



# **UCF DEGREE PLAN 2005-2013**

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# UCF DEGREE PLAN, 2005-2013

## EXECUTIVE SUMMARY

The University of Central Florida has experienced a period of rapid growth designed to provide access to the increasing college degree seeking population and to expand its graduate education and research consistent with its mission and its vision to be the nation's leading metropolitan research university. In the past 3 years, degree production has increased at a 6.4% average annual rate, from 7,818 in the 2001-2002 academic year to 9,423 in 2004-2005.

In response to the Chancellor's request, this report constitutes the UCF 2005-2013 Degree Plan and provides the degree projections with relevant explanations of how the anticipated growth has been planned with consideration to the targeted degree programs in the areas of: Critical Needs, Economic Development, and Emerging Technologies. The degree projections are by level for each 6-digit CIP level as specified.

The 2005-2013 degree plan is a revision of the "Enrollment and Degree Plan 2004-2015" submitted in June 2004. Program level headcount projections for 10 years were developed by using three different models applied to five years of historical data at the HEGIS code level. Degree production was estimated by modifying the expected degrees that were computed using the historical degree production rate applied to the program enrollment projections. The resulting enrollment and degree projections were provided to the colleges for review and modification and the results compiled and synthesized at the 6-digit CIP level. As requested, only degree projections are included in this report.

The UCF Degree Plan for 2005-2013 recommends a continued growth approach to meet the educational demands in the state of Florida, with a particular emphasis on the Central Florida metropolitan region as well as the targeted program areas. The program level degree projections anticipate 10,250 degrees in the 2005-2006 academic year, increasing to 13,417 in the 2012-2013 academic year, an annual growth rate of 3.9% over 7 years.

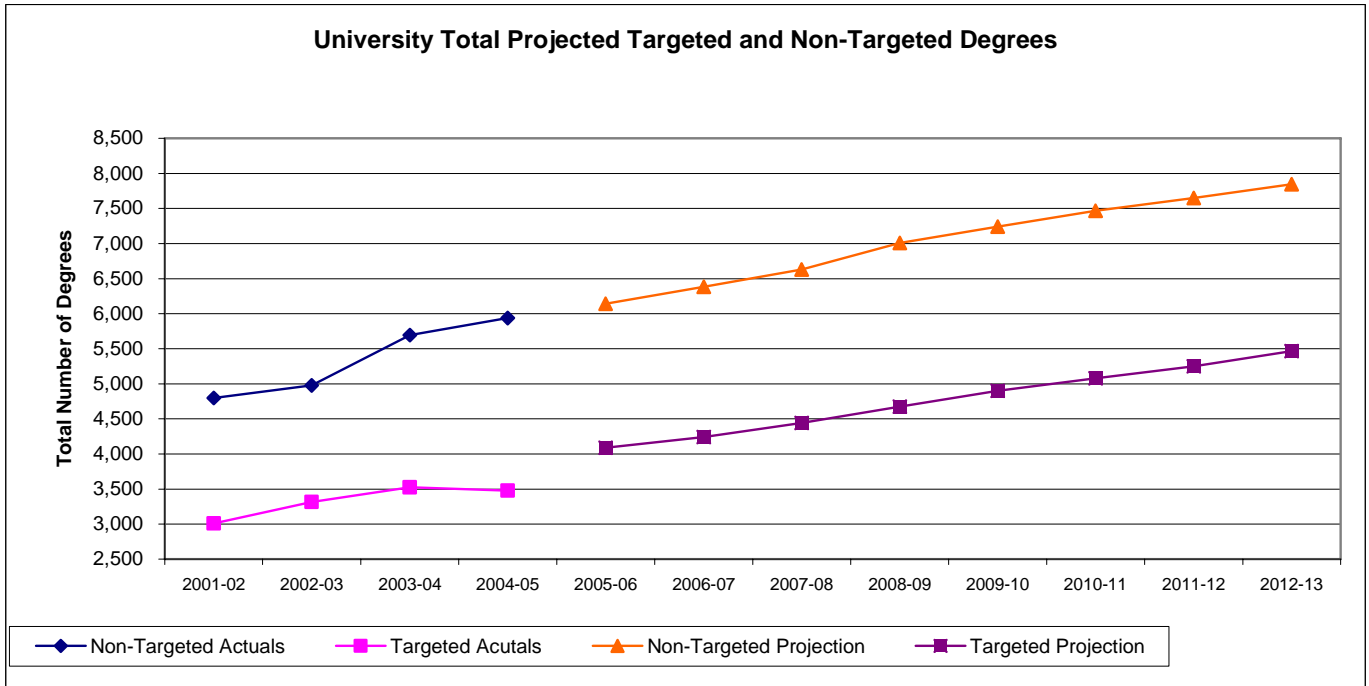
The projected degrees by level are as follows:

<b>Projected Degrees</b>	<b>Baccalaureate</b>	<b>Master's</b>	<b>Doctoral</b>	<b>MD*</b>	<b>Total</b>
2005-2006	8,092	1,967	191		10,250
2012-2013	10,472	2,520	385	40	13,417

\* assumes approval by BOG and funding by the Legislature

The detailed program level projections indicate that the UCF doctoral and graduate certificate programs will grow quickly. The doctoral programs are growing in size and number due to the expansion of UCF's research efforts. Film and digital media has significant growth both at the baccalaureate and the master's levels, in addition to a very large increase in certificates through the Florida Interactive Entertainment Academy. Among the largest gainers in expected baccalaureate degree production over the next ten years are as follows: Hospitality Management, Liberal Studies, Management, Nursing, Criminal Justice, Digital Media, Marketing, Psychology, Molecular Biology and Microbiology, Elementary Education, Legal Studies, and Accounting.

In the development of these degree projections, consideration was given to the focus on targeted program areas. Non-targeted (educated citizenry) degrees are expected to grow from 6,162 in the 2005-2006 academic year to 7,874 in the 2012-2013 academic year, a 3.6% annual growth rate over seven years. The growth rate of targeted degrees is expected to exceed this growth rate by growing 4.5% annually from 4,088 in 2005-2006 to 5,543 in 2012-2013. The non-targeted programs include several large programs identified as institutional priority, including Hospitality Management and Master's level programs in Education.



In developing the degree projections, it was assumed that various university and SUS initiatives would have an overall effect of increasing targeted degree productivity during the plan years. That assumption was reflected in the degree projections for the targeted programs. The university initiated a special incentive program to support making that productivity improvement a reality. In particular, UCF has instituted a special funding procedure that included a university-wide solicitation for initiatives that would focus on improving enrollment, retention, and completion in targeted program areas. Thirty-four proposals were received from colleges and academic administration units requesting \$15.3 million over a three year period. Funding was available for nine of these programs with the university committing \$3.079 million over three years. This represents about 20% of the total requested amount. In addition to the effects of UCF initiatives, a significant portion of the anticipated growth is dependent on the initiatives included in the \$40.2 million 2006-2007 Legislative Budget Request by the Board of Governors to improve targeted degree production in education, nursing, and engineering.

The UCF enrollment and degree plans with supporting detailed data are available at <http://uaps.ucf.edu/enrollment/>.

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# UCF DEGREE PLAN, 2004-2015

## 1. BACKGROUND

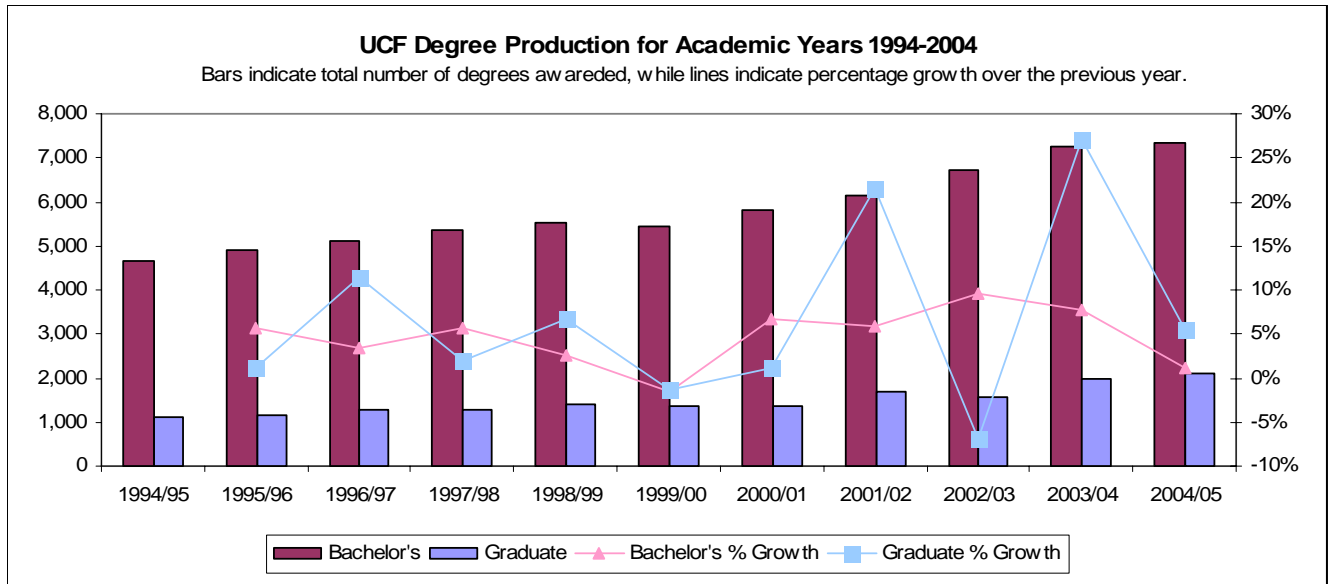
On May 6, 2005, the Chancellor directed the university presidents to develop annual FTE enrollment and degree plans for their universities through 2012-13. The enrollment and degree plans from all of the universities will be used to support both funding and strategic planning activities of the Board of Governors. The plans are to be submitted in two parts. The first part includes annual FTE projections by level and the distribution of total FTEs to main and branch campuses. This portion of the request, "UCF FTE Enrollment Plan 2005-2013," was submitted on June 14, 2005. The second part includes annual degree projections by level and by 6-digit CIP program level. The degree plan included in this report is to be submitted by October 3, 2005.

To provide the degree planning context, the planned enrollment growth for UCF that was submitted in the UCF FTE Enrollment Plan 2005-2013 is summarized in Table 1. Note that the table includes both Annual FTE and Fall Headcount estimates. In comparison with the projections submitted in 2004, the FTE projection for 2012-2013 is slightly higher this year and the Fall headcount projection is slightly lower this year. The headcount projection is lower because the enrollments realized in 2004-2005 were lower than projected due to the triple hurricane effect and more restrictive admissions policies adopted in anticipation of no enrollment growth funding. Even with lower headcount enrollments, FTE enrollment has increased reflecting the impact of students increasing their average number of credit hours taken.

