



GRADUATE STUDIES

ANNUAL REPORT
2010-2011

TENNESSEE TECHNOLOGICAL
UNIVERSITY

Summary

During the 2010-2011 academic year Graduate Admissions and Graduate Studies:

- ✔ Processed 2,787 applications for admission/readmission
 - ✔ Admitted 2,105 students
 - ✔ Approved 57 theses and 21 dissertations
 - ✔ Conferred 664 degrees:
 - 505 Master's
 - 138 Specialist in Education
 - 21 Doctor of Philosophy
- ✔ Increased for 2010 Fall Semester:
 - Applications:
 - International Students, ↑19%
 - Enrollment:
 - Total, ↑9%
 - Part-time, ↑30.6%
 - African American students, ↑27.95%
 - Tennessee Residents, ↑9.27%
 - Out-of-State Residents, ↑48.57%
 - College of Engineering, ↑0.7% *
 - Nondegree seeking, ↑266.21%
 - RODP enrollment, ↑2.3%

2010-2011 Historical Data

Academic Terms

Summer Semester 2010	
June 1	Registration
August 7	No Commencement
Fall Semester 2010	
August 26	Registration
December 18	Commencement
Spring Semester 2011	
January 11	Registration
May 7	Commencement

Fees and Expenses

Application Fee	\$ 25.00 American Applicants
	\$ 30.00 International Applicants
Graduate Tuition (<i>Payable by nonresidents of Tennessee</i>)	
	\$574.00 per hour*
Graduate Maintenance Fee** (<i>Payable by all students</i>)	
	\$388.00 per hour*
Thesis & Dissertation Binding Fees	\$10.00 per copy
Postage	\$5.00 to U.S. addresses
	\$6.00 to non-U.S. addresses

*Summer Semester Fees will be charged at the per-hour rates with no maximum amount.

**Graduate fees are comprised of the following fees: maintenance, general access, debt service, and student government.

Mission of the Graduate School

The Mission of the Graduate School is to promote, coordinate, enhance the quality of, and serve as an advocate for graduate education programs at Tennessee Technological University.

Core Value: Academic excellence through critical thinking skills, lifelong learning, and promotion of diversity.

Goals

- Enhance the intellectual community of scholars among graduate students and faculty.
- Provide quality control for all graduate education programs.
- Promote the academic excellence of all graduate programs.
- Support and facilitate research, including scholarly and creative activities.

Graduate Faculty—New Full Memberships

A full member of the Graduate Faculty shall have: an earned doctorate or equivalent terminal degree in an appropriate discipline; achieved professorial rank in the discipline relevant to the degree; achieved an appropriate level of scholarship and erudition characterized by honesty, accuracy, critical ability and thoroughness; and demonstrated (by involvement in institutional activities) his or her commitment to the academic community and the University, as well as to his or her students and academic discipline.

Dr. Debbie Barnard, Ph.D.	Assistant Professor of French
Dr. Sherry Gaines, Ph.D., RN	Professor & Director, School of Nursing
Dr. George M. Graham, Ph.D.	Assistant Professor of Manufacturing and Industrial Technology
Dr. Billy Bruce Green, Ph.D.	Professor of Animal Science
Dr. Melanie J. Earles, Ph.D.	Professor of Accounting
Dr. Mark Groundland, Ph.D.	Assistant Professor of Spanish
Dr. Kimberly J. Hanna, Ph.D.	Assistant Professor of Nursing
Dr. Eric L. Harris, Ph.D.	Assistant Professor of Music
Dr. Jeremy C. Hansen, Ph.D.	Assistant Professor of Horn
Dr. Mary E. Howard, Ph.D.	Assistant Professor of Accounting
Dr. Ahmed Kamal, Ph.D.	Associate Professor of Electrical Engineering
Dr. C. Elizabeth Propes, Ph.D.	Assistant Professor of History
Dr. Stephen L. Scott, Ph.D.	Professor of Computer Science
Dr. Robert A. Seay, D.B.A.	Associate Professor of Business
Dr. Kenneth J. Wiant, Ph.D.	Professor of Business

Graduate Faculty—New Associate Memberships

A faculty member who does not qualify for full membership on the Graduate Faculty may be appointed as an Associate Member on the basis of at least a master's degree and demonstrated specific competencies to carry out the departmental special needs for graduate teaching, advisement, or research.

LeEllen Carter, Ed.S.	Instructor of Curriculum and Instruction
Barbara S. Jared, MSN	Assistant Professor of Nursing

Graduate School Administration and Staff

Dr. Francis Otuonye
Associate Vice President for
Research & Graduate Studies

Dr. Robby Sanders
Director of Research &
Graduate Studies

Denise Anderson
Graduation Analyst

K'Cindra Cavin
Graduate Studies & Research
Program Specialist

Sandy Garrison
Executive Secretary

Kathy Reynolds
Secretary III

Vision of the Graduate School

The vision of the Graduate School is to improve human knowledge through teaching, learning, research, and outreach.

THEC Academic Inventory

Tennessee Tech University Graduate Programs

COLLEGE/SCHOOL	MAJOR AREA	CONCENTRATION	DEGREE
Arts & Sciences	Biology	Fisheries Management General	M.S.
	Chemistry		M.S.
	English		M.A.
	Mathematics	Applied Mathematics Mathematics	M.S.
	Environmental Sciences	Biology Chemistry	Ph.D.
Business	Business Administration	Accounting Finance General Management Human Resource Management International Business Management Information Systems Risk Management and Insurance	M.B.A.
Education	Curriculum & Instruction	Curriculum Early Childhood Education Elementary Education Library Science (M.A. only) Reading Secondary Education Special Education	M.A. and Ed.S.
	Educational Psychology & Counselor Education	Agency Counseling Case Management & Supervision (M.A. only) Educational Psychology Mental Health Counseling (M.A. only) School Counseling Pre K-12 School Psychology	M.A. and Ed.S.
	Exceptional Learning	Applied Behavior Analysis Literacy Program Planning & Evaluation	Ph.D.
	Exercise Science, Physical Education and Wellness	Adapted Physical Education Elementary & Middle School Physical Education Lifetime Wellness	M.A.
	Instructional Leadership	Elementary Principal Materials Supervisor Secondary Principal Supervision of Instruction No concentrations for the EDS program.	M.A. and Ed.S.
	Engineering	Chemical Engineering	
Civil Engineering		Environmental Engineering Structural Engineering Transportation Engineering	M.S.
Electrical Engineering		Communications Theory & Electronics Computers & Digital Systems Electromagnetic Fields & Physical Electronics Networks & Control Systems Nuclear Systems Power Systems & Energy Conversion	M.S.
Mechanical Engineering		Acoustics Control Systems Design/Mechanical Systems Materials Thermal Science/Systems	M.S.
Engineering			Ph.D.
Computer Science			M.S.
RODP Programs		Advanced Studies in Teaching and Learning	Childhood Literacy Reading
	Master of Professional Studies	Human Resources Leadership Strategic Leadership Training & Development	M.P.S.
	Nursing	Advanced Practice - Family Nurse Practitioner Nursing Administration Nursing Education Nursing Informatics	M.S.N.

Committee Role and Membership

Policies that govern the organization and administration of the Graduate School are developed by the Graduate School Executive Committee. As authorized by the Administrative Council of the University, the membership of this committee includes a minimum of eight faculty members, representing the four colleges in which graduate programs are offered; a minimum of seven administrators, to include representation from each of the five colleges and one school; a minimum of four student member representatives; and such non-voting advisory members as may be determined by the President of the University. The Dean of Graduate Studies serves as executive officer. All appointments are made by the President. The chairperson of the committee is elected annually.

Committee Actions

The executive committee met seven times. The following actions were taken:

- ❑ Approved a revision in the deadline for submitting items required for graduation.
- ❑ Approved a revision in the policy on external members on graduate advisory committees.
- ❑ Approved course additions, deletions, and prerequisite changes from the Departments of Mathematics, Accounting, Curriculum and Instruction, Civil and Environmental Engineering, Electrical and Computer Engineering, Chemistry, Mechanical Engineering, and History.
- ❑ Approved program revisions and changes in admission requirements from the Department of Curriculum and Instruction, the Exceptional Learning PhD program, the Instructional Leadership M.A. and Ed.S. programs, the Department of Electrical and Computer Engineering, the Department of Counseling and Psychology, the Department of Civil and Environmental Engineering, and the Department of Mathematics.
- ❑ Approved requests of several students regarding one-year extensions and banking of hours in programs of study.
- ❑ Approved request for new STEM Education concentration in the College of Education's Exceptional Learning PhD program.
- ❑ Approved new courses for the MA degree in Curriculum and Instruction with a concentration in Curriculum and a new course in the Department of History.
- ❑ Recommended changes to the proposal from the Department of Curriculum and Instruction for proposed new program in Masters of Arts Degree in Curriculum with a concentration in Rural Education Teaching and Learning.
- ❑ Approved a request from the Department of Electrical and Computer Engineering for a name change in graduate degrees.
- ❑ Approved a request to change the deadline for submission of graduation requirements.
- ❑ Approved the Pearson Test of English (PTE) Academic score be accepted as an alternative to the TOEFL, IELTS, or FLS.
- ❑ Approved a request that the students and their advisory committees be responsible for the quality, grammar and content of the students' theses/dissertations before submission to the Graduate School.

