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Teaching and Academic Support

Data Sources:

The data used for the teaching and academic support section of this book come from:

Academic Development: Academic Development

<u>Library Collections and Utilization:</u> University Libraries

Media Technology Services: Media Technology Services

Pittsburgh Council on Higher Education (PCHE) and Pittsburgh Filmmakers: Units both taught by PCHE schools and taken by PCHE

students are collected through the Student Information System (SIS)

Intercultural Communication Center: Intercultural Communication Center

<u>Units Taught:</u> Student Information System (SIS)

<u>Video Collection Viewing Area:</u> University Libraries

Definitions:

<u>PCHE:</u> Pittsburgh Council on Higher Education - a consortium of the ten accredited colleges and universities in Allegheny County, Pennsylvania. As part of the consortium agreement, full-time graduate or undergraduate students at each PCHE school can cross-register at any other PCHE school at no additional expense to the student.

<u>Pittsburgh Filmmakers:</u> Carnegie Mellon students are eligible to take courses at Pittsburgh Filmmakers at no additional expense to the student.

Units Taught:

Academic Year: Consists of the fall and spring semesters of a given academic year

Data Source: All units taught are taken from the Student Information System (SIS) at the completion of each semester

Level: Based on the level of the student taking each course

<u>Other:</u> Includes units taught to special/non-degree students and students from other colleges attending Carnegie Mellon through the Pittsburgh Council of Higher Education (PCHE)

<u>Units:</u> A student earns a specified number of units for each course taken at the university. Three (3) units are the equivalent of one (1) credit hour. The total units taught by a department are calculated by summing the units taken by each student for each course taught by the department.

Academic Development Academic Years 2004-05 to 2008-09

Academic Development's mission is to assist students in developing the skills, strategies, and behaviors needed to perform as confident, independent, and active learners. Their services are designed to help both students who are having academic difficulties and those who just want to improve their performance. Currently four programs are available to assist students: Supplemental Instruction, Peer Tutoring, Academic Counseling, and EXCEL Collaborative Learning Groups.

Supplemental Instruction

The Supplemental Instruction (SI) Program offers review sessions for traditionally difficult courses. Sessions are offered two times each week for targeted courses and are conducted by students who have previously done well in the course. Designed to supplement, not replace, class lectures and TA recitations, the sessions are interactive and student-friendly. Attendance is voluntary.

Supplemental Instruction

	2004-05	2005-06	2006-07	2007-08	2008-09
Unique Courses Supported with SI	18	17	18	13	12
Total Course Enrollment	3,006	2,746	3,185	1,908	1,404
Number of SI Sessions	477	564	586	485	460
Unique Student SI Attendance	1,875	1,599	1,802	1,273	967
Cumulative Student SI Attendance ¹	6,935	7,381	6,265	5,529	4,070
Total Student Contact Hours	-	-	11,450	9,201	7,117
Percent of Students Attending SI	62%	58%	57%	67%	69%

Walk-in Peer Tutoring

Walk-in Peer Tutoring offers subject-specific tutoring geared primarily (but not exclusively) towards large introductory level courses. During the fall and spring semesters, tutoring is conducted on a walk-in basis Sunday through Thursday evenings and on selected afternoons.

Standing Appointment Tutoring

Standing appointments are available upon student request for various university courses. After completing a tutor request form, students meet weekly with a peer tutor to discuss and review course content.

	2004-05	2005-06	2006-07 ²	2007-08	2008-09
Walk-in Tutoring Contacts ¹	2,768	3,887	2,893	2,869	2,917
Standing Appointment Contact Hours	3,398	3,725	3,365	2,274	2,879

Academic Counseling

Academic Counseling provides both group and individual study skills instruction. Group workshops are available several times each semester and cover topics such as exam preparation, time management, and citing sources. Students interested in individual appointments are first given a Study Skills Assessment. Students who require additional help can meet individually with learning specialists. Workshops are open to all students.

