

## Analysis of Co- and Concurrent Enrollment for the 1996 - 1997 Academic Year

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### Summary

This study considers data on two types of university transfer students:

- **Concurrent** students are those who take courses at both Austin Community College and a university during the same semester
- **Co-enrolled** students take courses at Austin Community College during one semester and enroll at a university at some point during the same academic year

Course-taking patterns of these students are analyzed in terms of the types of courses taken, the campuses where courses are taken, and the time of day the course is taken.

### Types of Students in this Study

Austin Community College serves a significant population of students who attend four-year institutions. Some of these students enroll concurrently at both ACC and a university; others take courses at ACC during one semester, but enroll elsewhere at some point in the same academic year, either before or after they are students at ACC. Technically, these students transfer either from a university to ACC or from ACC to a university. However, for purposes of this analysis, these students were considered to be co-enrolled, since they attend more than one institution during an academic year.

ACC administrators assume that concurrent and co-enrolled students form a significant market segment for ACC. To better understand the behavior of (and address the needs of) this segment, an analysis was done to provide data on the course-taking patterns of students who take courses at ACC and either the University of Texas (UT) or Southwest Texas State University (SWT). This process began by gathering data on two groups of students: those who took courses at both ACC and either UT or SWT during the 1996-1997 academic year; and those who were enrolled at both ACC and either UT or SWT during the Fall 1996 semester. These data were provided by the Texas Higher Education Coordinating Board. ACC then identified students in its database and determined which courses they took during this time period.

During the 1996-1997 academic year, a total of 5,837 students took at least one course at ACC and UT (Table 1). Of these, 4,103 or 70.1% attended ACC in the Summer term. Unlike UT students, SWT students did not significantly increase their course-taking at ACC during the summer term. Of the 1,638 SWT students who also attended ACC during the academic year, 772 students, or about half (47.1%) took at least one class in the summer. (Demographic data on these students are available in Attachment C.)

Table 1

## Number of Concurrent and Co-Enrolled Students by Term

Academic Year 1996 - 1997

University	Total Co-enrolled AY 1996	Students Enrolled at ACC			Total Concurrent Fall 1996
		Fall 1996	Spring 1997	Summer 1997	
University of Texas at Austin	5,837	1,656	1,318	4,103	620
Southwest Texas State University	1,638	743	623	772	272

Source: Texas Higher Education Coordinating Board

During the Fall 1996 semester, only 620 UT students and 272 SWT students were also taking courses at ACC. This suggests that students tend to enroll at only one institution during a specific term. For example, students may be taking courses at ACC in the fall in order to transfer into UT or SWT in the Spring term.

The next part of the analysis consisted of acquiring information on ACC courses these students were taking. For each group, student ID numbers were compared to the ACC semester data base. In this way, it was possible to analyze the number and types of courses these students are taking. For purposes of this project, all courses in which students were enrolled were counted.

On an annual basis, individual UT students took slightly fewer courses than individual SWT students, 2.63 compared to 2.82 (Table 2). Both groups averaged more courses in the Fall term than Spring or Summer. UT students averaged nearly three courses in the Fall term but only two courses in the summer, while SWT students averaged about two and a half courses in the Fall, but less than 2 courses in the Summer. Concurrent students at both averaged a little over one course in the Fall 1996 term.

Table 2

## Average Number of Courses Taken by Concurrent and Co-Enrolled Students

Academic Year 1996 - 1997

University	Co-enrolled AY 1996	Enrolled at ACC			Concurrent Fall 1996
		Fall 1996	Spring 1997	Summer 1997	
University of Texas at Austin	2.63	2.61	2.14	2.00	1.23
Southwest Texas State University	2.82	2.48	2.27	1.76	1.31

Source: ACC Student Database

## Patterns of Concurrently Enrolled Students

During the Fall 1996 term, only 10.6% of the UT students and 16.6% of the SWT students were taking courses at ACC during the same term they were enrolled at the university. Of these concurrent enrollees, UT students were enrolled predominantly at the Rio Grande Campus (43.5%). Nearly one-fifth took courses at the Northridge Campus and about one-tenth at Riverside. SWT students were more dispersed, with about one-fifth of the course enrollments at Riverside, 17.1% at Rio Grande, and 15.2% at the Pinnacle. Another 13.4% enrolled at Northridge. In addition, 17.6% of the enrollments were at an Open Campus site, probably San Marcos High School, which is located near the SWT campus.

