESTION : Select Query

Field:	SSN_TRANS: numb_	SSN_SEM: numb_sti	SEM_TRANS: code_	SEM_SEM: code_un	campus_trans: code	campus_sem: code_	code_crse_key	se
Table:	dbo_transcript	dbo_student_sem	dbo_transcript	dbo_student_sem	dbo_transcript	dbo_student_sem	dbo_transcript	db
Sort:								
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Criteria:			"199898FA"				"A E 124"	"0
or:								

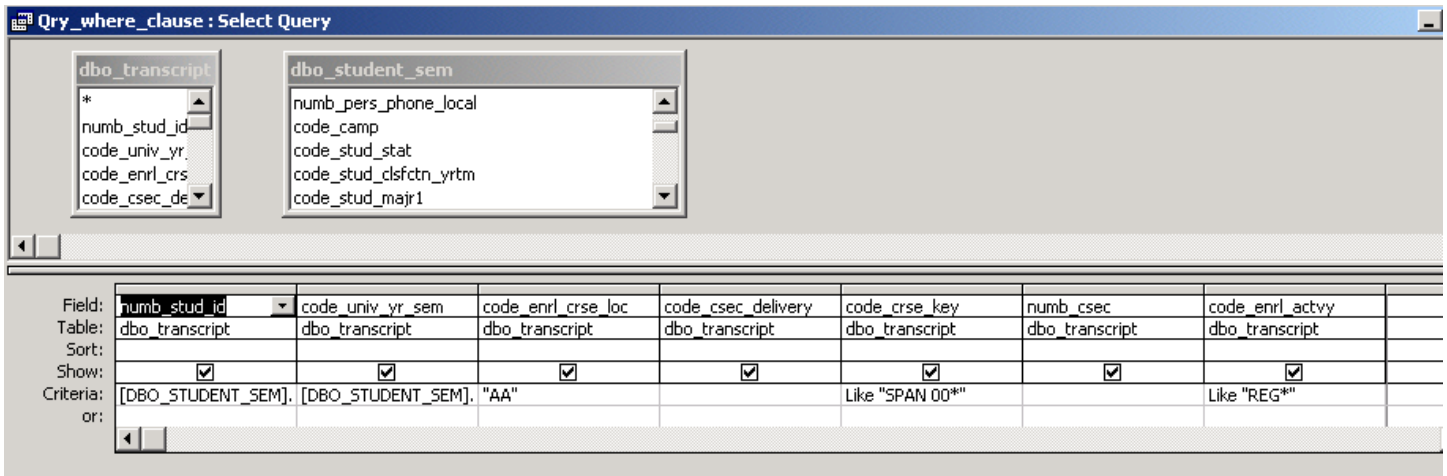
### Query using a where clause:

Here is the SQL Code:

```

SELECT dbo_transcript.numb_stud_id, dbo_transcript.code_univ_yr_sem, dbo_transcript.code_enrl_crse_loc,
dbo_transcript.code_csec_delivery, dbo_transcript.code_crse_key, dbo_transcript.numb_csec,
dbo_transcript.code_enrl_actvy
FROM dbo_transcript, dbo_student_sem
WHERE (((dbo_transcript.numb_stud_id)=[DBO_STUDENT_SEM].[NUMB_STUD_ID]) AND
((dbo_transcript.code_univ_yr_sem)=[DBO_STUDENT_SEM].[CODE_UNIV_YR_SEM] And
(dbo_transcript.code_univ_yr_sem)>="199900FA" And (dbo_transcript.code_univ_yr_sem)<="200102sp") AND
((dbo_transcript.code_enrl_crse_loc)="AA") AND ((dbo_transcript.code_crse_key) Like "SPAN 00*") AND
((dbo_transcript.code_enrl_actvy) Like "REG*"));

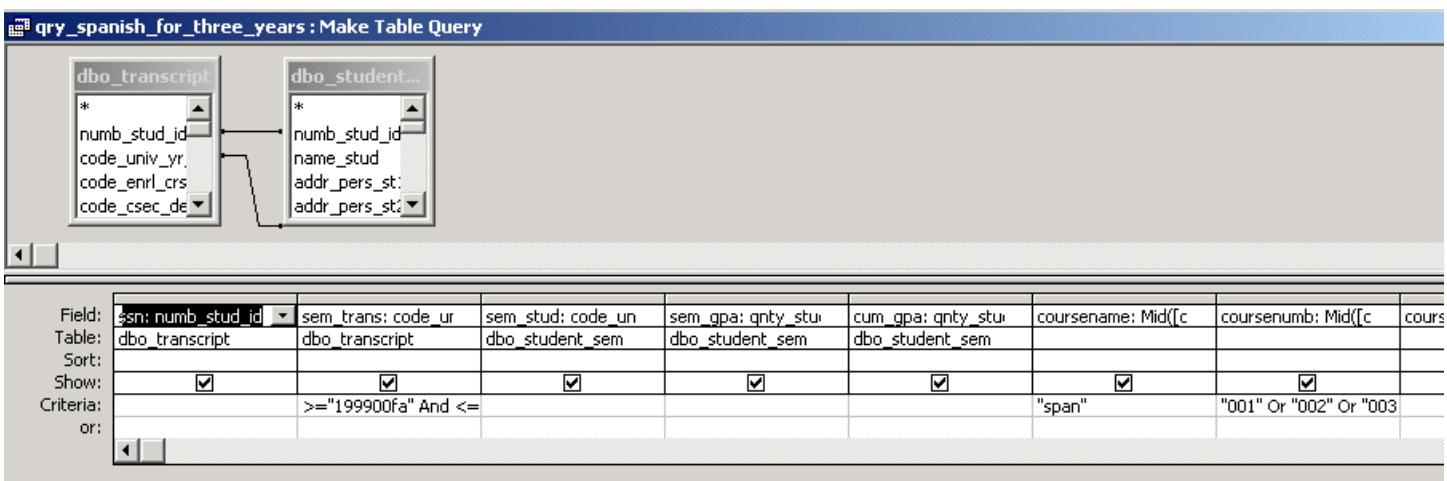
```



### Query taking Spanish for 3 years. Query#1

Here is the SQL Code:

```
SELECT dbo_transcript.numb_stud_id AS ssn, dbo_transcript.code_univ_yr sem AS sem_trans,
dbo_student_sem.code_univ_yr sem AS sem_stud, dbo_student_sem.qnty_stud_gpa_yrtm AS sem_gpa,
dbo_student_sem.qnty_stud_gpa_cum AS cum_gpa, Mid([code_crs_key],1,5) AS coursenam,
Mid([code_crs_key],6,3) AS coursenumb, Mid([code_crs_key],9,1) AS coursesufx, dbo_transcript.numb_csec AS
[section], dbo_transcript.code_csec_delivery, dbo_transcript.code_enrl_crs AS campus,
dbo_transcript.code_enrl_actvy AS status, dbo_student_sem.code_stud_clsfcn_yrtm AS sem_clsfcn,
dbo_student_sem.code_stud_majr1 AS major INTO a
FROM dbo_transcript INNER JOIN dbo_student_sem ON (dbo_transcript.code_univ_yr sem =
dbo_student_sem.code_univ_yr sem) AND (dbo_transcript.numb_stud_id = dbo_student_sem.numb_stud_id)
WHERE (((dbo_transcript.code_univ_yr sem) >= "199900fa" And (dbo_transcript.code_univ_yr sem) <= "200102sp")
AND ((Mid([code_crs_key],1,5) = "span") AND ((Mid([code_crs_key],6,3) = "001" Or
(Mid([code_crs_key],6,3) = "002" Or (Mid([code_crs_key],6,3) = "003")) AND
((dbo_transcript.code_enrl_crs) = "AA") AND ((dbo_transcript.code_enrl_actvy) Like "reg*")));
```



### **Query taking Spanish for 3 years. Query#2**

Here is the SQL Code:

```
SELECT [a].[ssn] AS Expr1, Count([a].[ssn]) AS CountOfssn INTO b  
FROM a  
GROUP BY [a].[ssn];
```

### **Query taking Spanish for 3 years. Query#3**

```
SELECT b.ssn AS Expr1, a.sem_trans AS Expr2, a.coursename AS Expr3, a.coursenumb AS Expr4, a.sem_clsft AS  
Expr5, a.section AS Expr6, a.sem_gpa AS Expr7, a.cum_gpa AS Expr8, a.status AS Expr9  
FROM b, a  
ORDER BY b.ssn, a.sem_trans, a.coursename, a.coursenumb;
```

[http://www.engr.psu.edu/sql\\_tips](http://www.engr.psu.edu/sql_tips)

<http://www.engr.psu.edu/services>