	2004-05	2005-06	2006-07	2007-08	2008-09
Number of Study Skills Assessments	69	62	76	58	41
Number of Unique Students Meeting	61	72	73	54	53
Individually with Learning Specialists					
Total Individual Appointments	205	244	253	269	361
Total Workshop Attendance	384	884	315	266	358
Total Workshop Count	27	35	28	16	11
Total Contacts	658	1,200	644	593	772

EXCEL Collaborative Learning Groups

Formal study groups were piloted in Spring 2007. The groups are facilitated by a group leader, limited to six students, and are focused on student interaction and cooperative learning.

	2007-08	2008-09
Number of Courses Supported	12	12
Total Course Enrollment	1,363	1,650
Number of Sessions	194	142
Number of Students Attending	102	66
Cumulative Student Contacts ¹	581	378

^{1.} Students are counted each time they attend.

^{2.} The AY 2006-07 decrease in walk-in contacts is a result of changes in the structure of services due to budget constraints.

Intercultural Communication Center Academic Years 2004-05 to 2008-09

The Intercultural Communication Center (ICC) provides language support services to all nonnative English speakers at Carnegie Mellon (international students as well as students who attended all or part of high school or college in the United States). Since the ICC's inception in 1985, this support has become increasingly crucial as the number of international students at the university has grown from 350 students to 3,540 in Fall 2009.

The Mission of the ICC is to:

 Provide support to help nonnative English speakers, both undergraduates and graduate, succeed in their academic programs:

ICC offers over 33 classes, workshops, and seminars as well as individual tutoring throughout the academic year and summer. Students can also have a placement interview for individual feedback on language skills and recommended ICC support.

 Help international teaching assistants and faculty develop the skills needed to provide effective instruction at Carnegie Mellon:

ICC provides training for nonnative English speakers preparing for teaching assistant jobs and also assesses speaking fluency before nonnative English speakers can work as TAs (required by Carnegie Mellon University policy and Pennsylvania law). If requested, ICC helps international faculty develop language skills and/or culturally appropriate teaching skills.

Help both the university and departments identify and respond to the changing needs of nonnative English speakers and international students:

ICC offers pre-admission phone interviews to evaluate speaking fluency of international applicants. ICC also runs workshops for domestic faculty, students, and staff to help them learn to communicate more effectively with nonnative English speakers.

Population Served by the ICC

	2004-05	2005-06	2006-07	2007-08	2008-09
Undergraduate	51	58	97	92	94
Graduate	616	604	604	667	739
Other (staff, faculty, and visiting researchers)	37	33	45	44	33

Assessment and Instructional Hours

	2004-05	2005-06	2006-07	2007-08	2008-09
Assessment Hours	749	779	818	860	867
Instructional Hours	7,807	8,272	9,556	9,747	11,470

Library Collections and Utilization Fiscal Years 2005 to 2009

University Libraries consists of:

- Engineering and Science Library Subjects include Computer Science, Engineering, Mathematics, Physics, Science, and Technology
- Hunt Library Subjects include Arts, Business, Humanities, and Social Sciences. Departments and Units include Acquistions;
 Archives/Digital Library Initiatives; Arts and Special Collections, including Architecture Archives, Arts Reference, Audio Collection,
 Fine and Rare Book Room, and Visual Resources Collection; Cataloging; Dean's Office/Business Services; Hunt Library
 Reference; Library Information Technology, including Operations and R&D; Access Services, including Circulation and Reserves,
 Interlibrary Loan, Periodicals, and Video Collection. Also located in Hunt Library: Computing Services Cluster; Hunt Institute for
 Botanical Documentation, including Hunt Botanical Library and Gallery; and Osher Lifelong Learning Institute
- Mellon Institute Library Subjects: Chemistry and Biology
- Off-Site Storage Older, infrequently-used library materials are available by request (24-hour turnaround)
- Posner Center Featuring Posner Memorial Collection of rare books and artifacts; and collection exhibits
- Qatar Library Subjects: Business and Computer Science
- Other Carnegie Mellon Libraries: Hunt Botanical Library and Gallery, Research Library, Botany and Art; Engineering Institute
 Library, Research Library: Security, Software, and Technology; and Universal Digital Library, Digitized media in all genres and
 subject areas, such as Books, Collections, Images, Journals, Multimedia, Music, etc.