Graduate School Executive Committee

2010-2011 Committee Members

Dr. Pedro Arce
Dr. Pat Bagley
Dr. J. P. Barfield
Mr. Jason Bonoir
Dr. Michael Burduck
Dr. Dan Combs
Ms. Susan Collins
Ms. Amanda Crook
Dr. Susan Elkins
Mr. Jason Emert
Dr. Melissa Geist
Dr. Dennis George
Dr. Sharon Huo
Dr. Stephen Idem
Dr. Steve Isbell, Chairperson
Dr. Pat Jordan
Dr. James Jordan-Wagner
Ms. Carrie Beth Langford
Dr. Roy Loutzenheiser
Dr. Francis Otuonye,
Executive Officer
Dr. Paul Semmes
Dr. Matt Smith
Dr. Barry Stein
Dr. Tom Timmerman
Dr. Ken Wiant

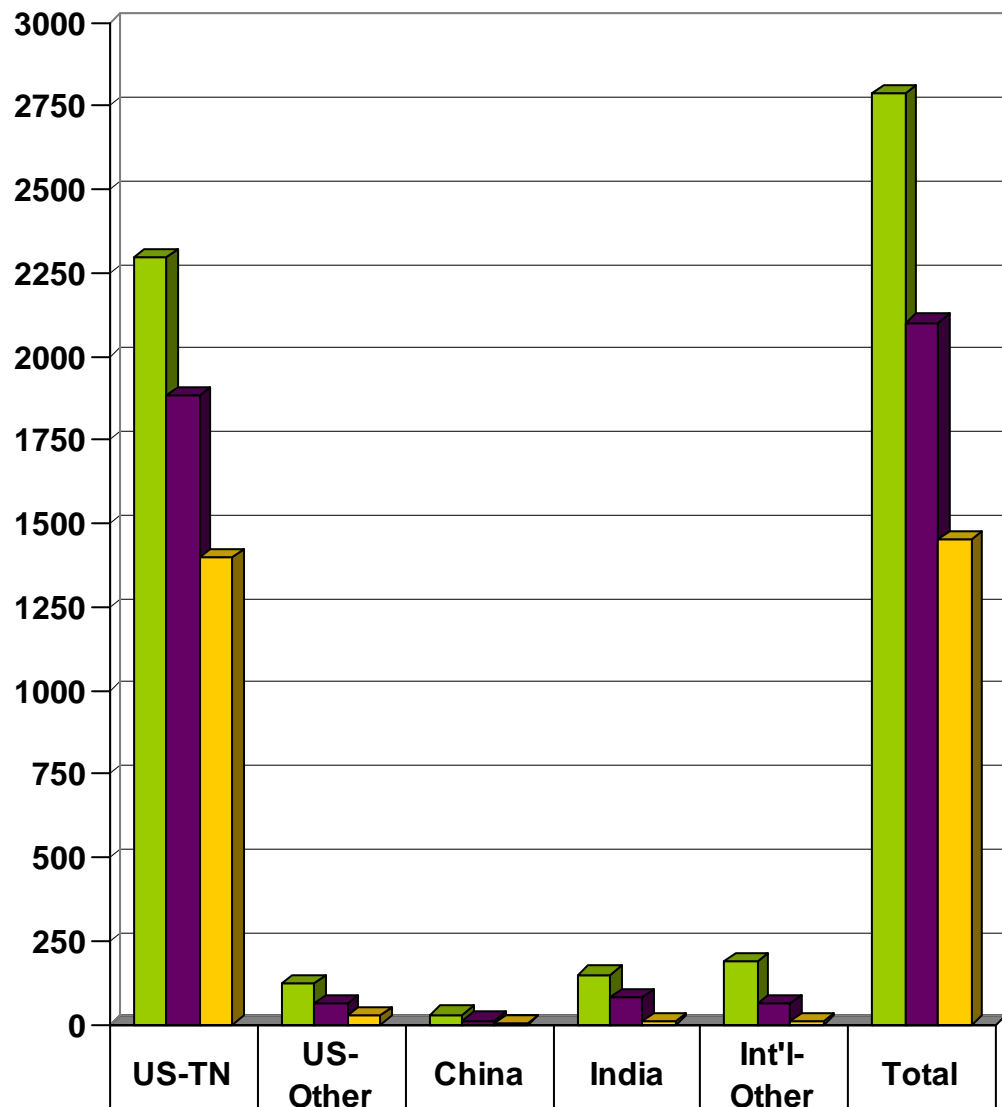
2010-2011 Meeting Dates

July 6, 2010
September 7, 2010
October 5, 2010
November 2, 2010
February 1, 2011
March 1, 2011
April 5, 2011

Graduate Admissions

Interest in graduate study at Tennessee Technological University continues to grow. Tremendous energy is expended in the Graduate School to assist academic departments as efficiently and expeditiously as possible in recruiting, admitting, monitoring, and assuring the completion of graduate degrees for their students.

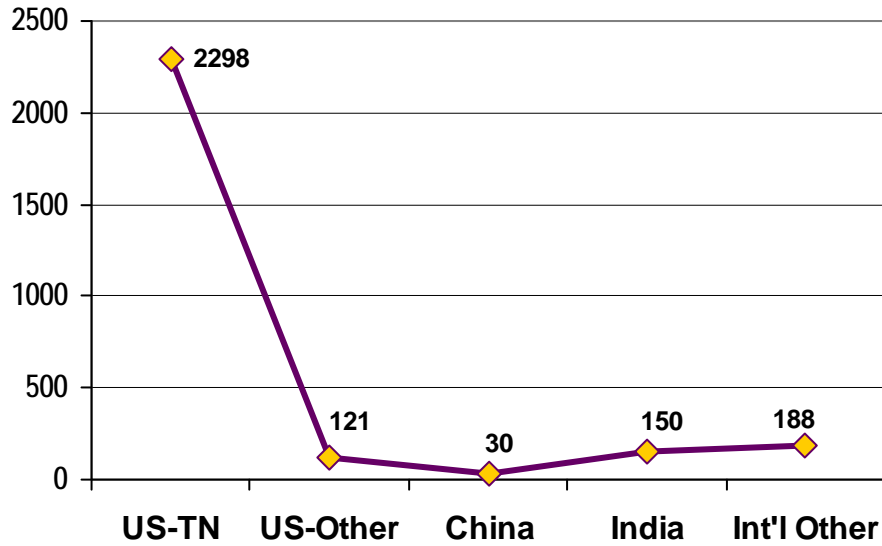
Graduate School Admissions 2010-2011



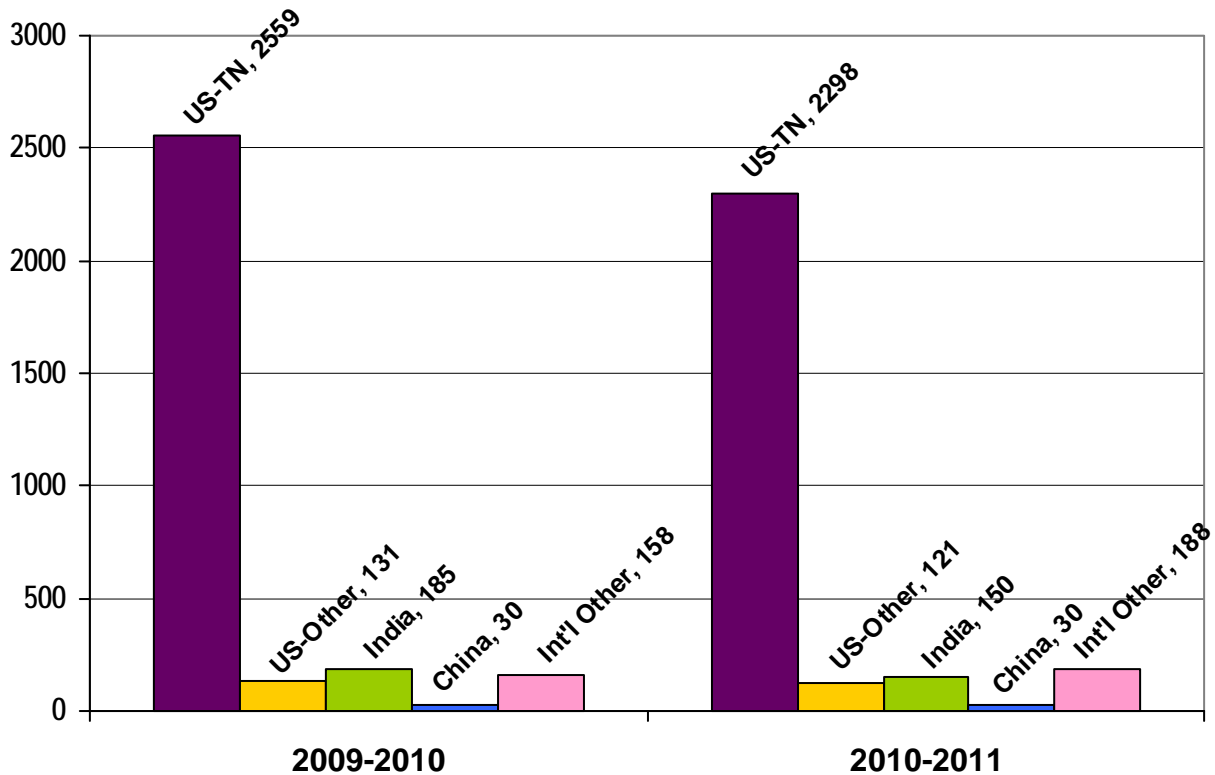
■ Applications Received	2298	121	30	150	188	2787
■ Applicants Admitted	1885	62	12	80	63	2102
■ Applicants Enrolled	1396	27	5	11	11	1450