**Table 1.** UCF fundable Fall headcount and annual FTE projections.

		<b>UCF Planned Estimated Enrollment Growth -- June 13, 2005</b>										
		2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
UCF E&G Total	Actual	Detailed Prediction Model										
		Projection Model										
	Lower FTEs	8,730	9,477	9,815	10,316	11,192	11,994	12,819	13,633	14,476	14,741	15,257
	Upper FTEs	12,596	13,476	13,953	14,454	15,127	15,611	16,183	16,764	17,328	17,636	17,998
	Grad FTEs	3,364	3,624	3,648	3,699	3,848	3,922	3,986	4,044	4,100	4,200	4,329
	Grad I FTEs	2,728	2,934	2,879	2,899	2,986	3,043	3,093	3,138	3,181	3,245	3,337
	Grad II FTEs	636	690	769	800	862	879	893	906	919	955	992
	<b>Total FTE</b>	<b>24,690</b>	<b>26,577</b>	<b>27,416</b>	<b>28,469</b>	<b>30,168</b>	<b>31,527</b>	<b>32,987</b>	<b>34,441</b>	<b>35,904</b>	<b>36,577</b>	<b>37,585</b>
Headcount	UNCLASS	1,372	1,187	1,080	1,144	1,138	1,135	1,139	1,139	1,139	1,140	1,141
	LOWER	12,860	13,814	13,953	14,264	15,034	15,647	16,183	16,548	16,838	17,146	17,746
	UPPER	19,096	20,212	21,042	22,427	23,573	24,420	25,391	26,334	27,149	27,632	28,200
	GRAD	5,467	5,972	6,316	6,487	6,796	6,966	7,109	7,243	7,372	7,551	7,783
	BEG GRAD	4,344	4,666	4,886	4,983	5,191	5,297	5,385	5,468	5,548	5,668	5,828
	ADV GRAD	1,123	1,306	1,430	1,504	1,605	1,669	1,724	1,775	1,823	1,883	1,955
	<b>TOTAL HC</b>	<b>38,795</b>	<b>41,185</b>	<b>42,391</b>	<b>44,322</b>	<b>46,540</b>	<b>48,167</b>	<b>49,822</b>	<b>51,264</b>	<b>52,498</b>	<b>53,469</b>	<b>54,870</b>

The University of Central Florida has experienced a period of rapid growth designed to provide access to the increasing college degree seeking population and to expand its graduate education and research consistent with its metropolitan research university mission. In addition to the enrollment growth illustrated in Table 1, in the past 3 years, degree production has increased at a 6.4% average annual growth rate, from 7,818 in the 2001-2002 academic year to 9,423 in 2004-2005. Figure 1 illustrates the continued growth in degree production. Since 1994, the number of undergraduate and graduate degrees has increased except for relatively flat growth in 1999 and an anomalous decrease in graduate degrees in 2002. However, as Figure 1 shows, the number of graduate degrees rebounded by the next year.



**Figure 1.** UCF degree production, 1994-2004.

The purpose of this report is to summarize the procedures used to develop the UCF Degree Plan for 2005-2013, provide the degree projections by levels and by six digit CIP codes, provide relevant explanations of how degree production plans have been developed with consideration to the targeted programs, and describe university initiatives to increase targeted degrees.

## 2. PROGRAM DEGREE PROJECTIONS

The Chancellor's request requires annual degree estimates by level, and by program at the 6-digit CIP code level. A projection of degrees for any new programs is also required at the 6-digit CIP level.

The UCF enrollment prediction-projection model described in the report "UCF FTE Enrollment Plan 2005-2013" operates at an aggregate university level to estimate total fundable Fall headcount and annual fundable FTE. For the past several years, all UCF graduate programs have been required to update new student estimates and the Office of Graduate Studies has developed enrollment projections for each program. Although the College of Engineering and Computer Science has also used a 5-year projection model for its undergraduate programs, similar results have not been widely developed for undergraduate programs in the remainder of the university. The UCF Enrollment and Degree Plan 2004-2015 dated June 23, 2004 was the first attempt to develop enrollment and degree projections at the program level for all university programs. The enrollment projections developed using this micro approach corresponded very well with the aggregate enrollment projections that drive the FTE projections. The approach used in 2004 to estimate program enrollment and degrees is the basis for the approach used to develop the current degree projections that are reported here.

### 2.1. Overview of Program Headcount and Degree Projection Approach

Realistic estimates of program enrollment and degree production must be based on strong program input. Rather than require programs to generate these estimates from a blank sheet, initial estimates were provided to all programs using a consistent approach.

In order to obtain the maximum value from program input, the estimates were provided at the HEGIS code level since this is the level where real program knowledge resides.

Using five years of Fall enrollment data from Fall 2000 through Fall 2004, 10-year enrollment projections were developed using a linear model (constant growth rate), a logarithmic model (decreasing growth rate), and a model that mirrored the overall university growth rate in the university-level model. The average of these three projections was used as the initial enrollment estimate for each degree level (including certificate programs). Enrollment projections were also included for unclassified students in each HEGIS code as well as undeclared students. Details of the approach are described in Appendix A. Note that these enrollment projections at the program level were only used as a component of the modeling method for the projected degrees. Therefore, the detailed program enrollment projections are not reported here.

Initial estimates of degree production for each program were computed by applying the five-year historical program degree production rate to the program enrollment projections. The directions from the state indicated that counts should be first majors only. The program enrollment projections were based on data in the Student Data Course File that only includes a single major. Hence the method only focuses on a single major for each student. In practice, most students declare a second major or minor close to the time that they file an intent to graduate form. In most cases, programs will not know that a student has more than one major. The number of declared double majors is small relative to the inherent enrollment projection error. Additionally, there is no reasonable way to separate the associated FTE. The approach that was used effectively addresses the state requirement.

The Fall headcount estimates and the annual degree estimates were sent to the colleges for their review and modification. In addition, the worksheets included the enrollment and degree projections that were developed last year. This provided a frame of reference and helped to identify areas where the mathematical projections did not account for other programmatic changes. The instructions and timeline that were provided to the colleges are included in Appendix B. The Deans' representatives provided the updated estimates that were then compiled.

## **2.2. New Program Projections**

The UCF strategic plan calls for developing new programs in key niche areas, particularly in graduate education areas. UCF has a well-developed formal planning process for identifying new programs and determining which programs will be supported over what time frame. The current five-year plan includes programs under detailed development over the next two years and a number of other programs that will be discussed in the following three years.

When the programs were asked to review and modify the program enrollment and degree estimates, they were also asked to identify any new programs and provide similar enrollment and degree estimates. Several of the programs that were identified are tracks in existing degree programs. The degree projections include degrees for potential new programs in the planning process for which the plans are sufficiently developed. In addition, programs that were added in the past year are identified as new programs. Programs that were approved in previous years, but for which there may not be any graduates have not been identified as new programs. The new degree projections also include a Doctor of Medicine degree. A separate degree program proposal for that degree was submitted to the Board of Governors in September 2005. The new degree areas are summarized in Table 2.

**Table 2.** New degree programs.

	<b>CIP Code</b>	<b>Program</b>	<b>Targeted Program</b>
<b>Baccalaureate</b>	05.0000	Latin American Caribbean and Latino Studies*	
	24.0102	Applied Science AS to BS	
	26.1201	Biotechnology*	Emerging Tech: Natural Science and Technology
	52.0901	Event Management	
	52.0905	Restaurant and Food Service Management	
<b>Master's</b>	26.1201	Biotechnology (MS)*	Emerging Tech: Natural Science and Technology
	26.1201	Biotechnology Management (MS/MBA)*	Emerging Tech: Natural Science and Technology
	42.0101	Human Factors Psychology	
	45.0201	Anthropology	
	50.0601	Film and Digital Media	
	51.1608	Nursing Science*	Critical Needs: Health Care
<b>Doctoral</b>	52.0206	Non-profit Management	Economic Development: High Wage/High Demand
	13.1401	Teaching English to Speaker of Other Language*	
	50.0706	Digital Media*	Emerging Tech: Electronic Media and Simulation
	51.1601	Nursing (R.N. Training)*	Critical Needs: Health Care
<b>First Professional</b>	51.2308	Physical Therapy*	Critical Needs: Health Care
	51.1201	Medicine*	Emerging Tech: Medical Science and Health Care

\* assumes approval and funding

### **2.3. Annual Degree Projections by Program**

The required annual degree projections by 6-digit CIP code and degree level are included in Appendix C. The detailed program level projections indicate that the UCF doctoral and graduate certificate programs will grow quickly. The doctoral programs are growing in size and number due to the expansion of UCF's research efforts. Film and digital media has significant growth both at the baccalaureate and the master's levels, in addition to a very large increase in certificates through the Florida Interactive Entertainment Academy. The annual degree projections by level for degree-seeking students are summarized in Figure 2 and Table 3.

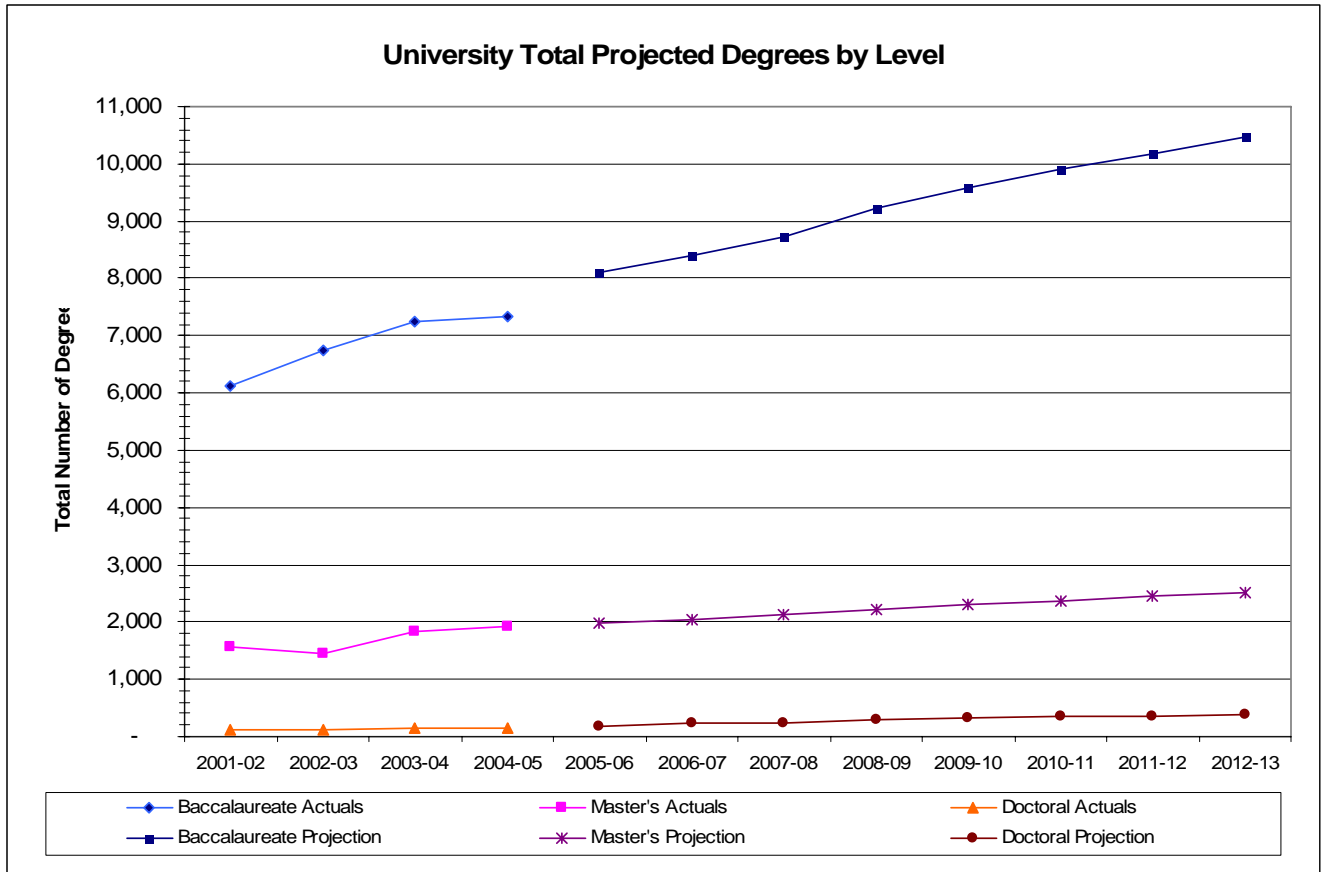


Figure 2. UCF degree projections, by level, 2005-2013.