The disciplines with the highest enrollments for concurrently enrolled UT students included government, history, mathematics, Spanish, biology and chemistry. SWT concurrent enrollments were highest in the areas of mathematics, Spanish, and English.

Table 3  
Course Enrollment of Concurrent ACC Students by Campus

Academic Year 1996 - 1997

University	CYP	ERG	NRG	PIN	RGC	RVS	DIS	OP	TOT
UT Students	29	22	153	22	366	92	100	57	841
Percent	3.4%	2.6%	18.2%	2.6%	43.5%	10.9%	11.9%	6.8%	
SWT Students	15	17	51	58	65	80	28	67	381
Percent	3.9%	4.5%	13.4%	15.2%	17.1%	21.0%	7.3%	17.6%	
<b>Total</b>	44	39	204	80	431	172	128	124	1,222
<b>Percent</b>	3.6%	3.2%	16.7%	6.5%	35.3%	14.1%	10.5%	10.2%	

Source: ACC Database

## Patterns of Co-Enrolled UT Students

In all the 5,837 co-enrolled UT students took 15,351 courses during the 1996 Academic Year. Nearly 40 percent of these courses were taken at the Rio Grande Campus (See Table 4).

The Northridge Campus accounted for about one-fifth of the enrollments, while 15.6% of the courses were taken through some form of Distance Learning format. The Riverside Campus had nearly 15% of the course enrollments, with all other campuses combined having only about 10 percent of the total course enrollments.

Table 4  
Course Enrollment of Co-Enrolled ACC and UT Students by Campus

Academic Year 1996 - 1997

Term	CYP	ERG	NRG	PIN	RGC	RVS	DIS	OP	TOT
Fall 1996	157	70	881	202	1,785	651	458	126	4,330
Spring 1997	77	54	542	110	1,133	463	334	112	2,825
Summer 1997	141	117	1,567	237	3,165	1,166	1,605	198	8,196
<b>Total</b>	375	241	2,990	549	6,083	2,280	2,397	436	15,351
<b>Percent</b>	2.4%	1.6%	19.5%	3.6%	39.6%	14.9%	15.6%	2.8%	

Source: ACC Database

Four courses, Texas and U. S. Government and U.S. History I and II, accounted for over 25% of the student enrollment in courses. Nearly 10% of the course enrollments were in Spanish I through IV. In these areas, most of the enrollments were in the Summer term. Other subject areas that had significant enrollment included mathematics, physics, chemistry, computers, and English literature and composition. (See Table 5) Enrollment for specific courses varied by semester, with introductory courses in the sciences, philosophy, psychology and mathematics having significant enrollment in the fall and summer terms, and areas like accounting and economics showing increased enrollment during the summer.

Distance learning enrollment were highest in the summer term. Along with history and government, courses with the highest enrollment included Biology 1603 and 1613, Economics 1623 and 1633, English 1613, 1623, and 2713, and Psychology 1613.

Table 5

## High Enrollment Courses of Co-Enrolled ACC and UT Students by Course

Academic Year 1996 - 1997

Course	Fall 1996	Spring 1997	Summer 1997	Total
GOV2623-TEXAS	215	158	861	1234
GOV2613-U.S.	177	133	748	1058
HIS1623-U.S. II	149	114	776	1039
HIS1613-U.S. I	154	108	673	935
SPN2613-SPANISH III	65	56	302	423
SPN3623-SPANISH IV	49	64	305	418
SPN1625-SPANISH II	78	93	176	347
SPN1615-SPANISH I	118	57	135	310
PHY2624-ENGR PHYSICS II	64	42	186	292
ENG1623-COMP II	68	51	152	271
ENG1613-COMP I	49	46	174	269
HKN1601 (All sections)	101	68	71	240
ENG2713-LIT I	66	38	128	232
MTH1513-SPIRIT&USE	87	48	91	226
MTH1743-ALGEBRA	98	65	46	209
CHM1644-CHM II	65	50	90	205
PHY1624-GEN PHYSICS II	42	32	126	200
PHY2614-ENGR PHYSICS I	56	36	100	192
ECO1623-MICRO	53	29	106	188
CHM1634-CHEM I	70	36	68	174
PSY1613-INTRO	77	40	57	174
Course	Fall 1996	Spring 1997	Summer 1997	Total
MTH1684-BUS CALC II	22	28	123	173
PHY1614-GEN PHYSICS I	50	36	78	164
ECO1633-MACRO	44	27	80	151
BIO1654-CELL/MOLECULAR	47	40	52	139
MTH1674-BUS CALC I	25	29	69	123