Graduate Admissions

Applications Received by Residence 2010-2011

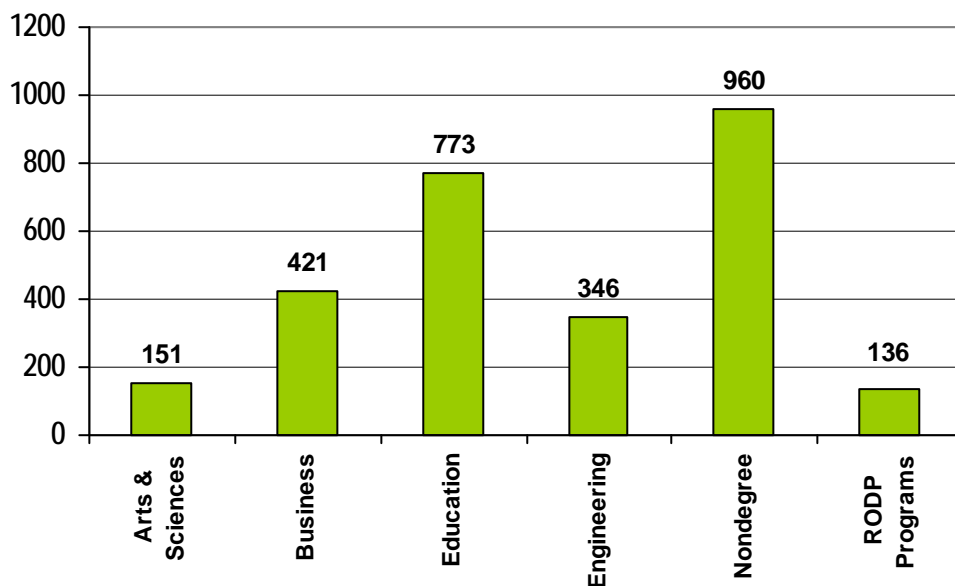


Total Applications Received 2009-2010 vs. 2010-2011

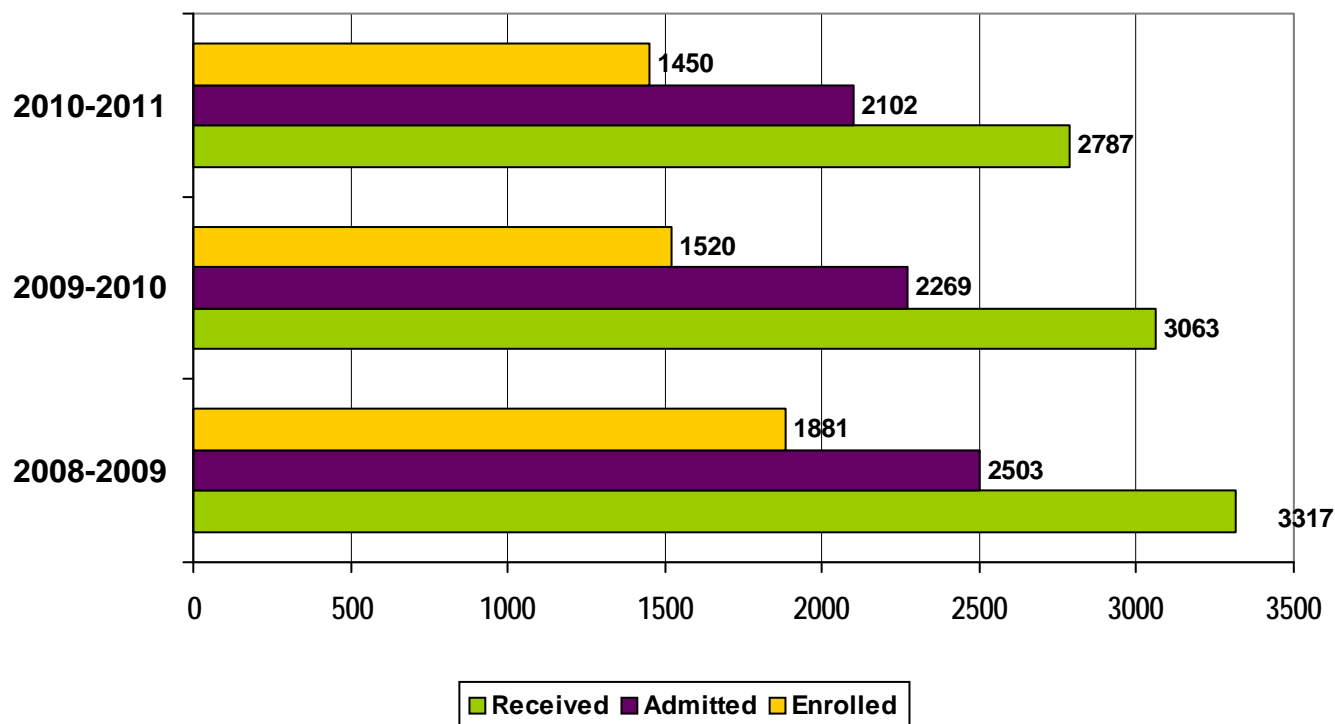


Graduate Admissions

Applications Received by Discipline
2010-2011

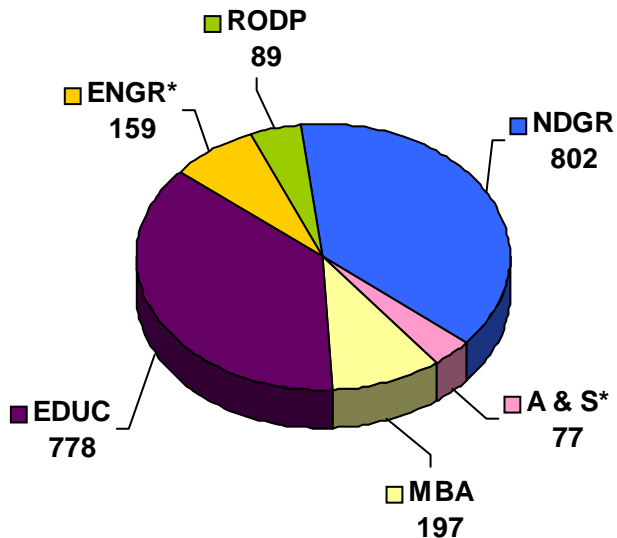


Applications Resulting in Admission and Enrollment
2008-2011



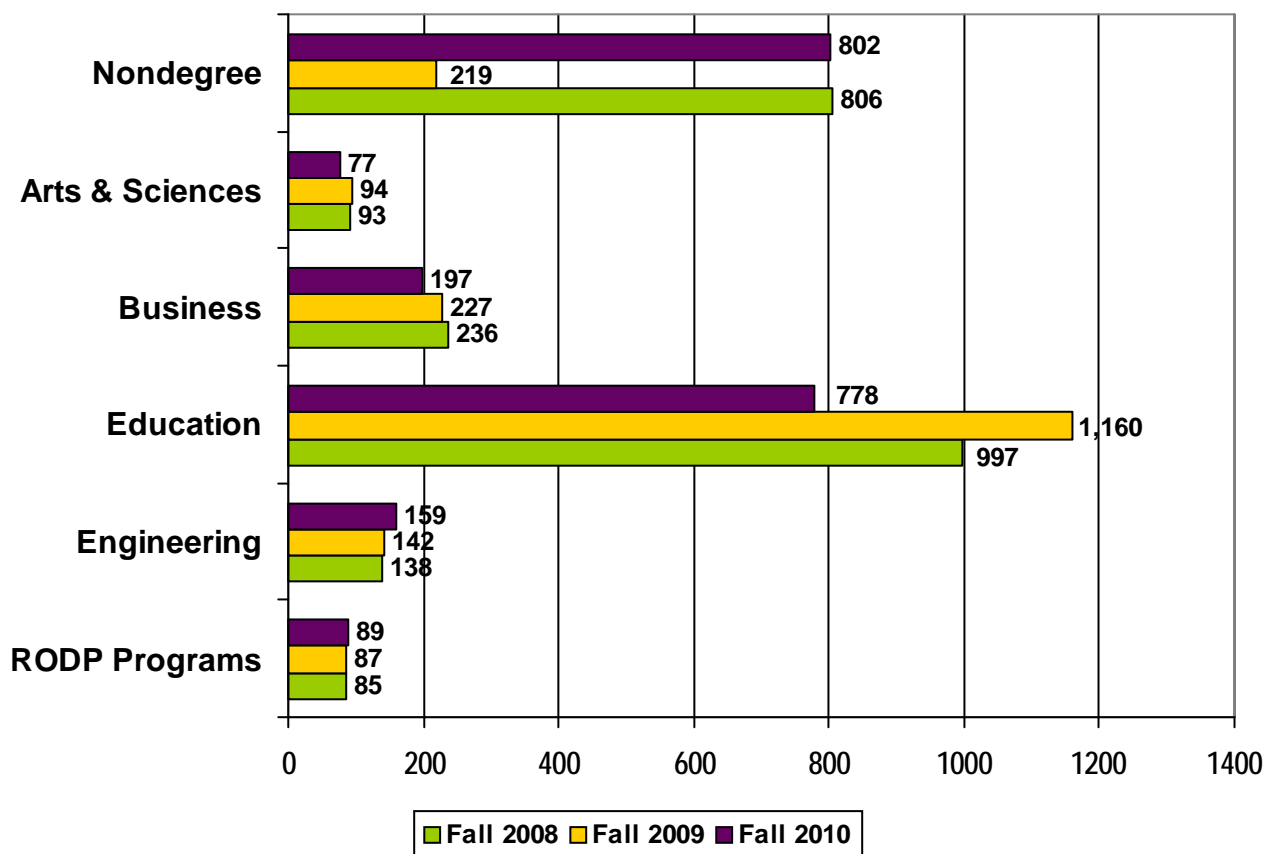
Graduate Enrollments

Graduate Enrollment by College 2010 Fall



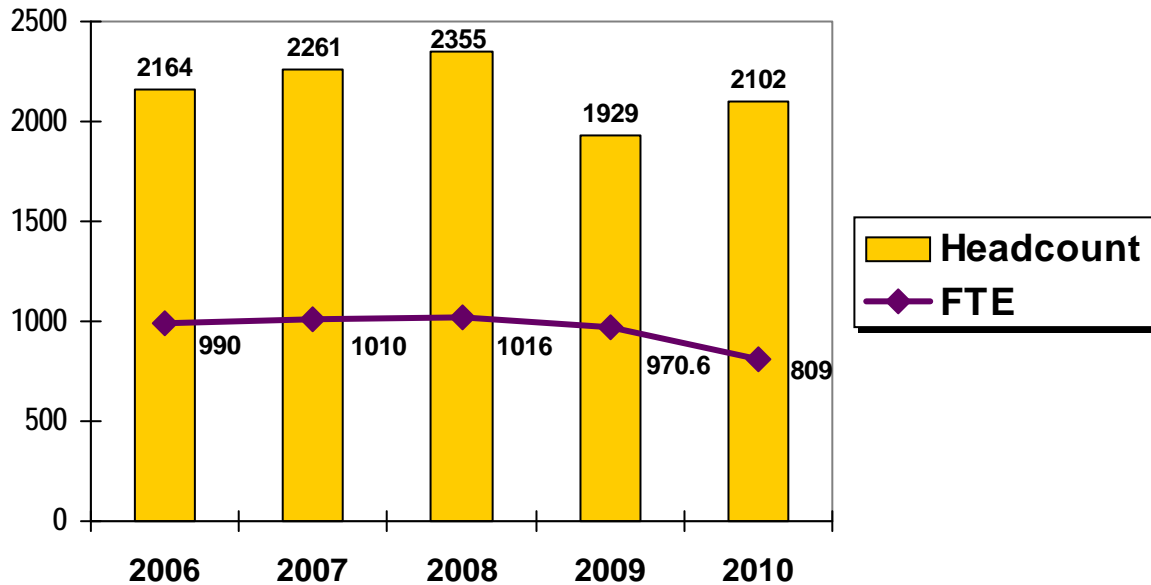
*Computer Science moved to College of Engineering fall 2010.