Library Collections	2005	2006	2007	2008	2009
Total Print Volumes (Books, Bound Journals, etc.)	1,066,057	1,084,013	1,098,181	1,112,393	1,129,808
Current Subscriptions:	2,236	2,075	1,969	1,955	1,846
Periodicals, Newspapers, Government Documents					
Electronic Subscriptions	15,429	26,694	53,728	48,019	73,475
Microforms:	995,293	1,023,146	1,050,602	1,074,202	1,101,685
Books, Serial Titles, Government Documents					
Graphic Materials:	195,777	197,233	200,635	201,643	152,447
Unmounted Pictures and Slides					
Audio Materials:	26,708	26,960	27,098	27,455	27,628
Cassettes, Phonograph Records, CDs, Tapes					
Video Materials	9,294	9,890	10,297	10,499	11,533
Music Scores	20,170	20,169	20,168	20,069	19,917
Maps	161	161	161	161	161
Library Material Duplication					
Photocopies Made on Public Copiers	512,007	335,488	220,391	205,510	154,253
Microform Copies and Scans Made in Libraries ¹	11,183	17,760	36,848	32,289	22,988
Printing: Pages Printed from Public Laser Printers	2,488,931	1,056,691	1,375,431	2,068,170	2,438,998
Number of Visits to the Libraries					
Engineering and Science Library	145,875	146,144	145,901	167,614	172,320
Hunt Library	441,689	408,329	500,091	612,686	621,471
Posner Center	1,910	1,759	1,324	1,173	1,787
Virtual Visits	1,212,987	1,665,888	2,001,165	1,998,101	1,408,285
Total Visits	1,802,461	2,222,120	2,648,481	2,779,574	2,203,863
Seating					
Engineering and Science Library	153	151	155	155	155
Hunt Library	670	695	652	660	660
Mellon Institute Library	122	122	122	122	122
Total Seating	945	968	929	937	937

^{1.} Microform scanning capability began in July 2006.

	2005	2006	2007	2008	2009
Circulation of Library Materials	158,986	130,236	127,764	101,762	128,147
Books Used in Libraries	76,413	52,746	41,583	39,113	33,526
Library Instruction					
Number of classes	146	136	144	156	165
Number of participants	2,464	2,640	3,514	2,795	3,377
Reference Questions Answered	12,745	11,684	15,751	13,814	11,138
Directional Help Given	10,406	12,816	17,975	8,616	8,256

Electronic Information Resources and Access

The University Libraries provide access to a variety of digital information, including the library catalog, other local databases, and a growing number of commercial databases that are licensed for use by the university community. Access methods continue to change as the delivery of electronic information evolves. Currently, Internet access predominates.

The web-based library catalog (Cameo) contains records of items owned by the libraries, as well as items on order or being cataloged for library collections. Cameo is part of a system that integrates acquisitions and cataloging functions with circulation, reserve, and user service functions. Users can see if items are available or checked out when they use the library catalog; they can also request services (such as Renew Item or Request Check-out item).

Users may access Cameo from any computer with Internet capability at: http://www.library.cmu.edu

As the digital library environment matures, more full-text documents and images are becoming available. Some vendors who are providing full-text documents are no longer reporting numbers of searches.

Searches:	2005	2006	2007	2008	2009
Performed using Cameo (Library Catalog) ¹	617,651	574,415	573,607	543,141	417,231
Performed to Licensed and Local Web Resources	887,750	736,747	428,699	564,508	595,000
Total Database Searches	1,505,401	1,311,162	1,002,306	1,107,649	1,012,231
Total Full-text Documents Retrieved	911,820	579,350	879,462	1,099,963	3,056,990
Electronic Reserve Usage (Items Viewed)	286,178	89,065	75,457	103,611	36,521
Images Scanned for the Digital Library ²	175,170	148,261	159,423	112,715	38,750
Reference Questions Answered	2005	2006	2007	2008	2009
Digital	2,469	2,393	2,220	2,706	2,938
Traditional	10,276	11,684	13,531	11,108	11,142
Reserve Items Used	2005	2006	2007	2008	2009
Digital	286,178	89,065	75,457	103,611	36,521
Traditional	5,315	5,698	5,716	6,190	2,849
Resource Sharing and Document Delivery	2005	2006	2007	2008	2009
Interlibrary Loan Items Borrowed	20,144	20,020	18,624	18,431	19,132
Items Loaned	5,776	4,616	5,414	4,387	4,361
PALCI (Pennsylvania Academic Library Consortium, I	,	1,010	-,	.,	,,
Items Borrowed	2,157	5,441	2,321	2,557	2,885
Items Loaned	3,532	2,119	6,808	3,192	7,519
Electronic Current Awareness Service					
Individuals using site license subscription	71	72	73	73	74

^{1.} Estimated for FY 2006.