Course	Fall 1996	Spring 1997	Summer 1997	Total
MTH1674–BUS CALC I	25	29	69	123
CIS1003–INTRO	45	32	39	116
ACC1623–FINANCE	23	17	74	114
ACC1633–PRIN	23	10	81	114
BIO1673–GENERAL	54	20	37	111
CHM2624–ORGANIC II	34	24	52	110
BIO1603–LIFE ON EARTH	22	14	69	105
CHM2614–ORGANIC I	38	28	36	102
BIO2714–ANATOMY	32	26	42	100
PHL1613–INTRO	52	18	29	99
SOC1613–INTRO	40	26	30	96
CIS2003–C++	27	18	51	96
CIS1033–PASCAL	31	25	39	95
CSC1003–INTRO	39	20	34	93
MTH1643–BUS & ECON	34	22	36	92
MTH2164–DIFF EQUATIONS	33	14	44	91
BIO2724–HUMAN PHYSIOLOGY	22	11	58	91
BIO1613–LIVING PLANET	22	7	58	87
MTH1854–CALC I	29	26	31	86
MTH1563–STAT	22	14	48	84
ACC2013–STATISTICS	13	7	54	74
MTH1864–CALC II	28	18	22	68
MTH1523–MATH I	11	10	44	65

### Patterns of Co-Enrolled SWT Students

The 4,612 students who took courses at ACC and SWT at some point during the academic year were dispersed among the campuses. Northridge, Riverside, and Rio Grande each had about one-fifth of the enrollments, while the Pinnacle and Open Campus each had about a tenth. More SWT students were enrolled in the Fall and Spring terms than in the Summer. (See Table 6)

Table 6

## Course Enrollment of Co-Enrolled ACC and SWT Students by Campus

Academic Year 1996 - 1997

Term	CYP	ERG	NRG	PIN	RGC	RVS	DIS	OP	TOT
Fall 1996	94	35	446	227	352	402	115	175	1,846
Spring 1997	88	18	284	162	270	306	92	195	1,415
Summer 1997	41	4	328	94	304	273	130	177	1,351
<b>Total</b>	223	57	1,058	483	926	981	337	547	4,612
<b>Percent</b>	4.8%	1.2%	22.9%	10.5%	20.1%	21.3%	7.3%	11.9%	

Source: ACC Database

SWT students were not as focused as UT students in their course-taking. MTH1743–College Algebra, PHI1613–Introduction to Philosophy, and GOV2623–Texas Government had over 150 enrollments each. Other courses with over 100 enrollments included ECO1623, ENG1623, GOV2613, MTH1643, SPN1615.

Moreover, SWT students enrolled in some specific courses not taken by significant numbers of UT students. These included MTH1643–Bus and Econ, ACC1233 and ACC1623, BIO1814–Botany, and Developmental Mathematics.

Enrollment in distance learning courses was not significant for SWT students.

Table 7

## High Enrollment Courses of Co-Enrolled ACC and SWT Students by Course

Academic Year 1996 - 1997

Course	Fall 1996	Spring 1997	Summer 1997	Total
MTH1743–ALGEBRA	65	54	86	205
HKN1601 (All sections)	48	63	59	170
PHL1613–INTRO	75	51	40	166
GOV2613–U.S.	59	41	54	154
GOV2623–TEXAS	71	35	43	149
SPE1603–INTRO SPEECH	31	50	67	148
HIS1623–U.S. II	49	41	51	141
SPN1615–SPANISH I	52	45	30	127
ECO1623–MICRO	41	31	54	126
ENG1623–COMP II	46	41	38	125