Enrollment Trends by College Fall Terms 2008-2010

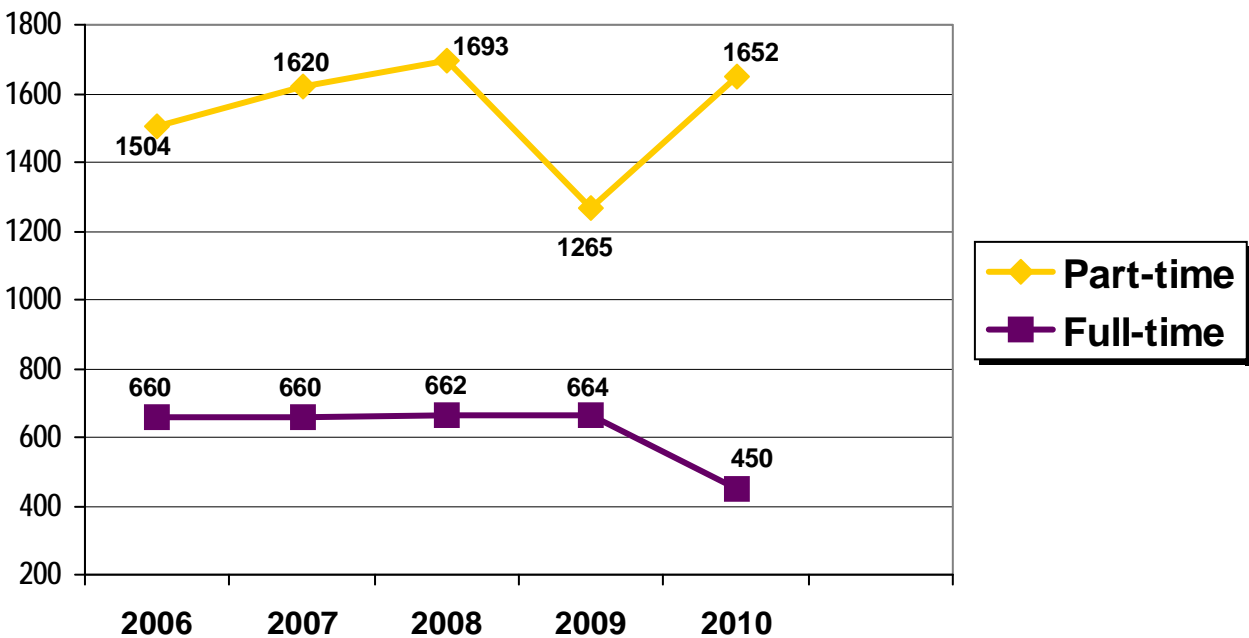


Graduate Enrollments

Headcount vs. Full-time (FTE) Enrollment
Fall Terms 2006-2010

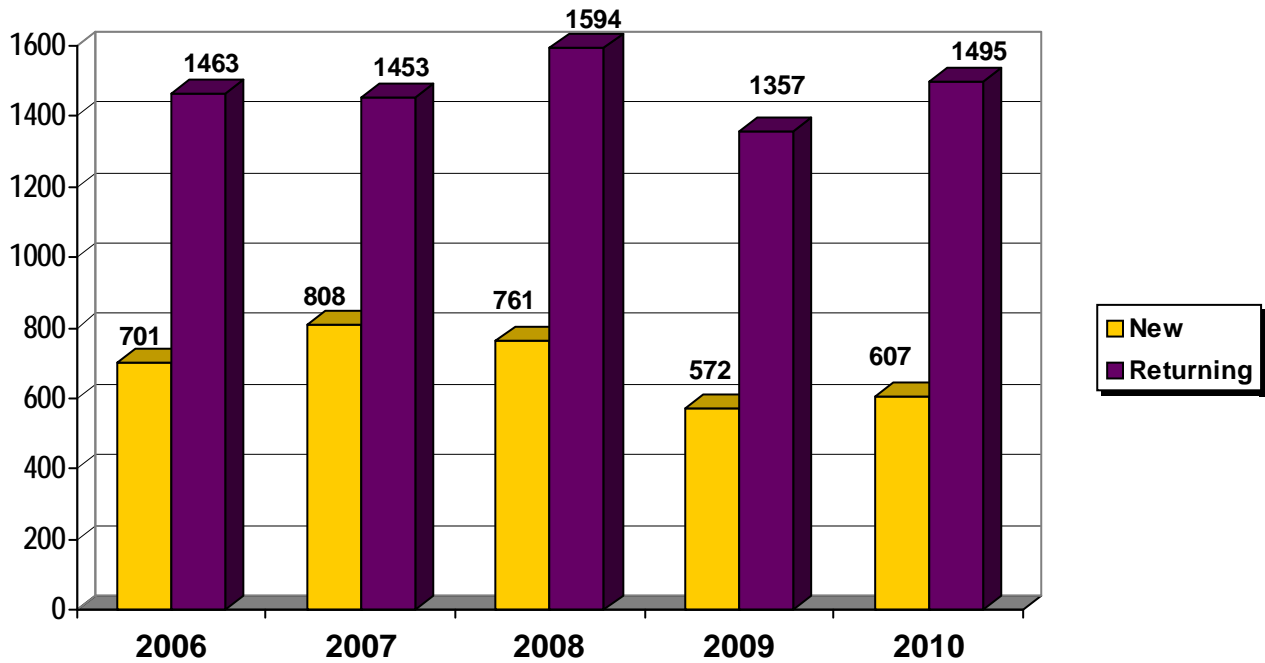


Part-time vs. Full-time Enrollment
Fall Terms 2006-2010

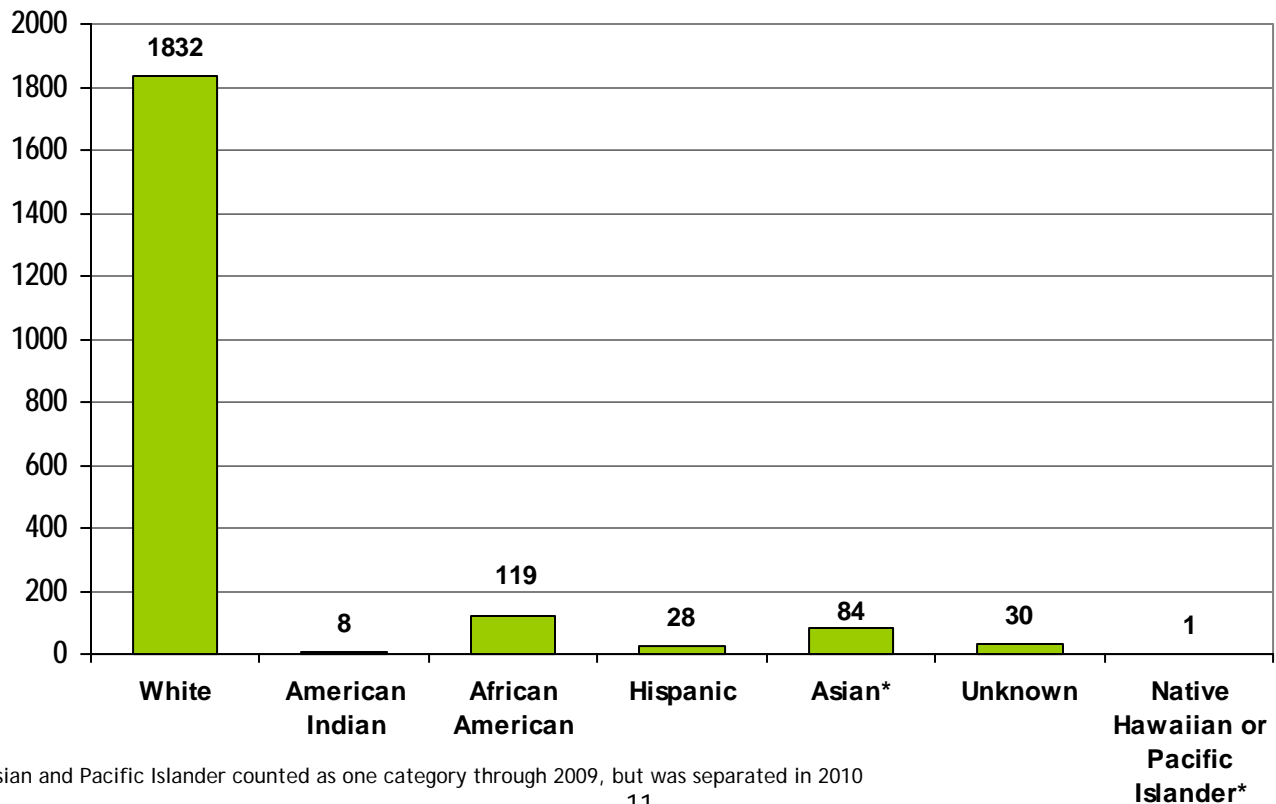


Graduate Enrollments

New vs. Returning Student Enrollment Fall Terms 2006-2010