 $^{2.\ \}mbox{FY}\ 2009$ data decreased due to changes in the nature of scanning procedure.

Media Technology Services Fiscal Years 2005 to 2009

Equipment Available for Borrowing¹

	2005	2006	2007	2008	2009
Video/Data Projectors	4	4	4	4	4
VCRs	2	6	4	4	4
Slide Projectors	4	N/A	N/A	N/A	N/A
Sound Systems	4	4	4	4	4
Overhead Projectors	2	6	3	N/A	N/A
Videodisc Players	1	N/A	N/A	N/A	N/A
MiniDV Camcorders	-	8	7	3	3
Audio CD/Flash Recorder	-	-	1	1	1
Clip-on Microphone		35	35	40	56
TOTAL	17	63	58	56	72

Equipment Installed in Classrooms, Lecture Auditoriums, and Teaching Clusters¹

-					
<u> </u>	2005	2006	2007	2008	2009
Overhead Projector	69	51	20	N/A	N/A
Video/Viewing (VCR/DVD)	81	79	N/A	N/A	N/A
Video/Viewing (VCR)	-	-	23	N/A	N/A
Video/Viewing (DVD)	-	-	82	86	94
Video/Viewing (LD)	-	-	2	1	1
Data Viewing (Data Projector)	81	93	92	92	119
Data Viewing (Flat Panel)	-	-	2	2	5
Document Cameras	12	30	60	81	89

^{1.} N/A represents retired technology and " - " represents technology not owned at the time.

Pittsburgh Council on Higher Education (PCHE) and Pittsburgh Filmmakers Academic Year 2008-09

The Pittsburgh Council on Higher Education (PCHE) is a voluntary, multi-purpose consortium of the ten accredited colleges and universities in Allegheny County, Pennsylvania. Founded in 1966, the membership includes Carlow University, Carnegie Mellon University, Chatham University, Community College of Allegheny County, Duquesne University, La Roche College, Pittsburgh Theological Seminary, Point Park University, Robert Morris University, and the University of Pittsburgh. The purpose of PCHE is to provide a means for sharing resources, insights, and information among the member institutions; to engage in joint or cooperative activities and projects; and to offer a common voice on matters that affect all of the member institutions. As part of the consortium agreement, full-time undergraduate and graduate students at each PCHE school can cross-register at any other PCHE school at no additional expense to the student.

Units Taken by Carnegie Mellon Students at PCHE Schools by Student Level

Student's College Affiliation	Undergraduate	Graduate	Total
CFA	204	48	252
CIT	330	144	474
Heinz	0	168	168
H&SS	405	426	831
Interdisciplinary	297	168	465
MCS	273	126	399
SCS	42	123	165
Tepper	36	165	201
TOTAL	1,587	1,368	2,955
PCHE School	Undergraduate	Graduate	Total
Carlow University	24	0	24
Chatham College	90	0	90
Community College Of Allegheny County (CCAC)	30	0	30
Duquesne University	9	9	18
University of Pittsburgh	1,434	1,359	2,793
TOTAL	1,587	1,368	2,955

Units Taught by Carnegie Mellon to PCHE Students

<u>College</u>	Total
CFA	106
CIT	382
Heinz	414
H&SS	843
Interdisciplinary	126
MCS	398
SCS	423
Tepper	135
ROTC	924
TOTAL	3,751

Units Taken by Carnegie Mellon Students at Pittsburgh Filmmakers by Student Level