Course	Fall 1996	Spring 1997	Summer 1997	Total
MTH1643-BUS & ECON	48	24	30	102
CHM1634-CHEM I	32	34	24	90
SPN1625-SPANISH II	22	40	26	88
ACC1623-FINANCE	34	22	30	86
HIS1613-U.S. I	24	29	31	84
ECO1633-MACRO	27	24	32	83
PHY1614-GEN PHYSICS I	18	28	24	70
ACC1633-PRIN	27	15	27	69
CHM1644-CHEM II	16	14	36	66
BIO1673-GENERAL	31	18	16	65
PSY1613-INTRO	26	19	14	59
CIS1003-INTRO	26	25	7	58
SOC1613-INTRO	27	20	9	56
CSC1003-INTRO	26	12	16	54
ENG2713-LIT I	22	7	23	52
ENG1613-COMP I	17	23	11	51
MTH1674-BUS CALC I	16	10	20	46
PHY1624-GEN PHYSICS II	22	14	10	46
BIO1654-CELL/MOLECULAR	16	14	16	46
DVM-INTERMED ALGEBRA	14	17	8	39
BIO1714-ANATOMY	20	11	7	38
MTH1563-STAT	14	15	8	37
BIO1824-ZOOLOGY	20	10	7	37
SPN3623-SPANISH IV	11	7	18	36
SPN2613-SPANISH III	8	5	21	34
ENG2653-WORLD LIT	18	4	9	31
DVM-ELEM ALGEBRA	14	9	6	29
BIO1814-BOTANY	22	6		28
CIS1023-VISUAL BASIC	12	8	3	23
CIS2003-C++	10	6	4	20



## Time of Day

Course enrollments from both UT and SWT students suggest that students take courses at all times of the day. Students are somewhat more likely to enroll in the morning than afternoon or evening, but about one-third take courses that ran between 12:00 and 4:00 p.m. Contrary to previous assumptions, less than half of these students took morning courses.

Table 8

### UT Course Enrollments by Time of Day

Fall 1996

Time of Day	CYP	ERG	NRG	PIN	RGC	RVS	TOT	%
Morning (7 a.m. - Noon)	66	344	338	66	644	262	1,720	42.5%
Afternoon (Noon - 4 p.m.)	54	18	314	87	643	242	1,358	33.6%
Evening (4 p.m. - 10 p.m.)	37	18	219	49	497	146	966	23.9%

Source: ACC Database

Table 9

### SWT Course Enrollments by Time of Day

Fall 1996

Time of Day	CYP	ERG	NRG	PIN	RGC	RVS	TOT	%
Morning (7 a.m. - Noon)	32	7	181	95	135	165	615	39.6%
Afternoon (Noon - 4 p.m.)	35	7	152	77	121	141	533	34.3%
Evening (4 p.m. - 10 p.m.)	26	21	112	55	96	96	406	26.1%

Source: ACC Database

In the Fall 1997, 35.7% of courses offered were in the morning, 31.0% were in the afternoon, and 33.3% were in the evening hours. While slightly more than one-third of class sections were offered in the morning, Fall 1996 morning enrollment of UT students was 42.5% and for SWT students was 39.6%. When morning and afternoon courses are considered together, two-thirds of courses (66.7%) were offered during these times. However, 76.1% of UT students and 73.9% of SWT students enrolled during these times.

There are two possible explanations for these observations. It is possible that UT and SWT students may be more likely to enroll in the morning and afternoon for unrelated personal reasons. If this is in fact the case, ACC could respond by increasing the number of transfer courses offered during these times and reducing the evening offerings of transfer courses.

Alternatively, if not enough transfer courses are being offered in the evening hours, UT and SWT students would be discouraged from enrolling during those times. This would force co-enrolled students to enroll for morning and afternoon courses that are transferable, even if their natural

preference would be to enroll for evening classes. This problem could be solved through more even distribution of the course times for transfer courses commonly enrolled in by UT and SWT students, such as Government and History. ACC should conduct further analysis to determine which of these presumptions is most accurate and use the results of that investigation to guide future course time decisions.