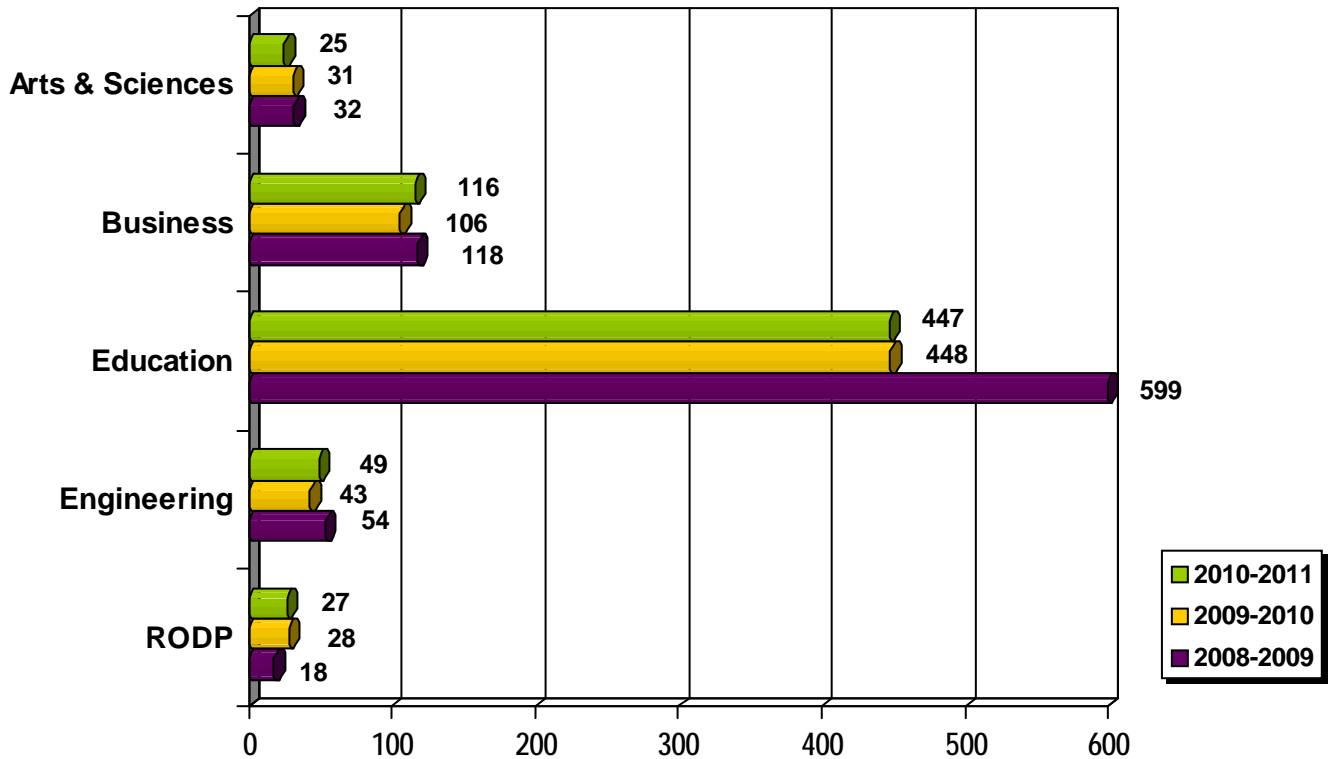
Graduate Enrollment by Race 2010 Fall



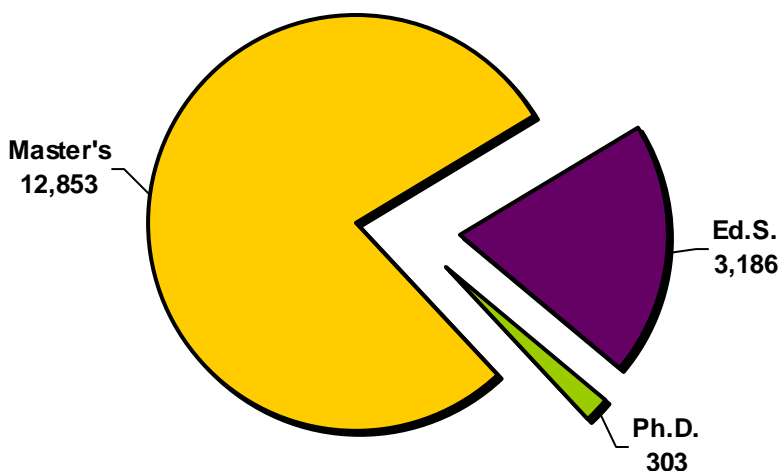
*Asian and Pacific Islander counted as one category through 2009, but was separated in 2010

Graduate Degrees Conferred

Graduate Degrees Conferred by College 2007-2011



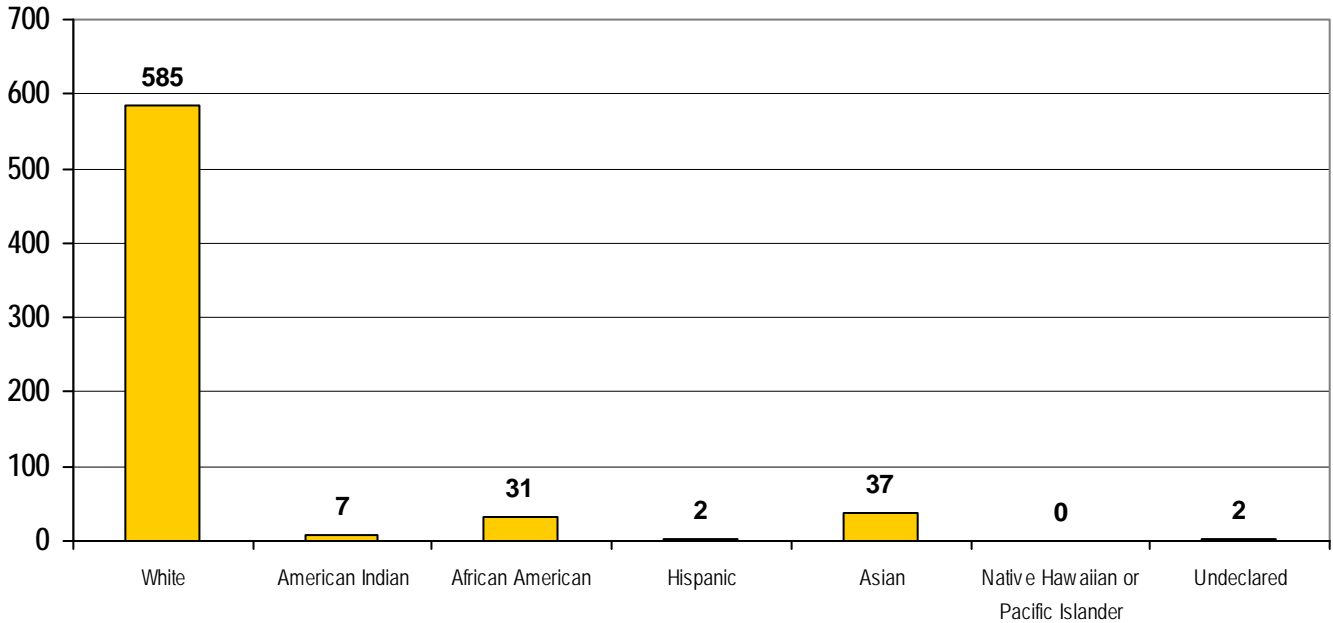
Graduate Degrees Conferred by Degree Level 1959-2011



