BOARD OF GOVERNORS
STRATEGIC PLANNING/EDUCATIONAL POLICY COMMITTEE

Strategic Planning for the State University System
Y-Axis

Goals and Objectives	2001-02 (or as indicated)	2008-09
I. State University System Goals		
A. Access to and Production of Degrees		
1. Bachelors	38,078	
2. Masters	11,623	
3. Doctoral	1,335	
4. Professional	1,270	
TOTAL	52,306	
5. Access/Diversity		
B. Meeting statewide professional and workforce needs *(details to support I.A.)*		
1. Critical Needs: Education	1,536	
2. Critical Needs: Health Professions	3,224	
3. Economic Development: Emerging Technologies	9,135	
a. Mechanical Science and Manufacturing		
b. Natural Science and Technology		
c. Medical Science and Health Care		
d. Computer Science and Information Technology		
e. Design and Construction		
f. Electronic Media and Simulation		
4. Economic Development: High-wage/high-demand jobs	6,942	
5. Educated citizenry/workforce	31,469	
TOTAL *(should tie to total in I.A. 1-4)*	52,306	
C. Building world-class academic research capacity		
1. Association of American Universities (AAU) membership	1	
2. Research expenditures - Contracts and Grants		
3. National Research Council rankings		
4. Centers of Excellence		
a. Biomedical and Marine Biotechnology (FAU)	X (2003-04)	
b. Photonics (UCF)	X (2003-04)	
c. Regenerataive Health Biotechnology (UF)	X (2003-04)	
5. Other forms of national recognition		

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Strategic Planning for the State University System
Y-Axis

Goals and Objectives	2001-02 (or as indicated)	2008-09
II. Constituent University Goals		
A. Access to and Production of Degrees		
1. Bachelors		
2. Masters		
3. Doctoral		
4. Professional		
TOTAL		
5. Access/Diversity		
B. Meeting statewide professional and workforce needs *(details to support II.A.)*		
1. Critical Needs: Education		
2. Critical Needs: Health Professions		
3. Economic Development: Emerging Technologies		
a. Mechanical Science and Manufacturing		
b. Natural Science and Technology		
c. Medical Science and Health Care		
d. Computer Science and Information Technology		
e. Design and Construction		
f. Electronic Media and Simulation		
4. Economic Development: High-wage/high-demand jobs		
5. Educated Citizenry/Workforce		
TOTAL for II-B *(should tie to total in II.A.1-4)*		
C. Building world-class academic research capacity		
1. Association of American Universities (AAU) membership		
2. Research expenditures		
3. National Research Council rankings		
4. Centers of Excellence (specify)		
D. Meeting community needs and fulfilling unique institutional		

Board of Governors
Strategic Planning/Educational Policy Committee

Degrees Granted by Level for Groupings in Y-Axis, I.B. 1-5

Degree Level	Program Groupings	Number of Grads in 2001-02 (Approx.)
I.B.1	**Critical Needs in Education**	
Bachelor Total		702
Master Total		733
Specialist Total		77
Doctoral Total		24
I.B.2	**Critical Needs in Health Care**	
Bachelor Total		2,130
Master Total		753
Pharmacy Total		328
Doctoral Total		13
I.B.3.a.	**Emerging Technologies in Mechanical Science and Manufacuturing**	
Bachelor Total		1,454
Master Total		790
Nuclear Engineering Total		1
Doctoral Total		155
I.B. 3.b.	**Emerging Technologies in Natural Science and Technology**	
Bachelor Total		1,947
Master Total		370
Doctoral Total		161
I.B.3.c.	**Emerging Technologies in Medical Science and Health Care**	
Bachelor Total		-
Master Total		290
Dentistry Total		71
M.D. Total		211
Veterinary Total		82
Doctoral Total		67
I.B.3.d.	**Emerging Technologies in Computer Science and Information Technology**	
Bachelor Total		2,362
Master Total		634
Specialist Total		7
Doctoral Total		29
I.B.3.e.	**Emerging Technologies in Design and Construction**	
Bachelor Total		309
Master Total		169
Doctoral Total		20
I.B.3.f.	**Emerging Technologies in Electronic Media and Simulation**	
Bachelor Total		3
Master Total		3
I.B.4.	**Other High-Wage Programs**	
Bachelor Total		4,966
Master Total		1,530
Specialist Total		99
Doctoral Total		347
I.B.5.	**Educated Citizenry/Workforce**	
Bachelor Total		24,205
Master/Specialist/Advanced Master Total		6,167
First Professional Total		578
Doctoral Total		519
Total		**52,306**

DATA SOURCES: Florida Education and Training Information Program 2001-02 Follow-Up; SUS Degree Inventory

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Strategic Planning/Educational Policy Committee