### **Summary Observations:**

- UT students take courses primarily in the summer. ACC should determine if this is a policy issue (written or *de facto*) at UT.
- SWT students take fewer courses in the summer. Some of these students attend classes at the San Marcos site, where summer courses offerings are limited. An analysis of possible additional offerings at this site may increase the number of SWT students attending in the summer. This could be accomplished by surveying fall and spring students to determine what other courses they might take.
- High numbers of enrollments in distance learning courses may be the result of closed high demand courses. Efforts should be made to ensure that sections of high demand courses are offered at appropriate times and locations for these students.
- Taskforces should conduct periodic reviews their course content and ensure that the curriculum meets the transfer requirements of UT and SWT.
- Enrollments in specific courses, such as Government and History, probably reflect different transfer policies. Additionally, recent legislation regarding the core curriculum for Texas universities will impact transferability of courses. ACC should continue to maintain communications with both universities to ensure course offerings in transferable courses.
- The impact of the legislatively mandated 42-hour transfer curriculum is not known. The potential impact should be analyzed as ACC implements this requirement. It may be possible to expand the number of courses that will easily transfer. These courses need to be identified and scheduled at times UT and SWT students can take them.
- While somewhat more students enroll in courses that meet in the morning than in the afternoon or evening, UT and SWT students do take classes at all times of day. ACC should conduct further analysis to establish the reasons for this and should work to ensure that appropriate numbers of transfer classes are being offered when UT and SWT students are most likely to enroll.

## Attachment A

## High Enrollment Courses of Co-Enrolled ACC and UT Students by Discipline Sorted by Course Title

Academic Year 1996 - 1997

Course	Fall 1996	Spring 1997	Summer 1997	Total
ACC1623-FINANCE	23	17	74	114
ACC1633-PRIN	23	10	81	114
ACC2013-STATISTICS	13	7	54	74
BIO1603-LIFE ON EARTH	22	14	69	105
BIO1613-LIVING PLANET	22	7	58	87
BIO1654-CELL/MOLECULAR	47	40	52	139
BIO1673-GENERAL	54	20	37	111
BIO2714-ANATOMY	32	26	42	100
BIO2724-HUMAN PHYSIOLOGY	22	11	58	91
CHM1634-CHEM I	70	36	68	174
CHM1644-CHEM II	65	50	90	205
CHM2614-ORGANIC I	38	28	36	102
CHM2624-ORGANIC II	34	24	52	110
CIS1003-INTRO	45	32	39	116
CIS1033-PASCAL	31	25	39	95
CIS2003-C++	27	18	51	96
CSC1003-INTRO	39	20	34	93
ECO1623-MICRO	53	29	106	188
ECO1633-MACRO	44	27	80	151
ENG1613-COMP I	49	46	174	269
ENG1623-COMP II	68	51	152	271
ENG2713-LIT I	66	38	128	232
GOV2613-U.S.	177	133	748	1058
GOV2623-TEXAS	215	158	861	1234
HIS1613-U.S. I	154	108	673	935
HIS1623-U.S. II	149	114	776	1039
HKN1601 (All sections)	101	68	71	240

Course	Fall 1996	Spring 1997	Summer 1997	Total
MTH1513–SPIRIT&USE	87	48	91	226
MTH1523–MATH I	11	10	44	65
MTH1563–STAT	22	14	48	84
MTH1643–BUS & ECON	34	22	36	92
MTH1674–BUS CALC I	25	29	69	123
MTH1684–BUS CALC II	22	28	123	173
MTH1743–ALGEBRA	98	65	46	209
MTH1854-CALC I	29	26	31	86
MTH1864-CALC II	28	18	22	68
MTH2164–DIFF EQUATIONS	33	14	44	91
PHL1613–INTRO	52	18	29	99
PHY1614–GEN PHYSICS I	50	36	78	164
PHY1624–GEN PHYSICS II	42	32	126	200
PHY2614–ENGR PHYSICS I	56	36	100	192
PHY2624–ENGR PHYSICS II	64	42	186	292
PSY1613–INTRO	77	40	57	174
SOC1613–INTRO	40	26	30	96
SPN1615–SPANISH I	118	57	135	310
SPN1625–SPANISH II	78	93	176	347
SPN2613–SPANISH III	65	56	302	423
SPN3623–SPANISH IV	49	64	305	418