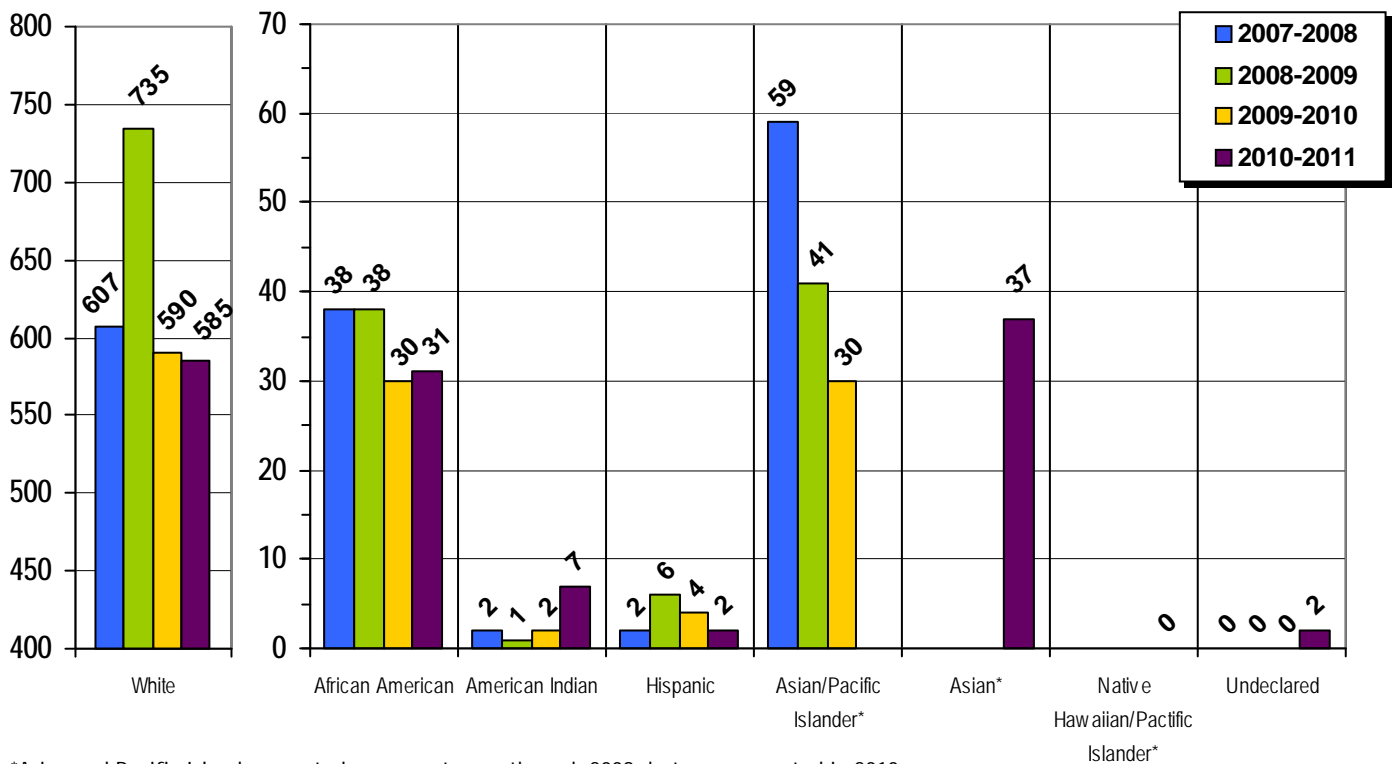
Total degrees conferred since inception of graduate studies at TTU is 16,342.

Graduate Degrees Conferred

Graduate Degrees Conferred by Race 2010-2011



Graduate Degrees Conferred by Race 2006-2007 through 2010-2011



*Asian and Pacific Islander counted as one category through 2009, but was separated in 2010

Appendix A

GRADUATE SCHOOL CHARACTERISTICS
Fall Terms 2006-2010

	2006	2007	2008	2009	2010
Total Enrollment (FTE)	2164	2261	2355	1929	2102
	990	1011	1016	971	809
Full-time	660	641	662	664	450
Part-time	1504	1620	1693	1265	1652
By Degree Sought					
M.A.	585	632	661	873	605
M.B.A.	187	238	236	227	197
M.Ed.	13	18	18	15	17
M.P.S.	9	14	24	31	31
M.S.	173	168	157	155	152
M.S.N.	29	28	43	41	41
Ed.S.	373	305	317	276	167
Ph.D.	101	92	93	92	90
Nondegree	694	766	806	219	802
By Gender					
Male	648	708	697	649	653
Female	1516	1553	1658	1280	1449
By Residence					
Tennessee	1949	2047	2213	1779	1944
Out-of-State	60	68	28	35	52
International	155	146	116	115	106
By Entry Status					
New	701	808	761	572	607
Returning	1463	1453	1594	1357	1495
By Race					
White	1911	2009	2060	1703	1832
American Indian	4	5	4	6	8
African American	101	102	90	93	119
Hispanic	16	25	23	24	28
Asian or Pacific Islander*	130	120	104	95	84
Native Hawaiian or Pacific Islander*	-	-	0	0	1
Unknown	-	-	74	8	30

*Asian and Pacific Islander counted as one category through 2009, but was separated in 2010

FALL TERM GRADUATE ENROLLMENTS
Master's, Ed.S., and Ph.D. Levels
2006-2010

College/Major	2006	2007	2008	2009	2010
ARTS & SCIENCES					
Master's					
Biology (M.S.)	27	27	28	28	22
Chemistry (M.S.)	11	15	14	12	14
Computer Science*	15	12	10	14	-
English (M.A.)	19	18	15	14	15
Mathematics (M.S.)	15	12	11	9	11
Ph.D.					
Environmental Sciences	<u>16</u>	<u>14</u>	<u>15</u>	<u>17</u>	<u>15</u>
Subtotals	103	98	93	94	77
<hr/>					
BUSINESS					
M.B.A.	187	238	236	227	197
<hr/>					
EDUCATION					
M.A.					
Curriculum & Instruction	196	188	209	396	265
Educ. Psy. & Couns. Educ.	56	66	78	84	94
Exer. Sci., Phys. Educ. & Wellness	44	50	54	46	55
Instructional Leadership	270	310	305	333	176
Ed.S.					
Curriculum & Instruction	31	27	51	36	39
Educ. Psy. & Couns. Educ.	22	19	20	22	25
Instructional Leadership	320	259	246	218	103
Ph.D.					
Exceptional Learning	<u>42</u>	<u>34</u>	<u>34</u>	<u>25</u>	<u>21</u>
Subtotals	981	953	997	1160	778
<hr/>					
ENGINEERING					
M.S.					
Chemical	17	18	12	11	8
Civil	17	12	11	15	20
Electrical	37	42	47	44	16
Mechanical	33	30	24	22	36
Computer Science*	-	-	-	-	25
Ph.D.					
Engineering	<u>44</u>	<u>44</u>	<u>44</u>	<u>50</u>	<u>54</u>
	148	146	138	142	159
<hr/>					
REGENTS ONLINE DEGREE PROGRAMS					
Adv. Studies in Teaching & Learning	13	18	18	15	17
Nursing (M.S.N.)	29	28	43	41	41
Master of Professional Studies (M.P.S.)	<u>9</u>	<u>14</u>	<u>24</u>	<u>31</u>	<u>31</u>
	51	60	85	87	89
<hr/>					
NONDEGREE	694	766	806	219	802
<hr/>					
TOTALS	2164	2261	2355	1929	2102

*Computer Science moved to College of Engineering fall 2010.

GRADUATE ENROLLMENT BY DEGREE LEVELS
A Five-Year Comparison
2006-2007 to 2010-2011

Year	Degree	Summer	Fall	Spring
2010-2011	M.A.	380	605	549
	M.B.A.	151	197	179
	M.Ed.	9	17	17
	M.P.S.	7	31	24
	M.S.	56	152	142
	M.S.N.	30	41	46
	Ed.S.	147	167	184
	Ph.D.	38	90	90
	NDGR	<u>19</u>	<u>802</u>	<u>41</u>
	Totals	837	2102	1272
2009-2010	M.A.	452	873	683
	M.B.A.	162	227	220
	M.Ed.	11	15	16
	M.P.S.	15	31	32
	M.S.	64	155	153
	M.S.N.	26	41	39
	Ed.S.	204	276	247
	Ph.D.	41	92	100
	NDGR	<u>43</u>	<u>219</u>	<u>59</u>
	Totals	1018	1929	1549
2008-2009	M.A.	568	661	645
	M.B.A.	184	236	239
	M.Ed.	17	18	19
	M.P.S.	11	24	24
	M.S.	61	157	147
	M.S.N.	23	43	48
	Ed.S.	293	317	323
	Ph.D.	43	93	91
	NDGR	<u>53</u>	<u>806</u>	<u>65</u>
	Totals	1253	2355	1601
2007-2008	M.A.	442	632	659
	M.B.A.	137	238	242
	M.Ed.	18	18	17
	M.P.S.	3	14	17
	M.S.	93	168	150
	M.S.N.	19	28	37
	Ed.S.	300	305	309
	Ph.D.	58	92	81
	NDGR	<u>44</u>	<u>766</u>	<u>78</u>
	Totals	1114	2261	1590
2006-2007	M.A.	456	585	581
	M.B.A.	129	187	176
	M.Ed.	4	13	14
	M.P.S.	0	9	11
	M.S.	82	173	177
	M.S.N.	16	29	25
	Ed.S.	289	373	387
	Ph.D.	78	101	94
	NDGR	<u>63</u>	<u>694</u>	<u>55</u>
	Totals	1117	2164	1520