Table 3.. UCF degree projection data, by level, 2005-2013.

	Actual		Projections							
	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Baccalaureate	7,235	7,323	8,092	8,389	8,728	9,219	9,595	9,915	10,184	10,472
Master's	1,846	1,936	1,967	2,055	2,140	2,230	2,307	2,371	2,450	2,520
Doctoral	137	155	191	227	250	307	329	354	369	385
MD**	-	-	-	-	-	-	-	-	-	40
<b>Total</b>	<b>9,218</b>	<b>9,414</b>	<b>10,250</b>	<b>10,671</b>	<b>11,118</b>	<b>11,756</b>	<b>12,231</b>	<b>12,640</b>	<b>13,003</b>	<b>13,417</b>

\*\* assumes that the program is approved by the BOG and funded by the legislature

Most of the programs listed in Appendix C are projecting growth. In that sense, they will require additional resources expected through normal processes. Several programs have been identified by the colleges as targeted for increased focus or additional resources.

### 3. TARGETED DEGREES

The current degree projections through 2012-2013 take into account the new initiatives by the university to increase the number of targeted degrees in the areas of Critical Needs, Economic Development, and Emerging Technologies. Baseline improvement was developed by modifying the forecast of targeted degrees to increase the historical production rate that would reflect the effects of other initiatives. It is expected that these forecasts will serve as targets for individual programs. The focused initiatives area

included developing and supporting new initiatives (e.g., recruiting, advising, mentoring) to increase enrollment and to improve retention and completion in selected targeted programs.

### 3.1. Forecast of Targeted Degrees

The initial estimates of degree production at the program-level were computed by applying the five year historical program degree production rate to the program enrollment projections. Due to the increased focus on targeted degree production, the model was then revised to include additional growth in the targeted degree areas. An additional 5% growth was applied to enrollment, and a gradual increase in degree production was applied from 6.05% in 2005 to 10.25% in 2014. This increased not only the number of degrees forecasted, but also the degree production rate.

These estimates were sent to each of the college representatives for their review. Additional increases in the number of targeted degrees were made by the college representatives based on their knowledge of programs focused on increasing targeted degree production. Figure 3 and Table 4 show the degree production prediction from last year as compared to this year. The number of targeted degrees is higher in the revised projection, while the projection of non-targeted degrees is lower. Also, targeted degrees are expected to increase at a higher rate than last year's projection. Last year, the number of targeted degrees were projected to grow from 3,546 in 2004-2005 to 4,594 in 2011-2012, a 3.77% annual growth rate over seven years. This year, the revised projection has the number of targeted degrees growing from 4,088 in 2005-2006 to 5,543 in 2012-2013, a 4.45% annual growth rate over seven years.

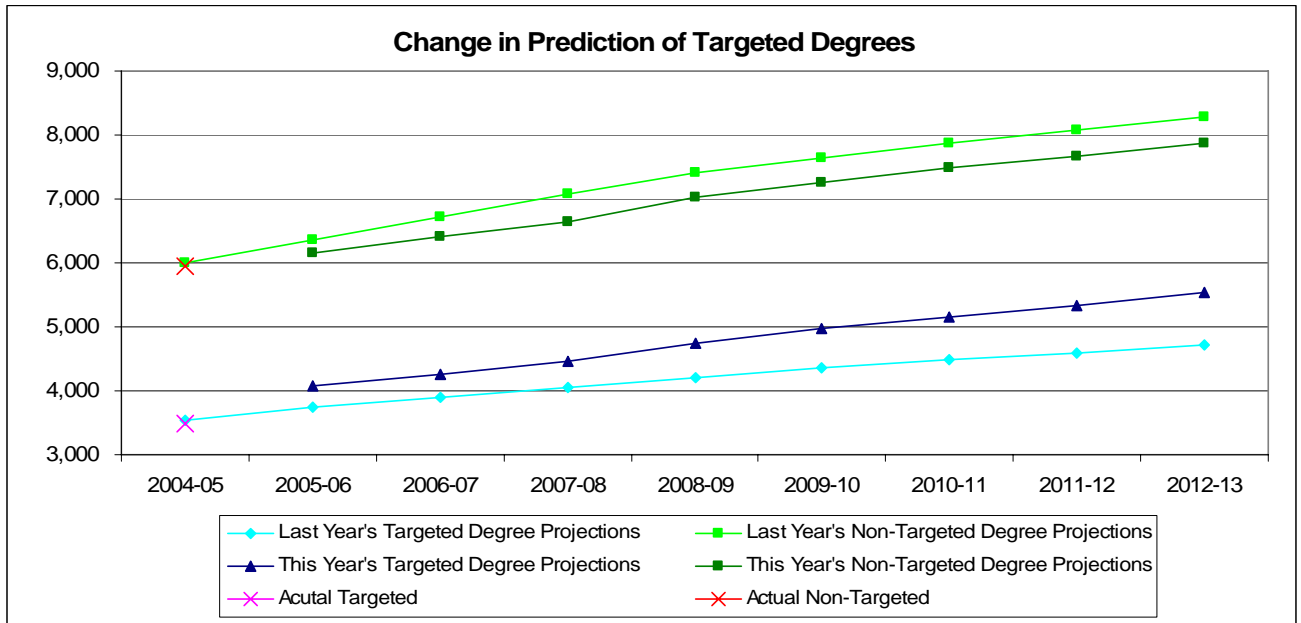


Figure 3. Degree production comparison.

**Table 4.** Targeted degree projection comparisons.

Projected Degrees		2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Last Year's	Targeted	3,546	3,746	3,885	4,048	4,204	4,350	4,478	4,594	4,712
	Non-Targeted	6,011	6,351	6,708	7,081	7,403	7,652	7,868	8,074	8,292
This Year's	Targeted		4,088	4,266	4,472	4,732	4,964	5,151	5,326	5,543
	Non-Targeted		6,162	6,405	6,646	7,024	7,267	7,489	7,677	7,874
Actual	Targeted	3,476								
	Non-Targeted	5,938								

**3.2. Initiatives to Increase Targeted Degrees**

With the focus on targeted degree production, UCF has instituted a special funding procedure designed to increase targeted degree production. The process involved a university-wide solicitation for initiatives that would focus on improving enrollment, retention, and completion in targeted program areas. Appendix D includes the form used to request special funding to increase degree production in a targeted discipline. Thirty-four proposals were received from colleges and academic administration units requesting \$15.3 million over a three year period. Funding was available for nine of these programs committing \$3.079 million over three years. This represents about 20% of the total requested amount. Table 5 shows the programs that received funding to increase targeted degree production.

**Table 5.** UCF targeted degree program initiatives.

Proposal	Programs	Year 1	3-year Total
EDU-2	Supporting Teaching Education Pre-Professionals (STEP)	\$ 105,863	\$ 319,683
EDU-5	Mathematics Education and Science Education: Graduate and Undergraduate	\$ 79,038	\$ 238,402
E&CS-4	Joint Engineering/Pre-Engineering Program (Cocoa Campus)	\$ 109,137	\$ 327,411
E&CS-5	Engineering Technology (Cocoa Campus)	\$ 83,186	\$ 219,558
HPA-3b	Accelerated Nursing	\$ 220,711	\$ 676,743
RC-1	Nursing--Regional Campuses and COHPA	\$ 217,387	\$ 569,923
RC-2	Math and Science--Undergraduate and Graduate (RC & CAS)	\$ 147,465	\$ 453,073
SDES-1	Undeclared Transfer/Major Changes	\$ 48,500	\$ 150,000
US-1	STEM Retention: Bachelor of Science in Math, Physics, Engineering	\$ 42,750	\$ 124,250
Funded Totals		\$ 1,054,037	\$ 3,079,043

The university incentive program provided funding to programs starting in Summer 2005. The projected growth in the targeted programs also depends on the anticipated funding for targeted degree programs included in the Board of Governors' Legislative Budget Request for 2006-2007. That request includes a total of \$40.2 million dollars for initiatives in education, nursing, and engineering. It is anticipated that UCF will receive approximately \$5 million to support its programs.

The degree plan provides a sharp focus on targeted degrees throughout the university. Table 6 identifies the growth in the targeted degrees over the next seven years.

**Table 6.** Degree projections by targeted area.

<b>Projected Targeted Degrees</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>7 Year Annual Growth Rate</b>
Critical Needs: Education	250	254	263	272	284	290	297	303	2.8%
Critical Needs: Health Care	713	781	821	864	890	927	950	970	4.5%
<b>Total Critical Needs</b>	<b>963</b>	<b>1,035</b>	<b>1,084</b>	<b>1,136</b>	<b>1,174</b>	<b>1,217</b>	<b>1,247</b>	<b>1,273</b>	<b>4.1%</b>
Emerging Technologies: Computer Science and Information Technolc	698	720	746	793	846	880	918	957	4.6%
Emerging Technologies: Design and Construction	121	127	131	139	146	151	156	160	4.1%
Emerging Technologies: Electronic Media and Simulation	209	205	226	250	271	292	313	333	6.9%
Emerging Technologies: Mechanical Science and Manufacturing	650	679	715	748	785	813	843	870	4.3%
Emerging Technologies: Natural Science and Technology	367	392	421	470	498	523	544	570	6.5%
Emerging Technologies: Medical Science and Health Care**	-	-	-	-	-	-	-	40	
<b>Total Emerging Technologies</b>	<b>2,045</b>	<b>2,123</b>	<b>2,239</b>	<b>2,400</b>	<b>2,546</b>	<b>2,659</b>	<b>2,774</b>	<b>2,930</b>	<b>5.3%</b>
<b>Economic Development: High-Wage/High Demand Jobs</b>	<b>1,080</b>	<b>1,108</b>	<b>1,149</b>	<b>1,196</b>	<b>1,244</b>	<b>1,275</b>	<b>1,305</b>	<b>1,340</b>	<b>3.1%</b>
<b>Total Targeted</b>	<b>4,088</b>	<b>4,266</b>	<b>4,472</b>	<b>4,732</b>	<b>4,964</b>	<b>5,151</b>	<b>5,326</b>	<b>5,543</b>	<b>4.4%</b>
<b>Total Non-Targeted</b>	<b>6,162</b>	<b>6,405</b>	<b>6,646</b>	<b>7,024</b>	<b>7,267</b>	<b>7,489</b>	<b>7,677</b>	<b>7,874</b>	<b>3.6%</b>
<b>Total Degrees</b>	<b>10,250</b>	<b>10,671</b>	<b>11,118</b>	<b>11,756</b>	<b>12,231</b>	<b>12,640</b>	<b>13,003</b>	<b>13,417</b>	<b>3.9%</b>
<b>Percent Targeted</b>	<b>39.88%</b>	<b>39.98%</b>	<b>40.22%</b>	<b>40.25%</b>	<b>40.59%</b>	<b>40.75%</b>	<b>40.96%</b>	<b>41.31%</b>	

### 3.3. Institutional Priorities—Proposed New Targeted Programs

When collecting the degree projections, the college representatives were asked to identify the programs that were not currently on the list of the BOG's list of targeted degrees, but were still a focused degree area because they are programs of particular importance to UCF as an institution, within the Central Florida region, or programs recommended for inclusion on the targeted program list. From this list, several programs have been identified as having a high institutional priority for inclusion as targeted programs. These "Institutional Priority" programs are listed below: and are the programs that UCF recommends be added to the list of targeted programs. The programs are marked as Institutional Priority in the data file submitted with this report.