	Undergraduate	Graduate	Non-degree	Total
Pittsburgh Filmmakers	432	108	27	567

Units Taught by College and Student Level Academic Years 2004-05 to 2008-09

College	Level	2004-05	2005-06	2006-07	2007-08	2008-09
CFA	Undergraduate	85,848	85,229	85,040	86,019	91,473
	Graduate	20,335	19,938	20,871	21,319	21,551
	Special	1,270	1,262	1,281	1,876	1,546
	TOTAL	107,452	106,428	107,192	109,214	114,569
CIT	Undergraduate	69,217	69,843	70,122	71,070	74,661
	Graduate	62,359	62,217	67,399	71,534	86,545
	Special	909	690	843	696	609
	TOTAL	132,485	132,750	138,364	143,300	161,815
Heinz	Undergraduate	1,986	1,410	1,752	1,546	2,698
	Graduate	36,677	39,006	43,682	50,103	87,320
	Special	354	282	288	312	594
	TOTAL	39,017	40,698	45,722	51,961	90,612
H&SS	Undergraduate	146,760	145,683	152,908	159,447	160,996
	Graduate	17,115	16,325	15,628	16,278	16,264
	Special	1,248	1,509	1,251	1,455	1,518
	TOTAL	165,123	163,517	169,787	177,180	178,778
Inter-	Undergraduate	14,186	11,245	11,762	11,403	12,197
disciplinary	Graduate	41,506	42,272	41,776	43,508	12,546
шоогрина. у	Special	111	105	198	129	168
	TOTAL	55,803	53,622	53,736	55,040	24,911
MCS	Undergraduate	97,876	100,503	103,657	105,368	105,036
	Graduate	18,140	17,777	18,332	19,385	19,971
	Special	632	536	556	733	1,004
	TOTAL	116,648	118,816	122,545	125,486	126,011
scs	Undergraduate	41,493	42,027	45,247	48,824	51,638
	Graduate	56,995	58,109	62,206	63,738	69,256
	Special	1,178	1,037	873	1,113	949
	TOTAL	99,666	101,173	108,326	113,675	121,843
Tepper	Undergraduate	37,309	38,145	36,474	38,244	41,778
	Graduate	75,102	70,376	69,599	74,146	81,655
	Special	333	378	462	330	399
	TOTAL	112,744	108,899	106,535	112,720	123,832
Other	Undergraduate	6,749	7,141	6,371	5,956	5,629
	Graduate	2,084	2,245	2,144	2,709	2,459
	Special	1,068	1,089	873	1,020	978
	TOTAL	9,901	10,475	9,388	9,685	9,066
GRAND	Undergraduate	501,423	501,226	513,333	527,877	546,105
TOTAL	Graduate	330,313	328,264	341,637	362,720	397,567
	Special	7,103	6,888	6,625	7,664	7,765
	TOTAL	838,839	836,377	861,595	898,261	951,437

Units Taught by Department and Student Level Fall Semester 2008 and Spring Semester 2009