Source: A.C.C. Database

## Attachment B

## High Enrollment Courses of Co-Enrolled ACC and SWT Students by Discipline Sorted by Course Title

Academic Year 1996 - 1997

Course	Fall 1996	Spring 1997	Summer 1997	Total
ACC1623-FINANCE	34	22	30	86
ACC1633-PRIN	27	15	27	69
BIO1654-CELL/MOLECULAR	16	14	16	46
BIO1673-GENERAL	31	18	16	65
BIO1714-ANATOMY	20	11	7	38
BIO1814-BOTANY	22	6		28
BIO1824-ZOOLOGY	20	10	7	37
CHM1634-CHEM I	32	34	24	90
CHM1644-CHEM II	16	14	36	66
CIS1003-INTRO	26	25	7	58
CIS1023-VISUAL BASIC	12	8	3	23
CIS2003-C++	10	6	4	20
CSC1003-INTRO	26	12	16	54
DVM-ELEM ALGEBRA	14	9	6	29
DVM-INTERMED ALGEBRA	14	17	8	39
ECO1623-MICRO	41	31	54	126
ECO1633-MACRO	27	24	32	83
ENG1613-COMP I	17	23	11	51
ENG1623-COMP II	46	41	38	125
ENG2653-WORLD LIT	18	4	9	31
ENG2713-LIT I	22	7	23	52
GOV2613-U.S.	59	41	54	154
GOV2623-TEXAS	71	35	43	149
HIS1613-U.S. I	24	29	31	84
HIS1623-U.S. II	49	41	51	141
HKN1601 (All Sections)	48	63	59	170

Course	Fall 1996	Spring 1997	Summer 1997	Total
MTH1563-STAT	14	15	8	37
MTH1643-BUS & ECON	48	24	30	102
MTH1674-BUS CALC I	16	10	20	46
MTH1743-ALGEBRA	65	54	86	205
PHL1613-INTRO	75	51	40	166
PHY1614-GEN PHYSICS I	18	28	24	70
PHY1624-GEN PHYSICS II	22	14	10	46
PSY1613-INTRO	26	19	14	59
SOC1613-INTRO	27	20	9	56
SPE1603-INTRO SPEECH	31	50	67	148
SPN1615-SPANISH I	52	45	30	127
SPN1625-SPANISH II	22	40	26	88
SPN2613-SPANISH III	8	5	21	34
SPN3623-SPANISH IV	11	7	18	36

Source: A.C.C. Database

Attachment C

Demographic Analysis of Co-and Concurrently Enrolled Students

Attending 1996 - 1997

	<b>Co-Enrolled Students</b>		<b>Concurrent Students</b>	
	<b>UT</b>	<b>SWT</b>	<b>UT</b>	<b>SWT</b>
Average Age (years)	22.5	24.9	24.5	27.1
Male (%)	44.9	38.5	38.4	34.9
Female (%)	55.1	61.5	61.6	65.1
White (%)	68.6	76.0	73.4	77.3
Black (%)	3.0	3.9	3.4	4.3
Hispanic (%)	12.8	15.1	13.1	13.8
Asian (%)	11.9	3.5	8.2	2.2
American Indian (%)	0.5	0.6	0.0	1.0
International (%)	3.2	0.8	1.8	1.4

Source: A.C.C. Database.

Attachment D

Semester Credit Hours Taken by Co-and Concurrently Enrolled Students

Attending 1996-1997

	<b>Co-Enrolled Students</b>		<b>Concurrent Students</b>	
	<b>UT</b>	<b>SWT</b>	<b>UT</b>	<b>SWT</b>
Hours Attempted	19.5	26.6	26.3	29.8
Hours Earned	19.4	26.0	26.1	29.1

Source: ACC Database.

Note: Reflects all courses ever taken through Spring 1998.

Attachment E

Degrees Earned by Co-and Concurrently Enrolled Students

Attending 1996-1997

	Co-Enrolled Students		Concurrent Students	
	UT	SWT	UT	SWT
A.A.	18	9	2	
A.S.	25	9	6	1
A.A.S.	8	9	1	2
Certificate		2		

Source: ACC Database.

Note: Reflects all degrees earned through Spring 1998