#### 3.3.1. Bachelor's degrees

- **43.0106 Forensic Science.** This program is a highly scientific, industrial chemistry-based course of study. It clearly should be included as an emerging technology in category II.B.3.b, Emerging Technologies in Natural Science and Technology
- **52.0901 Hospitality Management.** In February 2005, over 20% of the metropolitan Orlando employment was involved in arts, entertainment, accommodation, and food service industries. Program graduates play a major role in operating in this industry that is critical to regional economic development. It is recommended that a new targeted degree subsection II.B.4.b. be created under the heading of Economic Development: Arts, Entertainment, Accommodation, and Food Service.
- **52.0905 Restaurant and Food Service Management.** The comments for Hospitality Management apply here.

### 3.3.2. *Master's degrees*

- **43.0106 Forensic Science.** This program is a highly scientific, industrial chemistry-based course of study. It clearly should be included as an emerging technology in category II.B.3.b, Emerging Technologies in Natural Science and Technology
- **52.0901 Hospitality Management.** In February 2005, over 20% of the metropolitan Orlando employment was involved in arts, entertainment, accommodation, and food service industries. Program graduates play a major role in operating in this industry that is critical to regional economic development. It is recommended that a new targeted degree subsection II.B.4.b. be created under the heading of Economic Development: Arts, Entertainment, Accommodation, and Food Service.
- **13.1401 TESOL.** Having individuals who can Teach English to Speakers of Other Languages satisfies a critical need in teacher preparation. The TESOL program should be considered as a critical need in higher education.
- **All education Master's degrees.** Currently, most Master's degrees for degree programs in education are not included in critical needs for education. Unlike the majority of education baccalaureate degrees that appear as a critical need or an economic development degree, only the Masters' in a critical need program are targeted. It is recommended that all education degrees be reclassified as critical needs.

### 3.3.3. *Doctoral degrees*

- **13.1401 TESOL.** Having individuals who can Teach English to Speakers of Other Languages satisfies a critical need in teacher preparation. The TESOL program should be considered as a critical need in higher education. The doctoral program will focus on preparing educators to teach English to speakers of other languages.
- **23.1101 Technical and Business Writing/Texts and Technology.** This is a multimedia-intense program that prepares researchers and faculty for teaching in the multimedia/digital media discipline. The degree in Texts and Technology is now considered a terminal degree for purposes of qualifying faculty to teach in the digital media program under SACS reaccreditation guidelines. Because of the extreme nationwide shortage of faculty in this area, it is important that more qualified faculty be produced. It is recommended that this program be included in section II.B.3.f Emerging Technologies in Electronic Media and Simulation
- **42.0101 Human Factors Psychology.** This degree supports faculty members teaching or doing research in the areas of multimedia/digital media and in the modeling and simulation program. A Human Factors Psychology faculty member currently co-directs the interdisciplinary modeling and simulation program. The Human Factors psychology degree is defined as a terminal degree for both the Modeling and Simulation and the Digital Media programs for purposes of determining SACS faculty qualifications.

## 4. REFERENCES

- Armocost, Robert L. and Wilson, Alicia (2002), "Three Analytical Approaches for Predicting Enrollment at a Growing Metropolitan Research University," presented at the Association for Institutional Research National Meeting, Toronto, Ont. CA, June 2002. (available at <http://uaps.ucf.edu/TechnicalReportSeries.html> )

Florida Department of Education (2005), *Projected Florida High School Graduates, 2004-2005—2020-2021*, Tallahassee, FL.

Office of Economic and Demographic Research (2005), Population Projections by Age and County (from Florida Population Projections by County.xls, 3/28/05; Florida2000PopulationbyCounty-byAgeRaceGender1.xls, 3/28/05); Florida Population Projections by Age Groups.xls, 3/30/05; and Selected counties 1970 to 2030 for Sandra Archer.xls, 3/30/05) downloaded from <http://www.state.fl.us/edr/population.htm>.

University of Central Florida (2003a), *Development of the UCF Enrollment Plan 2003-2017*, Orlando, FL.

University of Central Florida (2003b), Supplemental Information on Projected Graduate Enrollment, Orlando, FL.

University of Central Florida (2004), *UCF Enrollment and Degree Plan 2004-2015*, Orlando, FL (June 23, 2004).

University of Central Florida (2005), *UCF Enrollment Plan 2005-2013*, Orlando, FL (June 14, 2005).

## **APPENDIX A: PROGRAM DEGREE PROJECTIONS**

### **1. PROGRAM HEADCOUNT AND DEGREE PROJECTION MODEL**

The Chancellor's request requires annual degree estimates by level, and by program at the 6-digit CIP code level. A projection of degrees for any new program is also required at the 6-digit CIP level.

The UCF enrollment prediction-projection model described in the report "UCF FTE Enrollment Plan 2005-2013" operates at an aggregate university level to estimate total fundable Fall headcount and annual fundable FTE. For the past several years, all UCF graduate programs have been required to update new student estimates and the Office of Graduate Studies has developed enrollment projections for each program. Although the College of Engineering and Computer Science has also used a 5-year projection model for its undergraduate programs, similar results have not been widely developed for undergraduate programs in the remainder of the university.

The UCF Enrollment and Degree Plan 2004-2015 dated June 23, 2004 was the first attempt to develop enrollment and degree projections at the program level for all university programs. The enrollment projections developed using this micro approach corresponded very well with the aggregate enrollment projections that drive the FTE projections. The approach used in 2004 to estimate program enrollment and degrees is the basis for the approach used to develop the current degree projections that are reported here. The approach is described in the following sections.

#### **1.1. Program Headcount and Degree Projection Estimation Model**

Estimates of program enrollment and degree production must necessarily be based on strong program input. Rather than require programs to generate these estimates from a blank sheet, initial estimates were provided to all programs using a consistent approach. In order to obtain the maximum value from program input, the estimates were provided at the HEGIS code level since this is where real program knowledge resides.

##### ***1.1.1. Program Headcount Estimation Model***

Using five years of Fall enrollment data from Fall 2000 through Fall 2004, 10 year enrollment projections were developed using three separate models. A linear model (constant growth rate) and a logarithmic model (decreasing growth rate) were developed using a least squares fit to the data. The third model mirrored the overall university growth rate in the university level model. The average of these three projections was used as the initial enrollment estimates for each degree level (including certificates). Enrollment projections were also included for unclassified students in each HEGIS code as well as undeclared students. These enrollment headcounts were used only as a factor to determine degree projections and are therefore not reported here.

The directions from the state indicated that counts should be first majors only. In practice, most students declare a second major or minor close to the time that they file an intent to graduate form. The number of declared double majors is small relative to the inherent enrollment projection error so no effort was made to separate those students. Additionally, there is no reasonable way to separate the associated FTE.

### **1.1.2. Program Degree Estimation Model**

Initial estimates of degree production at the program were computed by applying the five year historical program degree production rate to the program enrollment projections. The degree production rate was computed by dividing the sum of the degrees awarded during the period by the sum of the fall enrollments during the period. This method provides the optimal estimate of the degree production rate, provided that the underlying rate is constant.

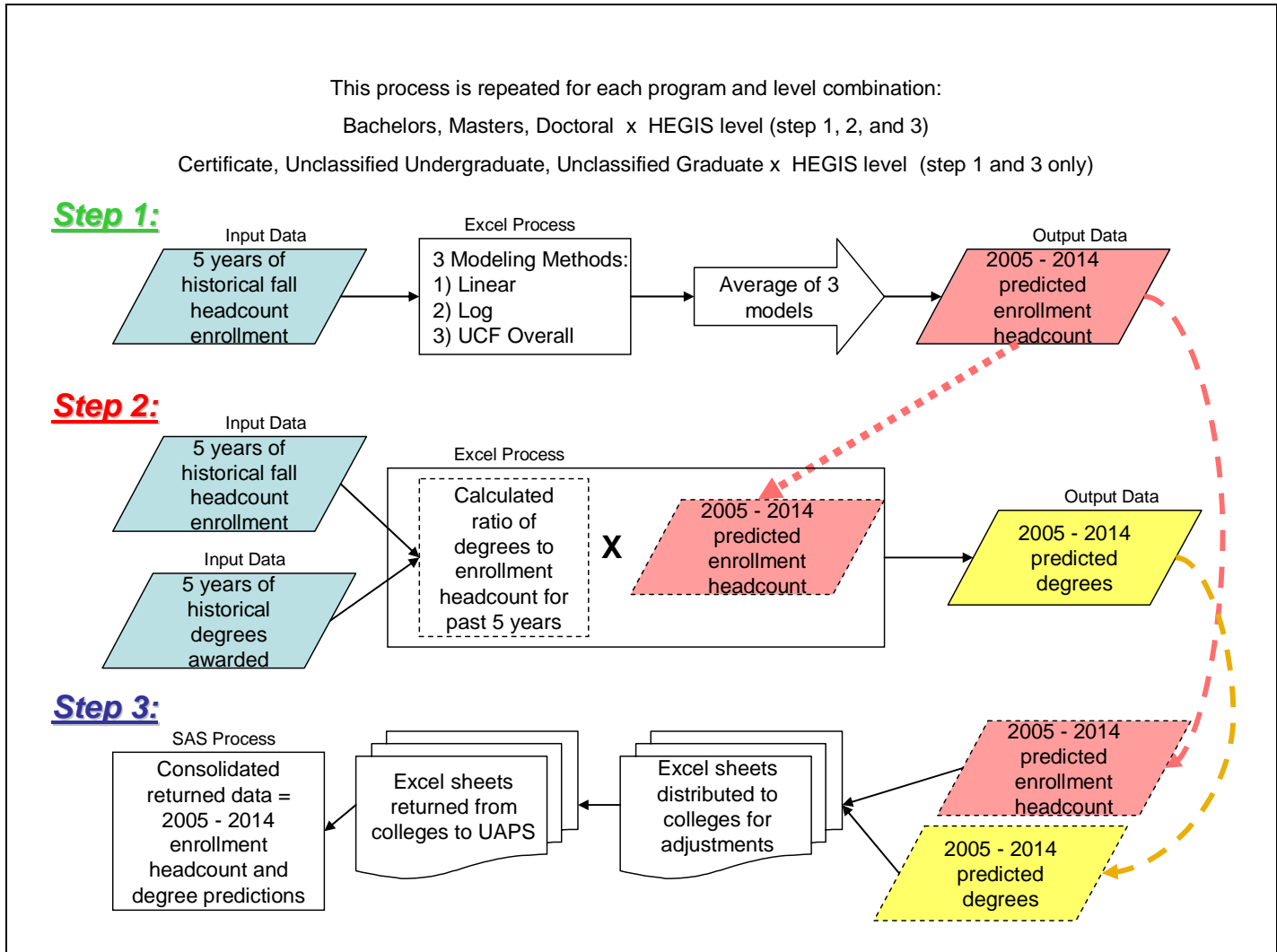
### **1.2. Model Implementation**

The enrollment and degree estimates were developed and presented to the programs in an Excel format. Using a designed template, a VBA macro read five years of historical enrollment and degree data using a table lookup function, then computed the parameters for the prediction functions for all degree levels, created the associated graphs, and saved the worksheet under the HEGIS code name. A separate worksheet was created for each HEGIS code. The enrollment and degree projections for each degree level were read into a consolidated worksheet to provide a composite summary.