		Fall 2008			Spring 2009				
College	Department	UG	Grad	Special	Total	UG	Grad	Special	Total
CFA	Architecture	12,138	1,487	9	13,634	10,815	1,770	27	12,612
	Art	6,769	720	30	7,519	6,506	879	29	7,414
	Design	6,726	2,532	15	9,273	6,276	1,718	42	8,036
	Drama	9,948	2,821 78	19	12,788	10,246	3,076	19	13,341
	Interdisciplinary Music	1,359 9,710	3,283	9 690	1,446 13,683	1,538 9,406	93 3,096	9 648	1,640 13,150
	Center for the Arts in Society	9,710	0,203	0	0	36	0,090	0	36
	TOTAL	46,650	10,920	772	58,342	44,823	10,631	774	56,227
CIT	Biomedical Eng	2,513	1,452	0	3,965	2,595	1,579	21	4,195
	Chemical Eng	5,242	4,960	49	10,251	4,665	4,887	39	9,591
	Civil & Environmental Eng	3,770	3,950	93	7,813	3,066	3,305	78	6,449
	Electrical & Computer Eng	10,609	15,142	48	25,799	9,954	14,421	48	24,423
	Eng & Public Policy	975	2,894	0	3,869	3,129	3,487	60	6,676
	Information Networking Institute	1 200	3,224	0	3,224	0	3,494	0	3,494
	Interdisciplinary Materials Science & Eng	1,299 3,265	201 3,990	0 54	1,500 7,309	1,518 3,270	381 3,640	0 57	1,899 6,967
	Mechanical Eng	9,539	4,614	27	14,180	9,240	4,207	35	13,482
	Silicon Valley	12	3,450	0	3,462	0,2.0	3,267	0	3,267
	TOTAL	37,224	43,877	271	81,372	37,437	42,668	338	80,443
Heinz	Creative Enterprise Management	55	2,844	18	2,917	195	3,472	30	3,697
	Information Systems Management	588	23,413	78	24,079	534	15,531	48	16,113
	Masters in Public Management	6	3,354	24	3,384	24	3,558	0	3,582
	Medical Management Public Policy & Management	0 648	2,409 15,780	0 288	2,409 16,716	0 648	2,544 14,415	0 108	2,544 15,171
	Public Policy & Management Public Policy & Mgmt, Adelaide	040	0	0	0,710	040	0	0	0
	TOTAL	1,297	47,800	408	49,505	1,401	39,520	186	41,107
H&SS	Center for the Arts in Society	654	0	0	654	1,800	0	0	1,800
	Ctr. for Neural Basis of Cognition	0	60	0	60	0	120	0	120
	Economics	10,416	0	18	10,434	11,763	18	27	11,808
	English	15,168	2,466	63	17,697	12,913	2,265	111	15,289
	History	10,071 3,500	590 12	117 0	10,778 3,512	9,740 2,973	574 0	30 0	10,344 2,973
	Information Systems Program Modern Languages	12,918	633	210	3,512 13,761	9,888	573	162	10,623
	Philosophy	6,483	723	45	7,251	6,651	699	60	7,410
	Psychology	10,338	1,470	72	11,880	8,504	1,178	162	9,844
	Social & Decision Sci	5,566	405	51	6,022	5,552	636	108	6,296
	Statistics	7,955	2,405	195	10,555	8,143	1,437	87	9,667
	TOTAL	83,069	8,764	771	92,604	77,927	7,500	747	86,174
Inter-	CM University-Wide Studies	5,595	93	27	5,715	1,808	51	9	1,868
disciplinary	Computational Biology	0	435	42	477	36	528 5.004	57	621
	Entertainment Technology International Education	81 936	6,225 72	0	6,306 1,008	123 1,188	5,004 0	12 0	5,139 1,188
	StuCo (Student Led Courses)	936	42	3	981	1,494	96	18	1,608
	TOTAL	7,548	6,867	72	14,487	4,649	5,679	96	10,424
MCS	Biological Sci	6,981	2,681	99	9,761	7,343	2,705	141	10,189
	Chemistry	11,582	3,157	67	14,806	9,932	2,713	114	12,759
	Interdisciplinary	99	204	0	303	234	216	0	450
	Mathematical Sci	25,029	1,924	236	27,189	20,281	1,796	154	22,231
	Physics	12,313	2,238	72	14,623	11,242	2,337	121	13,700
	TOTAL	56,004	10,204	474	66,682	49,032	9,767	530	59,329
SCS	Computer Science Human-Computer Interaction	23,008 788	10,119 3,792	169 69	33,296 4,649	23,807 1,143	8,933 3,972	114 30	32,854 5,145
	Institute of Software Research Int'l	69	3,069	15	3,153	126	3,039	12	3,177
	Language Technologies Institute	114	4,999	48	5,161	312	4,596	42	4,950
	Machine Learning	84	3,062	120	3,266	216	2,529	156	2,901
	Robotics	732	5,681	72	6,485	1,143	5,401	84	6,628
	Software Eng	72	5,142	12	5,226	24	4,922	6	4,952
Tomeron	TOTAL	24,867	35,864	505	61,236	26,771	33,392	444	60,607
Tepper	Business Adm School of Business	19,854 168	288 44,841	117 90	20,259 45,099	21,708 48	144 36,382	90 102	21,942 36,532
	TOTAL	20,022	45,129	207	65,358	21,756	36,526	192	58,474
Other		2,536	1,139	486	4,161	3,093	1,320	492	4,905
GRAND TOTA	L		210,564	3,966			187,003	3,799	457,690