GRADUATE DEGREES CONFERRED BY COLLEGE
A Three-Year Comparison

College/Major	2008-2009			2009-2010			2010-2011		
	Sum.	Fall	Spr.	Sum.	Fall	Spr.	Sun.	Fall	Spr.
ARTS & SCIENCES									
Biology (M.S.)	2	0	5	5	4	5	1	2	2
Chemistry (M.S.)	2	3	1	3	3	0	1	4	1
Computer Science (M.S.)*	1	0	0	1	1	1	-	-	-
English (M.A.)	2	1	5	3	1	0	2	1	1
Math (M.S.)	2	3	5	0	0	1	0	1	3
Ph.D.									
Environmental Sciences	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>1</u>
Subtotals	9	7	16	12	10	9	3	9	8
BUSINESS									
M.B.A.	53	35	30	43	32	31	48	39	31
EDUCATION									
M.A.									
Curr. & Instruction	22	16	33	15	12	31	7	18	30
Educ. Psychology	3	8	5	8	5	13	0	11	14
Health & P.E.	5	9	10	2	5	7	3	5	13
Instruct. Leadership	92	58	73	96	32	35	73	61	64
Ed.S.									
Curr. & Instruction	0	1	7	6	7	6	1	6	5
Educ. Psychology	1	1	5	2	2	3	1	2	6
Instruct. Leadership	87	45	113	78	29	47	67	21	30
Ph.D.									
Exceptional Learning	<u>4</u>	<u>1</u>	<u>0</u>	<u>3</u>	<u>2</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>5</u>
Subtotals	214	139	246	210	94	144	153	126	167
ENGINEERING									
M.S.									
Chemical	0	5	1	1	2	1	1	2	0
Civil	1	2	5	1	1	3	0	3	5
Electrical	2	6	8	2	12	3	7	7	6
Mechanical	5	2	5	2	3	3	1	3	4
Computer Science*	-	-	-	-	-	-	2	1	1
Ph.D.									
Engineering	<u>2</u>	<u>4</u>	<u>6</u>	<u>3</u>	<u>1</u>	<u>5</u>	<u>5</u>	<u>3</u>	<u>2</u>
REGENTS ONLINE DEGREE PROGRAMS									
Adv. Stu. Tchg. & Lrng. (MEd)	2	1	6	1	2	6	0	2	4
Master of Prof. Studies (MPS)	0	1	1	0	0	5	0	6	3
Nursing (MSN)	<u>1</u>	<u>3</u>	<u>3</u>	<u>6</u>	<u>5</u>	<u>3</u>	<u>4</u>	<u>4</u>	<u>4</u>
Nursing (MSN)	3	5	10	7	7	14	4	12	11
TOTALS	289	205	327	281	162	213	224	205	235

* Computer Science moved to College of Engineering fall 2010

GRADUATE DEGREES CONFERRED TO DATE
1959-2011

<i>Year</i>	<i>Master's</i>	<i>Specialist</i>	<i>Doctoral</i>
1959-1965	96		
1965-1966	31		
1966-1967	60		
1967-1968	88		
1968-1969	109		
1969-1970	124		
1970-1971	198		
1971-1972	203	7	
1972-1973	257	6	
1973-1974	217	18	2
1974-1975	247	20	1
1975-1976	260	30	4
1976-1977	240	23	3
1977-1978	205	13	1
1978-1979	253	25	1
1979-1980	222	41	3
1980-1981	277	31	2
1981-1982	229	26	2
1982-1983	196	36	4
1983-1984	208	26	6
1984-1985	252	31	4
1985-1986	213	32	2
1986-1987	178	35	7
1987-1988	206	32	5
1988-1989	298	46	6
1989-1990	264	19	8
1990-1991	185	35	4
1991-1992	247	44	7
1992-1993	221	36	7
1993-1994	231	50	15
1994-1995	269	44	8
1995-1996	268	64	9
1996-1997	284	43	11
1997-1998	333	69	3
1998-1999	334	80	8
1999-2000	348	91	4
2000-2001	392	101	5
2001-2002	414	117	7
2002-2003	448	158	15
2003-2004	382	174	9
2004-2005	467	185	14
2005-2006	532	291	13
2006-2007	435	272	22
2007-2008	426	258	24
2008-2009	544	260	17
2009-2010	457	180	19
2010-2011	<u>505</u>	<u>138</u>	<u>21</u>
TOTALS	12,853	3,186	303

Appendix B

Dissertations and Theses

July 1, 2010—June 30, 2011

DISSERTATIONS

- Abdallah, Mohammed Ahmed Sadik.** "Reconfigurable Stand-Alone Multi-Channel Data Acquisition, Archiving, Monitoring and Processing System using FPGA-SOPC Technology with Heterogeneous Maximal Service Scheduling." August 2010. Engineering. (Dr. Omar Elkeelany)
- Baker, Julie Christine.** "De-Marginalizing Adolescent Literacy: Seven Constructions of Textual Multiplicity." August 2010. Exceptional Learning. (Dr. Suellen Alfred)
- Black, Tyler R.** "Habitat Use of Stream-Dwelling Crayfish during Reproductive Seclusion and Vulnerability of Juvenile Crayfish to an Herbicide." May 2011. Environmental Sciences. (Dr. Hayden Mattingly)
- Chen, Xin.** "Dependability Modeling and Benchmarking for Distributed Storage Systems." December 2010. Engineering. (Dr. Xubin He)
- Davis, Johnathan Glenn.** "Development of Long-Term Monitoring Protocols for Two Rare Fishes, The Tuxedo Darter and the Spotfin Chub, in Tennessee." August 2010. Environmental Sciences. (Dr. S. Bradford Cook)
- Deepthike, Halambage Upul.** "Biological and Proteomic Methods for Evaluation of Bioavailability and Toxicity of Organic Pollutants." December 2010. Environmental Sciences. (Dr. Jeffrey O. Boles)
- Hill, Sara Jaquenette.** "Articulation in Early Childhood Education from Community Colleges to Four-Year Institutions of Higher Education in Tennessee: A Study of Faculty Perspectives." May 2011. Exceptional Learning. (Dr. David Dean Richey)
- Hu, Zhen.** "Theory, Testbed, and Optimization for Wireless Communication, Cognitive Radio, Cognitive Radar, and Smart Grid." December 2010. Engineering. (Dr. Robert Qiu)
- Isbell, Janet Kesterson.** "Drama, Discontent, and Despair: Narratives of Early High School Departure." May 2011. Exceptional Learning. (Dr. Lisa Zagumny)
- Lloyd, Malinda Ann Hoskins.** "Effects of Professional Development on Teachers' Reading of Professional Journals, Knowledge, and Implementation of Best Practices in Literacy Instruction." December 2010. Exceptional Learning. (Dr. Deborah Setliff and Dr. David Larimore)
- Ning, Jiaxin.** "Wide-Area Monitoring and Recognition for Power System Disturbances using Data Mining and Knowledge Discovery (DMKD) Theory." August 2010. Engineering. (Dr. Wenzhong Gao)
- Pallem, Vasanta Lakshmi.** "Fate and Transformation of Gold Nanoparticles in Surface Water Conditions." May 2011. Engineering. (Dr. Holly A. Stretz)
- Paradis, Terry Ann.** "A Criticalist Case Study of Teachers' Perspectives of and Experiences with Response to Intervention." May 2011. Exceptional Learning. (Dr. Deborah Setliff)
- Rayapati, Narayana Prasad.** "Eulerian Multiphase Model of Fragmenting Flows." August 2010. Engineering. (Dr. Mahesh Panchagnula and Dr. John Peddieson)

- Remsen, Mary Ann.** "The Development of Early Literacy in At Risk Populations: An Investigation of Research, Policy, and Parent and Teacher Perspectives." May 2011. Exceptional Learning. (Dr. David Dean Richey and Dr. Lisa Zagumny)
- Richey, Amanda Bethel.** "(M)other Literacies: Transgressive Identity and Education in Women's Narratives." May 2011. Exceptional Learning. (Dr. Lisa Zagumny)
- Silaipillayarputhur, Karthik.** "Development of a Steady State and Transient Sensible Performance Model for a Crossflow Heat Exchanger." December 2010. Engineering. (Dr. Stephen Idem)
- Ton, Julie.** "The Efficacy of a Function-Based Intervention on the Challenging Behavior of Three Young Boys with Autism in Rural Tennessee." December 2010. Exceptional Learning (Dr. John Wheeler)
- Vasantharao, Brahmaji Atchutha Bheemalinga.** "Residual Stiffness Based Modeling of Fatigue Damage and the Influence of Porosity in Thin Laminated Fiber Reinforced Composites." August 2010. Engineering. (Dr. Sally Pardue)
- Wang, Jun.** "Mobility Identification and Rectification of Planar Multiloop Mechanisms." August 2010. Engineering. (Dr. Kwun-Lon Ting)
- Zhang, Peng.** "Spectrum Sensing Algorithms and Transceiver Systems Design for Cognitive Radio Network Testbed." May 2011. Engineering. (Dr. Robert Qiu)

THESES

- Adhikari, Puran.** "Solid Oxide Fuel Cell System." December 2010. Electrical Engineering. (Dr. Periasamy K. Rajan)
- Armstrong, Ponda Frost.** "Behavioral Interactions and Crevice Depth Preferences in the Green Salamander." December 2010. Biology (Dr. Christopher A. Brown)
- Bedir, Abdulkadir.** "Design of a Stand-Alone Control Strategy for Retrofit Hybrid Electric Vehicles." August 2010. Electrical Engineering. (Dr. Ali Alouani)
- Betancourt, Daniel.** "Development of an Accelerated Stress Test of Realistic Cathode Catalyst PEMFC Automotive Decay and Preliminary Results." August 2010. Chemical Engineering. (Dr. Cynthia Rice-York)
- Bostic, Nicole M.** "Locus of Control and Academic Achievement Among First-Generation and Second-Generation College Students." December 2010. Educational Psychology and Counselor Education. (Dr. Yvonne Malone)
- Brinkley, Sarah C.** "Proteomic Consequences of L-Telluromethionine as the Predominant Source of Methionine for Escherichia Coli." December 2010. Chemistry. (Dr. Jeffrey O. Boles)
- Browning, Gregory Allen.** "Optimum Air Content Range in the Plastic and Hardened State for TDOT Class D Portland Cement Concrete." May 2011. (Dr. L. K. Crouch)
- Burmeister, Kevin S.** "On Time and the Artist in Herman Melville's Pierre." August 2010. English. (Dr. Michael Burdick)
- Chellapandi Velraj, Samgopiraj Yadav.** "A Novel Approach for Interdiffusion Modeling of Oxidation-Resistant Aluminide Coatings on Iron-Base Alloys." August 2010. Mechanical Engineering. (Dr. Ying Zhang)