### **1.3. College Review and Modification of Program Estimates**

The enrollment and degree estimates were delivered to the programs for review with the guidelines in Appendix B. Colleges were asked to review each program and either accept or modify the enrollment and degree estimates that had been computed. Some program representatives adopted the projections made with the model. In other cases, programs used their best judgment to make modifications that reflect local plans for the program. The program representatives delivered their changes either electronically by making changes in the Excel sheets, by making handwritten changes on paper printouts, or by communicating the changes in email text or verbal conversations with UAPS.

The entire process is summarized in Figures A-1 and A-2 and in Appendix B. Figure A-1 illustrates the process flow and Figure A-2 illustrates the detailed projection approach for a given program. The guidelines in Appendix B illustrate the step by step procedures required as part of the college-level review and modification of the estimates.



**Figure A-1.** Degree estimation process.

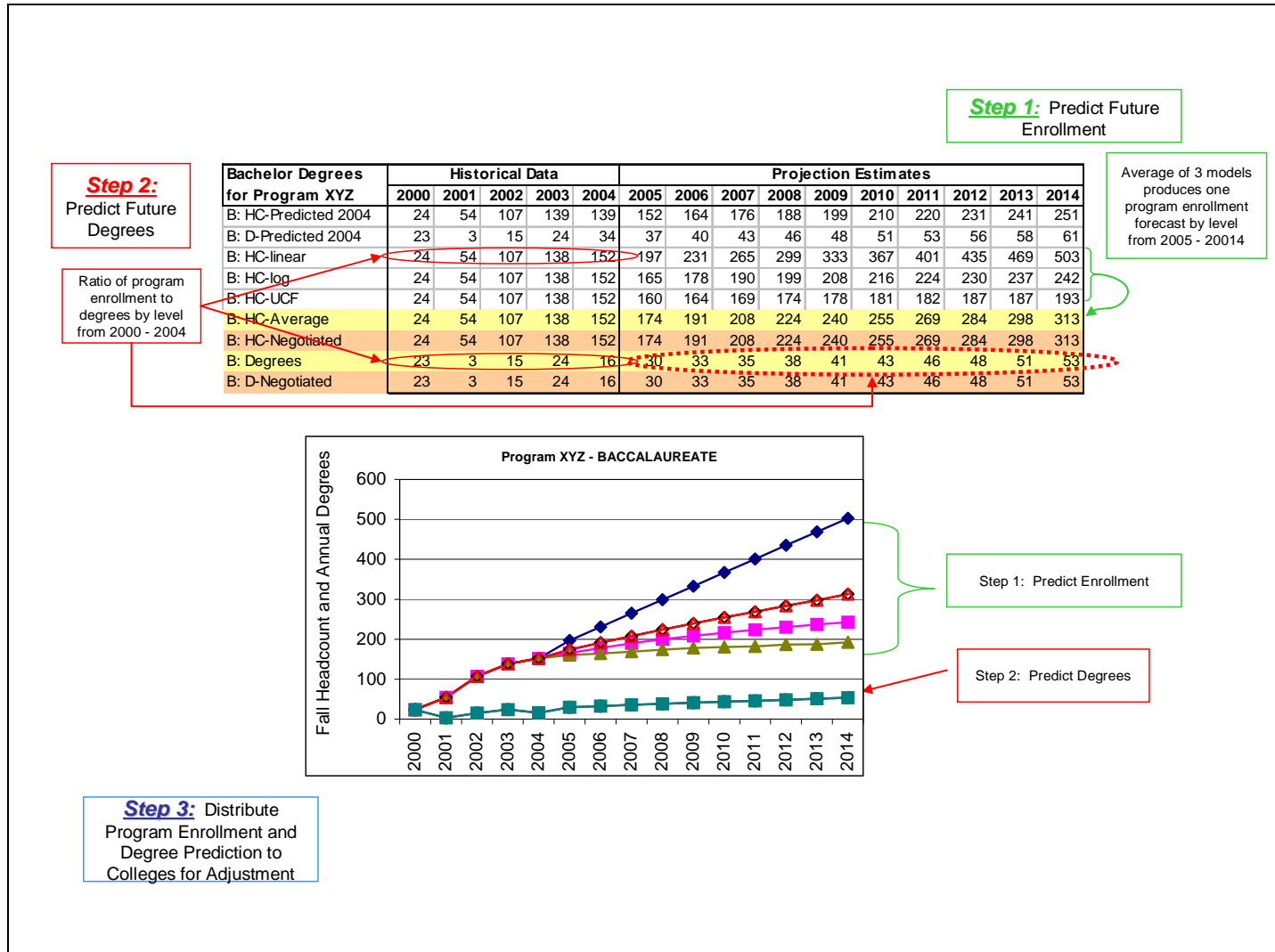


Figure A-2. Degree projection worksheet.

#### 1.4. Model Validation: Comparison with Previous Year's Results

Because the same modeling approach was used in the previous year, it is possible to better understand the accuracy of the approach by comparing the actual number of degrees produced in 2004-2005 with the projections from June 2004. Figure A-3 and Table A-1 illustrate the relative accuracy of the model and colleges' projections. In general, graduate degrees were underestimated and undergraduate degrees were overestimated. Overall, the total projected number of degrees was only 1.5% higher than the actual number of degrees awarded in the 2004-2005 academic year.

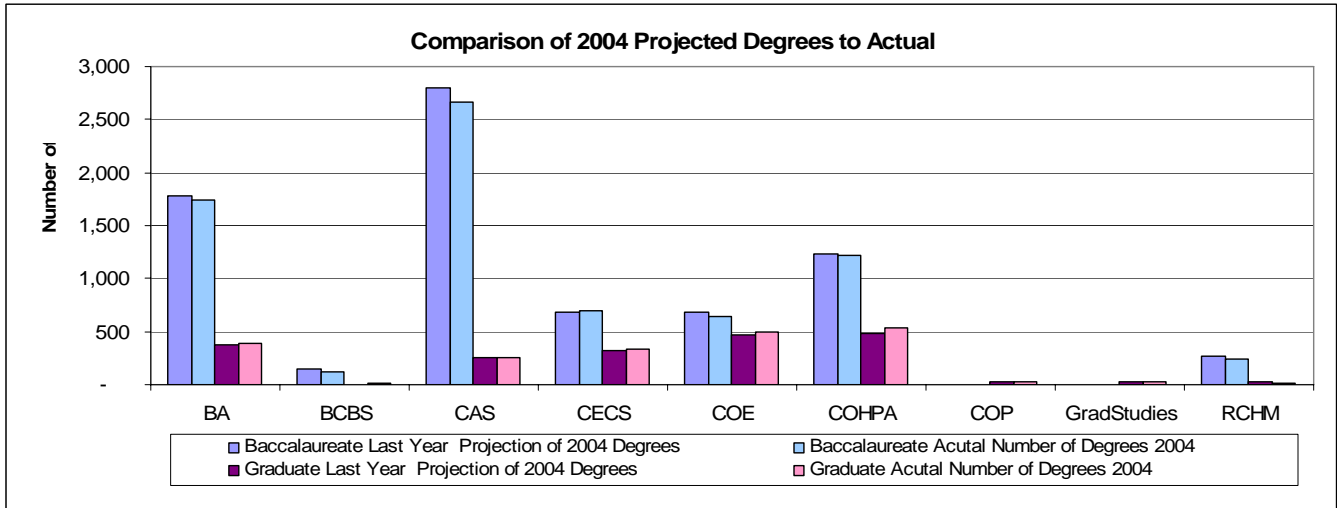


Figure A-3. Degree projection comparison, 2004-2005.

Table A-1. Degree projection comparison data, 2005-2005.

Projected Degrees by College		Baccalaureate			Graduate		
		Last Year Projection of 2004 Degrees	Actual Number of Degrees 2004	% Difference	Last Year Projection of 2004 Degrees	Actual Number of Degrees 2004	% Difference
BA	Business Admin	1,784	1,737	-2.6%	376	387	2.8%
BCBS	Burnett College of Biomedical Sci	152	119	-21.5%	6	8	23.6%
CAS	Arts & Science	2,798	2,660	-4.9%	248	256	3.1%
CECS	Engineering & Computer Science	678	697	2.8%	321	337	5.0%
COE	Education	680	648	-4.7%	466	489	4.8%
COHPA	Health & Public Affairs	1,227	1,222	-0.4%	487	542	11.3%
COP	Optics & Photonics	-	-	-	21	33	-
GradStudies	Interdisciplinary	-	-	-	22	23	-
RCHM	Rosen College of Hospitality Mngmt	264	240	-9.1%	27	16	-40.0%
<b>Total</b>		<b>7,582</b>	<b>7,323</b>	<b>-3.4%</b>	<b>1,975</b>	<b>2,091</b>	<b>5.9%</b>

## **APPENDIX B: PROGRAM ENROLLMENT PROJECTIONS GUIDELINES**

### **PROGRAM ENROLLMENT AND DEGREE PROJECTIONS COLLEGE REVIEW GUIDELINES**

#### **Background**

UCF is required to submit a university enrollment and degree plan to the state by June 14, 2005. The submitted plan must include Annual FTE plans by level and campus, and Annual Degree estimates by level in individual programs from 2005-06 through 2014-15. The reporting requirements are broken down by 6-digit CIP codes by level. In addition, UCF must separately identify all programs that are “targeted” for growth or additional resources, whether or not they are also targeted by the Board of Governors.

The development of the degree plans requires local program knowledge that only the colleges can provide. The purpose of this request is to obtain your review and suggested modifications of the degree production projections by level and degree program.

The current planning requirements are similar to the enrollment and degree projections developed with the colleges last year and submitted to the state in June 2004. UAPS is developing the overall FTE estimates consistent with strategic guidance from the Provost. Initial projections for program fall enrollment and annual degree production have been prepared at the HEGIS code level for review by the colleges. Similar to last year’s process, we used the past five years’ enrollment and degree data for each program to project enrollment and degree estimates for the next ten years. We used the average of three different enrollment projection models with the average degree production rate for each program and included a slight upward adjustment for enrollment and degrees in BOG targeted programs. For comparison purposes, we have also included last year’s projections that were submitted to the state.

The new factor this year that was not present last year is the requirement to identify and focus on targeted programs. The enrollment and degree production projections for 2005-2015 have been identified as either BOG targeted or non-targeted degrees for each program. The Provost is supporting several initiatives to increase production of degrees in targeted areas. The aggregate number of targeted degrees (overall programs and levels) identified for each college is considered a MINIMUM for planning purposes.

As indicated above, the projection models do not account for local program knowledge that only the colleges can provide. For example, what may be some normal variation in a program in “steady-state” could result in a projection showing an increase or decrease over the planning period. In some cases, the projections ultimately show a zero enrollment for programs that had an overall declining enrollment for the past five years. In other cases, the projections suggest apparent growth where no real growth may be anticipated by the program. In order to include the key local knowledge, we need help from the programs.

#### **Data Provided**

We are providing each college point-of-contact (designated by the Dean) with an Excel workbook that includes a separate summary worksheet for each degree level and a summary worksheet for the college. Each degree level worksheet shows the new projected enrollment and degree numbers and also shows the projections that were submitted last year. In some cases, the projections from last year were used in the new projections because of particular program changes identified by the colleges that are planned for the future (e.g., consolidation of programs.) Note that the values in the degree level summary sheets are summed automatically in the college summary sheet.

#### **College Requirements**

Each college is requested to review the fall enrollment and annual degree projections and make recommended revisions for each program and degree level. The primary focus for the submission to the

state is annual degree projections. However, fall enrollment projections should be adjusted to be consistent with annual degree projections. All of the colleges have been made aware of the focus by the Board of Governors on targeted programs for critical needs in health and education, emerging technologies, and high wage and high demand jobs. Targeted programs are identified on each summary sheet. Please review the targeted programs carefully and adjust the fall enrollment and annual degree projections consistent with the individual program initiatives to increase degree production in those areas.

You can make all of the changes directly on the degree level summary sheet. You can make those changes electronically on the Excel worksheet, or make legible handwritten changes on a printed version and UAPS will take care of entering them. The following guidelines apply:

1. For all programs, adjust the projected fall enrollment in the unshaded “This Year” rows as appropriate.

Bachelor's Summary			ENROLLMENT PROJECTIONS														
Ty/Ly	Hegis	Enrollment / Degrees	Historical Data					Projection Estimates									
			2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
ThisYear	000819 EXCEPTIONAL EDUCATION	Enrollment	0	0	0	0	51	147	152	158	163	168	173	179	179	179	179
LastYear	000819 EXCEPTIONAL EDUCATION	Enrollment	0	0	0	0	130	140	145	150	155	160	165	170	170	170	170
ThisYear	000819 EXCEPTIONAL EDUCATION	Degrees	0	0	0	37	54	64	66	69	72	76	78	80	80	80	80
LastYear	000819 EXCEPTIONAL EDUCATION	Degrees	0	0	0	37	56	60	62	64	66	69	71	73	73	73	73
ThisYear	000802 ELEMENTARY EDUCATION	Enrollment	838	889	908	948	963	1046	1071	1096	1120	1143	1163	1178	1202	1216	1241
LastYear	000802 ELEMENTARY EDUCATION	Enrollment	838	889	908	948	967	988	1010	1033	1055	1075	1095	1107	1127	1137	1146
ThisYear	000802 ELEMENTARY EDUCATION	Degrees	378	360	377	386	381	437	452	467	482	497	505	512	522	529	539
LastYear	000802 ELEMENTARY EDUCATION	Degrees	378	360	377	383	402	411	420	430	439	447	455	461	469	473	477
ThisYear	000801 EARLY CHILDHOOD EDUCATION	Enrollment	138	128	145	179	224	234	246	259	271	283	294	304	315	325	336
LastYear	000801 EARLY CHILDHOOD EDUCATION	Enrollment	138	128	145	179	174	179	205	210	220	225	230	235	240	245	250
ThisYear	000801 EARLY CHILDHOOD EDUCATION	Degrees	72	61	79	52	82	100	107	113	120	126	131	135	141	145	150
LastYear	000801 EARLY CHILDHOOD EDUCATION	Degrees	72	61	79	52	79	82	94	96	101	103	105	108	110	112	114
ThisYear	000848 ENGLISH LANGUAGE ARTS	Enrollment	62	64	68	67	94	96	100	104	108	111	115	118	122	125	128
LastYear	000848 ENGLISH LANGUAGE ARTS	Enrollment	62	64	68	67	65	65	65	65	65	65	65	65	65	64	63
ThisYear	000848 ENGLISH LANGUAGE ARTS	Degrees	18	17	21	17	24	26	28	29	31	32	33	34	35	36	37
LastYear	000848 ENGLISH LANGUAGE ARTS	Degrees	18	17	21	17	20	20	20	20	20	20	20	19	19	19	19
ThisYear	000833 MATHEMATICS EDUCATION	Enrollment	55	51	48	61	67	70	72	74	76	78	80	82	84	85	87
LastYear	000833 MATHEMATICS EDUCATION	Enrollment	55	51	48	61	63	65	67	69	71	73	75	77	80	82	84
ThisYear	000833 MATHEMATICS EDUCATION	Degrees	18	15	18	10	11	18	19	19	20	21	21	22	22	23	23
LastYear	000833 MATHEMATICS EDUCATION	Degrees	18	15	18	10	19	20	20	21	21	22	23	23	24	25	26

2. For all programs, adjust the projected annual degrees in the yellow-shaded “This Year” row below the enrollment adjustment as appropriate. Note that degree projections can be revised independent of enrollment in order to reflect initiatives to increase degree productivity.
3. For programs showing a decreasing enrollment or degree production, please identify whether the program will disappear (if so, please enter a zero enrollment at the appropriate year), or enter the value of what the planned enrollment will be.
4. For programs showing an increasing enrollment or degree production, please determine whether that growth will continue or if there some year where it levels off. Adjust the estimates accordingly.
5. Please review whether some programs have been consolidated with other programs or will be consolidated in the future. Please identify them separately and we will revise the worksheet appropriately.
6. Identify any new programs (whether approved yet or not) and develop fall headcount and annual degree estimates. Add the new programs on the degree level summary worksheet. Programs that were added in last year’s projections have already been included.
7. For any programs that the college will be targeting for growth, please indicate that with a “Yes” in the Institutional Priority column and add an explanation in the Comment column. Including the word “adjusted” in the enrollment comment column or the degree comment column will change

the font of those numbers to blue italics. Note that some records already contain some adjustments.

Bachelor's Summary						
Ty/Ly	Hegis	CIP	Targeted (Yes/No)	Dept Name	Comment	Institutional Priority?
ThisYear	000819 EXCEPTIONAL EDUCATION	131001 Special Ed, General	Yes	ED Child, Family & Comm Sci	adjusted: last year numbers	
LastYear	000819 EXCEPTIONAL EDUCATION	131001 Special Ed, General	Yes	ED Child, Family & Comm Sci	Degrees estimated using prior combined rate.	
ThisYear	000819 EXCEPTIONAL EDUCATION	131001 Special Ed, General	Yes	ED Child, Family & Comm Sci	adjusted: last year numbers	
LastYear	000819 EXCEPTIONAL EDUCATION	131001 Special Ed, General	Yes	ED Child, Family & Comm Sci	Degrees estimated using prior combined rate.	
ThisYear	000802 ELEMENTARY EDUCATION (GEN	131202 Elementary Teacher Ed	Yes	Teaching & Learning Principles	type comment here	
LastYear	000802 ELEMENTARY EDUCATION (GEN	131202 Elementary Teacher Ed	Yes	Teaching & Learning Principles		0
ThisYear	000802 ELEMENTARY EDUCATION (GEN	131202 Elementary Teacher Ed	Yes	Teaching & Learning Principles	type comment here	
LastYear	000802 ELEMENTARY EDUCATION (GEN	131202 Elementary Teacher Ed	Yes	Teaching & Learning Principles		0
ThisYear	000801 EARLY CHILDHOOD EDUCATION	131210 Pre-Elem/Early Childhood Teache	Yes	ED Child, Family & Comm Sci	type comment here	
LastYear	000801 EARLY CHILDHOOD EDUCATION	131210 Pre-Elem/Early Childhood Teache	Yes	ED Child, Family & Comm Sci		0
ThisYear	000801 EARLY CHILDHOOD EDUCATION	131210 Pre-Elem/Early Childhood Teache	Yes	ED Child, Family & Comm Sci	type comment here	
LastYear	000801 EARLY CHILDHOOD EDUCATION	131210 Pre-Elem/Early Childhood Teache	Yes	ED Child, Family & Comm Sci		0
ThisYear	000848 ENGLISH LANGUAGE ARTS EDU	131305 English Teacher Ed.	Yes	Teaching & Learning Principles	type comment here	
LastYear	000848 ENGLISH LANGUAGE ARTS EDU	131305 English Teacher Ed.	Yes	Teaching & Learning Principles	3% growth from 23.	
ThisYear	000848 ENGLISH LANGUAGE ARTS EDU	131305 English Teacher Ed.	Yes	Teaching & Learning Principles	type comment here	
LastYear	000848 ENGLISH LANGUAGE ARTS EDU	131305 English Teacher Ed.	Yes	Teaching & Learning Principles	3% growth from 23.	
ThisYear	000833 MATHEMATICS EDUCATION	131311 Mathematics Teacher Ed.	Yes	Teaching & Learning Principles	type comment here	
LastYear	000833 MATHEMATICS EDUCATION	131311 Mathematics Teacher Ed.	Yes	Teaching & Learning Principles	3% growth from 23	
ThisYear	000833 MATHEMATICS EDUCATION	131311 Mathematics Teacher Ed.	Yes	Teaching & Learning Principles	type comment here	
LastYear	000833 MATHEMATICS EDUCATION	131311 Mathematics Teacher Ed.	Yes	Teaching & Learning Principles	3% growth from 23	

The strategic guidance has established aggregate minimum requirements for targeted programs in each college. Those values are highlighted in yellow in the college summary sheet. After the projected degrees in all programs have been reviewed and modified on the degree level summary sheets, the total of the projected targeted and non-targeted degrees is computed automatically in the college summary sheet. This total must be greater than or equal to the aggregate minimum requirement for the college.

COLLEGE Summary		COLLEGE DEGREE PROJECTIONS														
Ty/Ly	Targeted	Historical Data					Projection Estimates									
		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
ThisYear	No	221	248	242	288	325	306	316	326	336	344	355	365	375	385	397
ThisYear	Yes	809	791	821	850	842	944	980	1,018	1,057	1,096	1,120	1,142	1,166	1,184	1,208
	<i>Minimum for Targeted</i>	809	791	821	850	842	944	980	1,018	1,057	1,096	1,120	1,142	1,166	1,184	1,208
% Targeted		78.5%	76.1%	77.2%	74.7%	72.2%	75.5%	75.6%	75.8%	75.9%	76.1%	75.9%	75.8%	75.7%	75.4%	75.3%
<b>ThisYear Total</b>		<b>1,030</b>	<b>1,039</b>	<b>1,063</b>	<b>1,138</b>	<b>1,167</b>	<b>1,250</b>	<b>1,296</b>	<b>1,344</b>	<b>1,392</b>	<b>1,440</b>	<b>1,474</b>	<b>1,506</b>	<b>1,541</b>	<b>1,569</b>	<b>1,605</b>
LastYear	No	221	248	242	301	309	327	341	356	370	384	394	403	415	427	440
LastYear	Yes	809	792	819	833	840	886	917	941	962	985	1,000	1,014	1,032	1,041	1,049
% Targeted		78.5%	76.2%	77.2%	73.5%	73.1%	73.0%	72.9%	72.5%	72.2%	72.0%	71.7%	71.5%	71.3%	70.9%	70.5%
<b>LastYear Total</b>		<b>1,030</b>	<b>1,040</b>	<b>1,061</b>	<b>1,134</b>	<b>1,149</b>	<b>1,212</b>	<b>1,257</b>	<b>1,297</b>	<b>1,333</b>	<b>1,369</b>	<b>1,394</b>	<b>1,418</b>	<b>1,447</b>	<b>1,468</b>	<b>1,489</b>

## UAPS Support

Bob Armacost and Sandra Archer are available to meet with the colleges to review the requirements and to review the current projections. The intention is to have as much program input from the college as possible while minimizing the workload on programs. The deadline for submission to the state is very tight and UAPS will be available as needed to assist the colleges.

## Schedule

- May 19, 2005 Distribute draft enrollment and degree projections
- June 1, 2005 Colleges submit revised enrollment and degree projections to UAPS
- June 2-3, 2005 Consultation with colleges to clarify projections
- June 6-8, 2005 Consultation with Provost to finalize draft plan
- June 9, 2005 Draft plans to President
- June 13, 2005 BOT concurrence

June 14, 2005    Submit plan

### **Technical Notes**

1. Save the *name\_of\_college 18May2005.xls* workbook to your hard-drive.
2. Open the workbook. If prompted by a message, click “Enable Macros”.
3. When you make a change in the individual level summary worksheet, it will update the totals on the college summary sheet.
4. When you make changes, please use “SaveAs” and save the workbook with the same base name appending the date that you saved it. This will ensure that you have a backup and will help in identifying the “current” file.