- Duggin, Cory Ray.** "A Study of Combined Energy Simulations using EQUEST and TRNSYS." May 2011. Mechanical Engineering. (Dr. Glenn Cunningham)
- Dye, II, Robert E.** "PAWS: A Toolkit for Analyzing Service Oriented Computing Workflows Using Proxies." May 2011. Computer Science. (Dr. Mike Rogers)
- Eckart, Benjamin David.** "Runtime Optimization and Diskless Checkpointing on Virtualized Clusters." August 2010. Electrical Engineering. (Dr. Xubin He)
- Foote, Jeffrey D.** "Effect of Hydrostatic Stress on Fracture Toughness for 2011-T3 Aluminum Notched Round Bars." December 2010. Mechanical Engineering. (Dr. Christopher Wilson)
- Forbes, Daniel Miceli.** "Porous Metal Substrate Development for Use in Metal-Supported Solid Oxide Fuel Cells" May 2011. Mechanical Engineering. (Dr. Jiahong Zhu)
- Gott, Matthew David.** "Analytical Separations and Speciation for Environmental Monitoring." December 2010. Chemistry. (Dr. Dale Ensor)
- Hendrix, John Patrick.** "Utilizing TCA Mix Design and Adjustment Method to Improve Pervious PCC." May 2011. Civil Engineering. (Dr. L. K. Crouch)
- Hodges, Nicholas B.** "Dynamic Frequency Estimation of PMU/FDR Measurements." May 2011. Electrical Engineering. (Dr. Ghadir Radman)
- Hogancamp, Aaron T.** "Two Well-Known Graph Theory Results and Their Relationship to Matroid Theory." May 2011. Mathematics. (Dr. Allan Mills)
- Hwang, Jung wun.** "Comparisons of Knoevenagel Condensations of Meldrum's Acid with Aryl Aldehydes using an Organic Solvent, an Ionic Liquid, and a Deep Eutectic Solvent." May 2011. Chemistry. (Dr. Daniel J. Swartling)
- Jagtap, Suhas Dattatraya.** "Development of Novel Online Differential Sand Compaction Sensor for Improving Lost Foam Castings Process." December 2010. Electrical Engineering. (Dr. Mohamed Abdelrahman)
- Jayaraman ,Jaianand.** "A Decentralized Approach to Energy Management and Conservation for Residential and Commercial Load." May 2011. Electrical Engineering. (Dr. Arun Sekar)
- Kambhampati, Rahul.** "Enhancement of Microgrid Dynamic Frequency Stability using Microgrid Frequency Controller (MGFC)." May 2011. Electrical Engineering. (Dr. Ghadir Radman)
- Karusala, Venkata Sudhir Babu.** "New Implementations of Time-Reverse Precoders for UWB Communication Systems and Evaluation of Their Performance." December 2010. Electrical Engineering. (Dr. Periasamy K. Rajan)
- Khedkar, Sanket.** "A Feasibility Study of a Wireless Strain Sensor for an Inkjet Printing Technology." August 2010. Electrical Engineering. (Dr. Stephen Parke and Dr. Hwan-Sik Yoon)
- Kozub, Nicole Arylene.** "Employers' Race, Age, Gender, Disability Status, Familiarity with Disability, and Familiarity with the ADA as Predictors of the Likelihood of Recommending the Hiring of an Individual with a Disability for University Jobs." May 2011. Educational Psychology and Counselor Education. (Dr. Jann Cupp)
- Kulkarni, Aboli V.** "Design and Optimization of Load Shedding Scheme in Power Systems." August 2010. Electrical Engineering. (Dr. Wenzhong Gao)

- Kumar, Anuradha.** "Time Domain Spectroscopy Measurement on a Current Transformer." December 2010. Electrical Engineering. (Dr. Satish Mahajan)
- Laycock, Kelly H.** "Characteristics of Depression Wetlands Important to Breeding Ambystomatid Salamanders at Arnold Air Force Base, Tennessee." August 2010. Biology. (Dr. Thomas Roberts)
- Lewis, Matthew Jordan.** "Synthesis and Evaluation of Electrolytically-Deposited Coatings to Protect Ferritic Stainless Steels for Solid Oxide Fuel Cell Interconnect Application." May 2011. Mechanical Engineering. (Dr. Jiahong Zhu)
- Li, Lily Liman.** "Some Well-Known Properties of the Relaxation Operation in Matroid Theory." December 2010. Mathematics. (Dr. Allan Mills)
- Lonare, Amit.** "Transfer Capacity Estimation using Extended DC-Model for Systems with Phase Shifting Transformers." August 2010. Electrical Engineering. (Dr. Ghadir Radman)
- Madhavapeddi, Arvind.** "Genetic Algorithm Optimized PID Controllers for a Solid Oxide Fuel Cell System." May 2011. Electrical Engineering. (Dr. Ghadir Radman)
- Mancuso, Matthew Cian.** "Utilization of a Tellurite Resistance Plasmid for Improved Telluromethionyl Uptake, Microbial Growth, and Recombinant Protein Expression." December 2010. Chemistry. (Dr. Jeffrey Boles)
- Marcum, Allison Denise.** "Stop Writing Like a Woman: Resistive Strategies in the Works of Dorothy Parker." December 2010. English. (Dr. Kurt Eisen)
- Matheney, Steven Richard.** "Freeze-Thaw Durability of Non-Air Entrained Concrete with Normal and Lightweight Aggregates." December 2010. Civil Engineering. (Dr. Benjamin Mohr)
- Mbachu, Chinyere Patricia.** "Degradation of Humic Acids in Aqueous Solutions by Pulsed Corona Discharges." December 2010. Chemical Engineering. (Dr. Pedro Arce)
- Medley, II, Martin Luke.** "Pervious Concrete Mixture Design by the Unit Weight Method." December 2010. Civil Engineering. (Dr. L. K. Crouch)
- Miller, Jason Edward.** "Summer Microhabitat, Dispersal, and Predation Risk of Three Rare Fishes in Abrams Creek, Great Smoky Mountains National Park." May 2011. Biology. (Dr. S. Bradford Cook)
- Partridge, John D.** "Development of the FPEX II Solvent System for Simultaneous Extraction of Cesium and Strontium." December 2010. Chemistry. (Dr. Dale Ensor)
- Patel, Keyuri Ritesh.** "DNA Binding Studies of a Series of Potential Anti-Tumor Agents: Thiosemicarbazone Ligands and Their Palladium (II) Metal Complexes." August 2010. Chemistry. (Dr. Edward Lisic)
- Poore, Adam Lawrence.** "The Effect of Tensile Prestraining on 2024-T851 Aluminum Mechanical Properties." December 2010. Mechanical Engineering. (Dr. Christopher Wilson)
- Potukuchi, Srikanth.** "A Study of Some New Approaches to a Lyapunov Stability Problem." May 2011. Mathematics. (Dr. Yung-Way Liu)
- Prabhala, Bharadwaj.** "The Shape of a Sessile Drop." December 2010. Mechanical Engineering. (Dr. Mahesh V. Panchagnula)

- Pulimera, Kanakadurga.** "Independent Component Analysis for Harmonic Source Estimation with Piecewise Constant Parameter Mixed Measurements." December 2010. Electrical Engineering. (Dr. Periasamy K. Rajan)
- Russell, Drew Clifford.** "Age, Growth, and Sampling of Lake Trout in Two Eastern Tennessee Reservoirs." December 2010. Biology. (Dr. Phillip Bettoli)
- Shepard, Merlin Shane.** "Microwave-Based Alkali Pretreatment of Newspaper for Enhanced Methane Production." May 2011. Civil Engineering. (Dr. Lenly Weathers)
- Siddique-E-Akbor, A. H. Muhammad.** "Surface Water and Ocean Topography (SWOT) Mission for Water Management in Bangladesh." December 2010. Civil Engineering. (Dr. Faisal Hossain)
- Smith, Aaron T.** "The Effects of Parameter Tuning on Meta-Learning." December 2010. Computer Science. (Dr. Doug Talbert)
- Smith, Christopher James.** "Impact of Inoculum on Startup Characteristics of a Simulated, Anaerobic Bioreactor Landfill." May 2011. Civil Engineering. (Dr. Lenly Weathers)
- Smith, Katrina.** "Habitat Requirements of the Black Mountain Salamander in Tennessee." May 2011. Biology. (Dr. Sean Blomquist)
- Tadisina, Naresh Kumar Reddy.** "A Thermodynamic Study on the Surface Tension of Amines and Glycol Ethers and Their Solutions with Water." December 2010. Chemical Engineering. (Dr. Donald P. Visco, Jr.)
- Tamersi, Amarnath.** "Enhancement of Microgrid Dynamic Voltage Stability using Microgrid Voltage Stabilizer." May 2011. Electrical Engineering. (Dr. Ghadir Radman)
- Todakar, Vivekanand.** "Reconfigurable Chip Design of Bidirectional Access Controller to the SD Card using FPGA." December 2010. Electrical Engineering. (Dr. Omar Elkeelany)
- Vasireddy, Vamshi Vivek Chandra.** "Experimental and Simulation Results of a 0.15 μ m Flexfet Transistor." August 2010. Electrical Engineering. (Dr. Stephen Parke)
- Watkins, Andrew N.** "A Novel Control and Physical Realization of a Clean Hybrid Hydrogen Fuel-Cell/Battery Low-Power Personal Electric Vehicle." December 2010. Electrical Engineering. (Dr. Wenzhong Gao)
- Woods, Sara Kay.** "Evaluation of New Multiply and Multiply-Accumulate Structures in FPGAS." May 2011. Electrical Engineering. (Dr. Roger Haggard)
- Zheglov, Vadim.** "Double Input DC - DC Converter for Hybrid Electric Vehicles." August 2010. Electrical Engineering. (Dr. Wenzhong Gao)



The Graduate School Annual Report 2010-2011. The information in this report was compiled and edited by K'Cindra Cavin and Shelia Kendrick. Tennessee Technological University: A constituent university of the Tennessee Board of Regents.