### **HELP**

If you need help with this at any time, please call or email Bob or Sandra. We are here to make this as painless as possible for you.

- Bob Armacost—882-0286 [armacost@mail.ucf.edu](mailto:armacost@mail.ucf.edu)
- Sandra Archer—882-0287 [archer@mail.ucf.edu](mailto:archer@mail.ucf.edu)

## APPENDIX C: ANNUAL DEGREE PROJECTIONS BY PROGRAM

### Baccalaureate Degrees (Table 1 of 2)

CIP Code	CIP Title	Targeted	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
05.0000	Area, Ethnic, Cultural and Gender Studies		-	-	-	-	2	4	6	8
09.0102	Mass Communication/Media Studies.		118	118	119	119	120	120	121	121
09.0401	Journalism.		29	29	30	30	30	30	31	31
09.0701	Radio and Television.		126	134	136	137	140	140	143	143
09.0903	Advertising.		122	122	123	124	125	126	127	128
11.0101	Computer and Information Sciences, General.	Emerging Technologies: Computer Science and Information Technology	100	95	90	85	85	90	95	100
11.0103	Information Technology.	Emerging Technologies: Computer Science and Information Technology	93	102	112	119	126	134	141	154
13.1001	Special Education and Teaching, General.	Critical Needs: Education	64	66	69	72	76	78	80	80
13.1202	Elementary Education and Teaching.	Economic Development: High-Wage/High Demand Jobs	437	452	467	482	497	505	512	522
13.1210	Early Childhood Education and Teaching.	Economic Development: High-Wage/High Demand Jobs	100	107	113	120	126	131	135	141
13.1302	Art Teacher Education.		14	14	14	15	15	16	16	17
13.1305	English/Language Arts Teacher Education.	Economic Development: High-Wage/High Demand Jobs	26	28	29	31	32	33	34	35
13.1306	Foreign Language Teacher Education.	Critical Needs: Education	3	3	2	3	3	3	3	3
13.1311	Mathematics Teacher Education.	Critical Needs: Education	18	19	19	20	21	21	22	22
13.1312	Music Teacher Education.	Economic Development: High-Wage/High Demand Jobs	5	6	6	7	8	8	9	10
13.1314	Physical Education Teaching and Coaching.	Economic Development: High-Wage/High Demand Jobs	41	43	48	50	52	54	55	55
13.1316	Science Teacher Education/General Science Teacher Education.	Critical Needs: Education	16	16	16	16	16	16	16	16
13.1317	Social Science Teacher Education.	Economic Development: High-Wage/High Demand Jobs	34	34	35	36	36	37	37	37
13.1320	Trade and Industrial Teacher Education.	Critical Needs: Education	20	21	24	26	29	31	33	35
14.0201	Aerospace, Aeronautical and Astronautical Engineering.	Emerging Technologies: Mechanical Science and Manufacturing	38	40	43	45	47	49	51	53
14.0801	Civil Engineering, General.	Emerging Technologies: Design and Construction	85	90	96	101	106	108	110	112
14.0901	Computer Engineering, General.	Emerging Technologies: Computer Science and Information Technology	97	102	107	112	118	120	122	125
14.1001	Electrical, Electronics and Communications Engineering.	Emerging Technologies: Mechanical Science and Manufacturing	102	106	111	115	119	122	125	128
14.1401	Environmental/Environmental Health Engineering.	Emerging Technologies: Natural Science and Technology	19	19	20	21	21	21	22	22
14.1901	Mechanical Engineering.	Emerging Technologies: Mechanical Science and Manufacturing	109	116	123	130	138	143	148	154
14.3501	Industrial Engineering.	Emerging Technologies: Mechanical Science and Manufacturing	33	34	35	37	38	40	41	43
15.0303	Electrical, Electronic and Communications Engineering Technology/Technician.	Emerging Technologies: Mechanical Science and Manufacturing	22	17	17	18	18	18	18	18
15.0899	Mechanical Engineering Related Technologies/Technicians, Other.	Emerging Technologies: Mechanical Science and Manufacturing	25	27	30	32	34	35	36	36
15.1202	Computer Technology/Computer Systems Technology.	Emerging Technologies: Computer Science and Information Technology	40	45	50	56	61	66	70	75
16.0101	Foreign Languages and Literatures, General.		4	5	5	5	5	5	5	5
16.0901	French Language and Literature.		7	8	8	9	10	10	11	11
16.0905	Spanish Language and Literature.		13	14	14	15	15	15	16	16
22.0302	Legal Assistant/Paralegal.		221	234	247	260	272	284	294	306
23.0101	English Language and Literature, General.		168	169	171	173	175	176	179	180
23.1001	Speech and Rhetorical Studies.		104	105	106	107	108	109	110	111
24.0101	Liberal Arts and Sciences/Liberal Studies.		497	521	546	570	591	613	632	654
24.0102	Applied Science AS to BS		12	13	14	15	16	17	19	20
24.0103	Humanities/Humanistic Studies.		18	19	20	21	22	23	24	25
26.0101	Biology/Biological Sciences, General.	Emerging Technologies: Natural Science and Technology	90	93	97	100	103	105	106	109
26.0503	Medical Microbiology and Bacteriology.	Emerging Technologies: Natural Science and Technology	173	186	200	213	227	237	247	258
26.1201	Biotechnology	Emerging Technologies: Natural Science and Technology	-	-	-	10	12	15	18	22

## Baccalaureate Degrees (Table 2 of 2)

CIP Code	CIP Title	Targeted	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
27.0101	Mathematics, General.	Emerging Technologies: Mechanical Science and Manufacturing	19	20	21	22	24	26	28	29
27.0501	Statistics, General.	Emerging Technologies: Mechanical Science and Manufacturing	7	8	9	10	11	12	12	13
38.0101	Philosophy.		17	18	19	20	21	22	22	23
40.0501	Chemistry, General.	Emerging Technologies: Natural Science and Technology	14	15	15	16	17	18	18	19
40.0801	Physics, General.	Emerging Technologies: Natural Science and Technology	9	9	10	12	12	13	14	15
42.0101	Psychology, General.		684	698	711	725	738	752	762	777
43.0104	Criminal Justice/Safety Studies.		319	334	350	365	379	392	404	418
43.0106	Forensic Science and Technology.	Institutional Priority	25	26	28	29	30	32	33	34
44.0401	Public Administration.	Economic Development: High-Wage/High Demand Jobs	60	61	63	64	66	67	67	68
44.0701	Social Work.		71	71	71	71	70	70	70	70
45.0101	Social Sciences, General.		8	8	8	8	8	8	9	9
45.0201	Anthropology.		38	38	38	38	39	39	39	39
45.0601	Economics, General.		9	9	9	9	9	9	9	9
45.1001	Political Science and Government, General.		227	231	233	237	241	244	246	251
45.1101	Sociology.		39	39	40	41	41	42	42	43
50.0501	Drama and Dramatics/Theatre Arts, General.		57	58	59	60	62	65	68	71
50.0602	Cinematography and Film/Video Production.		45	58	67	71	75	79	82	86
50.0605	Photography		5	10	13	18	20	25	30	34
50.0701	Art/Art Studies, General.		37	38	39	40	41	42	43	44
50.0702	Fine/Studio Arts, General.		45	48	50	52	53	53	54	55
50.0706	Intermedia/Multimedia.	Emerging Technologies: Electronic Media and Simulation	182	172	189	209	227	245	264	279
50.0903	Music Performance, General.		15	17	19	20	22	23	25	26
51.0000	Health Services/Allied Health/Health Sciences, General.	Critical Needs: Health Care	62	54	68	72	75	78	81	83
51.0204	Audiology/Audiologist and Speech-Language Pathology/Pathologist.		137	139	142	145	147	149	150	153
51.0701	Health/Health Care Administration/Management.	Critical Needs: Health Care	140	145	150	155	160	170	175	177
51.0706	Health Information/Medical Records Administration/Administrator.	Critical Needs: Health Care	30	31	32	33	34	35	36	37
51.0907	Medical Radiologic Technology/Science - Radiation Therapist.	Critical Needs: Health Care	15	15	15	15	16	15	15	15
51.0908	Respiratory Care Therapy/Therapist.	Critical Needs: Health Care	37	38	39	40	40	41	41	42
51.1005	Clinical Laboratory Science/Medical Technology/Technologist.	Critical Needs: Health Care	14	16	16	16	16	16	16	16
51.1601	Nursing/Registered Nurse (RN, ASN, BSN, MSN).	Critical Needs: Health Care	272	295	309	325	338	351	363	374
52.0101	Business/Commerce, General.		205	218	220	223	225	229	230	233
52.0201	Business Administration and Management, General.		331	353	374	395	415	434	451	471
52.0301	Accounting.	Economic Development: High-Wage/High Demand Jobs	279	293	307	321	334	343	352	362
52.0601	Business/Managerial Economics.		70	75	80	87	93	99	106	114
52.0801	Finance, General.		384	396	408	420	432	432	432	432
52.0901	Hospitality Administration/Management, General.	Institutional Priority	277	278	284	424	459	503	516	525
52.0905	Restaurant/Food Services Management	Institutional Priority	2	6	8	10	20	25	30	40
52.1201	Management Information Systems, General.	Emerging Technologies: Computer Science and Information Technology	200	200	200	220	250	250	250	250
52.1304	Actuarial Science.		7	7	8	9	10	10	11	12
52.1401	Marketing/Marketing Management, General.		364	376	395	410	420	435	450	460
54.0101	History, General.		91	96	100	105	110	114	118	123

## Master's Degrees (Table 1 of 2)

CIP Code	CIP Title	Targeted	2005-	2006-	2007-	2008-	2009-	2010-	2011-	2012-
			06	07	08	09	10	11	12	13
09.0102	Mass Communication/Media Studies.		43	47	50	54	57	60	64	67
11.0101	Computer and Information Sciences, General.	Emerging Technologies: Computer Science and Information Technology	50	52	53	55	56	57	59	60
13.0301	Curriculum and Instruction.	Institutional Priority	18	20	22	24	25	26	28	30
13.0401	Educational Leadership and Administration, General.	Institutional Priority	66	68	69	71	72	74	75	76
13.0501	Educational/Instructional Media Design.	Institutional Priority	33	32	32	31	30	30	29	29
13.1001	Special Education and Teaching, General.	Critical Needs: Education	66	66	66	66	67	66	66	67
13.1101	Counselor Education/School Counseling and Guidance Services.	Institutional Priority	53	55	57	59	61	63	66	68
13.1202	Elementary Education and Teaching.	Institutional Priority	56	56	56	56	56	56	56	57
13.1210	Early Childhood Education and Teaching.	Institutional Priority	9	9	10	11	12	13	13	13
13.1299	Teacher Education and Professional Development, Specific Levels and Methods,	Critical Needs: Education	3	3	3	4	4	4	5	5
13.1302	Art Teacher Education.	Institutional Priority	7	7	7	8	8	9	9	9
13.1305	English/Language Arts Teacher Education.	Institutional Priority	10	10	10	10	10	10	10	11
13.1311	Mathematics Teacher Education.	Critical Needs: Education	10	10	11	11	11	12	12	12
13.1312	Music Teacher Education.	Institutional Priority	11	12	13	14	15	16	17	18
13.1314	Physical Education Teaching and Coaching.	Institutional Priority	15	18	18	19	21	22	23	25
13.1315	Reading Teacher Education.	Critical Needs: Education	20	21	23	24	26	27	28	30
13.1316	Science Teacher Education/General Science Teacher Education.	Critical Needs: Education	8	7	8	7	8	8	8	9
13.1317	Social Science Teacher Education.	Institutional Priority	7	8	8	8	9	9	10	10
13.1320	Trade and Industrial Teacher Education.	Critical Needs: Education	3	3	3	3	3	3	3	3
13.1401	Teaching English as a Second or Foreign Language/ESL Language Instructor.	Institutional Priority	24	25	26	27	28	29	30	31
14.0201	Aerospace, Aeronautical and Astronautical Engineering.	Emerging Technologies: Mechanical Science and Manufacturing	7	8	8	8	8	8	8	8
14.0801	Civil Engineering, General.	Emerging Technologies: Design and Construction	32	32	30	32	34	37	39	41
14.0901	Computer Engineering, General.	Emerging Technologies: Computer Science and Information Technology	42	40	42	46	48	51	54	57
14.1001	Electrical, Electronics and Communications Engineering.	Emerging Technologies: Mechanical Science and Manufacturing	55	56	56	60	63	64	68	70
14.1305	Optical Science and Engineering	Emerging Technologies: Mechanical Science and Manufacturing	11	11	11	11	12	12	12	12
14.1401	Environmental/Environmental Health Engineering.	Emerging Technologies: Natural Science and Technology	8	10	10	11	12	13	13	15
14.1801	Materials Engineering.	Emerging Technologies: Mechanical Science and Manufacturing	11	11	12	12	13	13	14	14
14.1901	Mechanical Engineering.	Emerging Technologies: Mechanical Science and Manufacturing	21	23	25	27	29	31	32	33
14.3501	Industrial Engineering.	Emerging Technologies: Mechanical Science and Manufacturing	97	101	105	109	113	116	119	121
16.0905	Spanish Language and Literature.		7	7	7	8	8	8	8	8
23.0101	English Language and Literature, General.		24	23	22	22	22	22	23	23
24.0101	Liberal Arts and Sciences/Liberal Studies.		16	17	18	19	20	21	21	22
26.0101	Biology/Biological Sciences, General.	Emerging Technologies: Natural Science and Technology	18	18	18	18	18	18	19	19
26.0503	Medical Microbiology and Bacteriology.	Emerging Technologies: Natural Science and Technology	7	7	7	7	7	7	7	8
26.1201	Biotechnology	Emerging Technologies: Natural Science and Technology	-	-	-	6	6	8	10	10
27.0301	Applied Mathematics.	Emerging Technologies: Mechanical Science and Manufacturing	11	11	12	12	12	13	14	15

## Master's Degrees (Table 2 of 2)

CIP Code	CIP Title	Targeted	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
27.0501	Statistics, General.	Emerging Technologies: Mechanical Science and Manufacturing	23	24	26	27	29	31	33	35
30.0601	Systems Science and Theory.	Emerging Technologies: Electronic Media and Simulation	22	24	27	30	33	35	37	40
31.0504	Sport and Fitness Administration/Management.		25	25	25	25	25	25	25	25
40.0599	Chemistry, Other.	Emerging Technologies: Natural Science and Technology	8	9	10	9	9	10	10	11
40.0801	Physics, General.	Emerging Technologies: Natural Science and Technology	8	9	9	9	10	10	10	11
42.0101	Psychology, General		-	8	8	8	8	8	8	8
42.0201	Clinical Psychology.		12	13	14	16	17	18	19	20
42.0901	Industrial and Organizational Psychology.		15	15	16	17	17	17	17	17
43.0104	Criminal Justice/Safety Studies.		113	114	116	117	118	119	121	123
43.0106	Forensic Science	Institutional Priority	3	5	7	8	9	10	10	10
44.0401	Public Administration.		61	62	63	64	65	67	68	70
44.0701	Social Work.		102	105	108	111	114	117	120	124
45.0201	Anthropology		-	-	-	3	6	9	12	12
45.1001	Political Science and Government, General.		7	8	9	10	10	11	11	11
45.1101	Sociology.		16	16	17	17	17	17	17	18
50.0501	Drama and Dramatics/Theatre Arts, General.		12	16	19	20	23	23	26	26
50.0601	Film and Digital Media		-	5	20	30	40	40	40	40
50.0702	Studio/Fine Art		-	-	6	7	8	8	8	8
51.0000	Health Services/Allied Health/Health Sciences, General.	Critical Needs: Health Care	54	55	50	50	50	52	54	56
51.0204	Audiology/Audiologist and Speech-Language Pathology/Pathologist.		81	82	82	81	81	81	83	83
51.1601	Nursing/Registered Nurse (RN, ASN, BSN, MSN).	Critical Needs: Health Care	58	82	95	107	107	108	108	108
51.1608	Nursing Science	Critical Needs: Health Care	-	-	3	4	6	6	6	6
51.2308	Physical Therapy/Therapist.	Critical Needs: Health Care	31	30	20	-	-	-	-	-
52.0101	Business/Commerce, General.		220	223	227	230	233	237	242	247
52.0201	Business Administration and Management, General.	Economic Development: High-Wage/High Demand Jobs	32	15	5	-	-	-	-	-
52.0206	Non-Profit Management	Economic Development: High-Wage/High Demand Jobs	-	3	7	9	11	13	15	17
52.0301	Accounting.		38	38	39	39	40	40	40	40
52.0601	Business/Managerial Economics.		3	4	6	7	8	8	8	8
52.0901	Hospitality Administration/Management, General.	Institutional Priority	35	44	52	70	70	70	70	70
52.1201	Management Information Systems, General.	Emerging Technologies: Computer Science and Information Technology	57	64	71	78	80	85	98	104
52.1601	Taxation.		22	23	23	23	24	24	24	25
54.0101	History, General.		5	5	6	7	7	7	8	9

## Specialist's Degrees

CIP Code	CIP Title	Targeted	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
13.0301	Curriculum and Instruction.	Economic Development: High-Wage/High Demand Jobs	1	1	1	1	2	2	2	2
13.0401	Educational Leadership and Administration, General.	Economic Development: High-Wage/High Demand Jobs	5	5	6	6	6	6	7	9
42.1701	School Psychology.	Critical Needs: Education	19	19	19	20	20	21	21	21

## Doctoral Degrees

CIP Code	CIP Title	Targeted	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
11.0101	Computer and Information Sciences, General.	Emerging Technologies: Computer Science and Information Technology	14	15	15	16	16	20	22	25
13.0101	Education, General.	Economic Development: High-Wage/High Demand Jobs	35	34	36	42	46	48	51	52
13.0401	Educational Leadership and Administration, General.	Economic Development: High-Wage/High Demand Jobs	25	26	26	27	28	28	29	30
13.1401	Teaching English As A Second Language (Esol)	Institutional Priority	-	-	-	-	-	-	2	4
14.0801	Civil Engineering, General.	Emerging Technologies: Design and Construction	4	5	5	6	6	6	7	7
14.0901	Computer Engineering, General.	Emerging Technologies: Computer Science and Information Technology	5	5	6	6	6	7	7	7
14.1001	Electrical, Electronics and Communications Engineering.	Emerging Technologies: Mechanical Science and Manufacturing	17	19	20	21	22	23	24	25
14.1305	Optical Science and Engineering	Emerging Technologies: Mechanical Science and Manufacturing	10	10	11	11	12	12	13	13
14.1401	Environmental/Environmental Health Engineering.	Emerging Technologies: Natural Science and Technology	3	3	4	4	5	5	6	6
14.1801	Materials Engineering.	Emerging Technologies: Mechanical Science and Manufacturing	7	8	9	10	10	11	12	13
14.1901	Mechanical Engineering.	Emerging Technologies: Mechanical Science and Manufacturing	7	9	9	9	10	10	10	11
14.3501	Industrial Engineering.	Emerging Technologies: Mechanical Science and Manufacturing	13	14	15	15	16	17	18	18
23.1101	Technical and Business Writing.	Institutional Priority (Texts and Technology)	3	3	3	3	4	4	4	4
26.0210	Biomolecular Science	Emerging Technologies: Natural Science and Technology	4	5	7	13	15	17	17	17
26.1307	Conservation Biology	Emerging Technologies: Natural Science and Technology	-	3	5	5	6	7	8	8
27.0301	Applied Mathematics.	Emerging Technologies: Mechanical Science and Manufacturing	5	6	7	7	7	7	7	8
30.0601	Modeling and Simulation	Emerging Technologies: Electronic Media and Simulation	5	9	10	11	11	12	12	12
40.0501	Chemistry	Emerging Technologies: Natural Science and Technology	-	-	3	9	11	12	12	12
40.0801	Physics, General.	Emerging Technologies: Natural Science and Technology	6	6	6	7	7	7	7	8
42.0101	Psychology, General.	Institutional Priority (Human Factors)	15	17	19	19	19	19	19	19
44.9999	Public Administration and Social Service Professions, Other.		8	5	4	4	4	5	5	5
45.1101	Sociology		-	-	-	3	5	7	7	8
50.0706	Digital Media	Emerging Technologies: Electronic Media and Simulation	-	-	-	-	-	-	-	2
51.1601	Nursing (R.N. Training)	Critical Needs: Health Care	-	10	10	10	10	15	15	15
51.1608	Nursing Science	Critical Needs: Health Care	-	-	4	7	8	10	10	11
51.2308	Physical Therapy	Critical Needs: Health Care	-	10	10	30	30	30	30	30
52.0201	Business Administration and Management, General.		5	5	6	6	9	9	9	9
52.0601	Business/Managerial Economics		-	-	-	6	6	6	6	6

## First Professional Degrees

CIP Code	CIP Title	Targeted	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
51.1201	Medicine	Emerging Technologies: Medical Science and Health Care	-	-	-	-	-	-	-	40

**APPENDIX D: SPECIAL FUNDING FOR INCREASING TARGETED DEGREE PRODUCTION**

University of Central Florida  
Office of Academic Affairs

**REQUEST FOR TRANSITIONAL FUNDING  
TO INCREASE DEGREE PRODUCTION  
IN A “TARGETED DISCIPLINE”**

Degree name & level: \_\_\_\_\_

Department & college: \_\_\_\_\_

Requested by dean or designee: \_\_\_\_\_  
Name Date

This form is for use in requesting limited-term funding to increase *degree production* in one of the state’s “targeted disciplines.” The list of these disciplines is available from the Office of Academic Affairs. Please note that such funding is not meant to augment the 3-year transitional funding for *new programs*, which is aimed at increased credit-hour production, rather than degree completion.

Due to the relatively long lead times required for receipt of degrees, one early measure of success will be the yearly increases of *majors* in the targeted program. If awarded, funding will be for three (3) years, with extension possible for an added two (2) years, by mutual agreement of the parties.

1) Summary of Requested Funding Per Year:\*

	First Year	Second Year	Third Year	3-Year Total
Faculty Rate & Benefits				\$0
Staff Rate & Benefits				\$0
Non-salary Funds				\$0
Total for Year	\$0	\$0	\$0	\$0

\* Detailed budgets for each year, in a format of your choosing, must be attached.

2) Targeted Increases In Numbers of Majors:

Base Year**	First Year	Second Year	Third Year	3-Year Increase
No. Majors:				0

\*\* The “base year” refers to the academic year when the request is submitted.

3) What methods will be used to achieve this goal? (Use additional sheets if necessary.)

4) Why is special funding for this particular discipline needed, as opposed to others of your college?

5) Why is the requested extra funding needed, beyond the college's ongoing resources?

6) Why will the need for extra funding go away at the end of the 3-year period?

7) What other factors, if any, may be relevant to this request?