List of Targeted Programs for Y-Axis, II.B.1-5

PRO-GRAM CIP	PROGRAM TITLE	Criteria (C=Critical Need, E=Emerging Technology, H=High Wage	Levels for Expanded Programs (B, M, S, D, etc.)	Levels for New Programs (B, M, S, D, etc.)
II.B. 1. Critical Needs in Education				
131001	Special Ed	CH		
131005	Ed. Of the Emotionally Handicapped	CH		
131006	Ed of the Mentally Handicapped	CH		
131009	Ed. Of the Blind & Visually Handicapped	C		
131011	Ed. Of the Specific Learning Disabled	CH		
131203	Jr. High/Middle School Ed	C		
131205	Secondary Teacher Ed	C		
131306	Foreign Languages Teacher Ed.	C		
131311	Mathematics Teacher Ed.	CH		
131315	Reading Teacher Ed.	C		
131316	Science Teacher Ed.	C		
131320	Trade & Industrial Teacher Ed. (Vocational)	C		
131395	Secondary Science/Math Teaching	C		
421701	School Psychology	C		
CIP	Other (Specify)			
II.B. 2. Critical Needs in Health Care				
301101	Gerontology	CEH		
510701	Health Services Administration	CH		
510706	Health Information Management	C		
510807	Physician Assistant	CH		
510907	Radiologic (Med) Tech	C		
510908	Respiratory Therapy	CH		
511005	Medical Technology	CEH		
511601	Nursing (R.N. Training)	CH		
512001	Pharmacy	CEH		
512306	Occupational Therapy	CH		
512308	Physical Therapy	C		
512795	Health Science	CE		
CIP	Other (Specify)			
II.B. 3.a Emerging Technologies in Mechanical Science and Manufacuturing				
140101	Engineering	EH		
140201	Aerospace Engineering	EH		
140701	Chemical Engineering	EH		
141001	Electrical Engineering	EH		
141005	Optical Science and Engineering	E		
141101	Engineering Mechanics	E		

PRO-GRAM CIP	PROGRAM TITLE	Criteria (C=Critical Need, E=Emerging Technology, H=High Wage	Levels for Expanded Programs (B, M, S, D, etc.)	Levels for New Programs (B, M, S, D, etc.)
141701	Industrial/Manufacturing Engineering	EH		
141801	Materials Engineering	E		
141901	Mechanical Engineering	EH		
142301	Nuclear Engineering	E		
142701	Industrial & Systems Engineering.	EH		
143001	Engineering Management	EH		
150303	Electronic Engineering Technician	EH		
150899	Mechanical Engineering Related Technician	E		
151101	Engineering Technology	EH		
270101	Mathematics	EH		
270301	Applied Math/Math Sciences	E		
270501	Statistics	EH		
400595	Industrial Chemistry	E		
CIP	Other (Specify)			

II.B.3.b. Emerging Technologies in Natural Science and Technology

PRO-GRAM CIP	PROGRAM TITLE	Criteria	Levels for Expanded Programs	Levels for New Programs
020401	Plant Sciences	E		
030102	Environmental Science	E		
140301	Agricultural Engineering	EH		
141401	Environmental Health Engineering.	EH		
142401	Coastal & Ocean Engineering	E		
150504	Environmental and Urban Systems	E		
260101	Biology	E		
260202	Biochemistry	E		
260301	Botany	E		
260305	Plant Pathology	E		
260495	Plant Molecular & Cellular Biology	E		
260501	Microbiology/Bacteriology	E		
260603	Ecology	E		
260607	Marine/Aquatic Biology	E		
260701	Zoology	E		
260702	Entomology	E		
300101	Interdisciplinary Biological & Physical Sciences	EH		
400101	Radiation Physics	E		
400401	Atmospheric Science & Meteorology	E		
400501	Chemistry	E		
400508	Chemical Sciences	E		
400601	Geology	E		
400702	Oceanography/Marine Science	E		
400801	Physics	EH		
400896	Molecular Biophysics	E		
CIP	Other (Specify)			

PRO-GRAM CIP	PROGRAM TITLE	Criteria (C=Critical Need, E=Emerging Technology, H=High Wage	Levels for Expanded Programs (B, M, S, D, etc.)	Levels for New Programs (B, M, S, D, etc.)
II.B.3.c. Emerging Technologies in Medical Science and Health Care				
140501	Biomedical Engineering	E		
260608	Neuroscience	E		
510401	Dentistry	EH		
510501	Dental Sciences	E		
511201	Medicine (M.D.)	E		
511395	Medical Sciences	E		
512201	Public Health	E		
512210	Community Health	E		
512401	Veterinary Medicine (D.V.M.)	EH		
512501	Veterinary Medical Sciences	E		
CIP	Other (Specify)			
II.B.3.d. Emerging Technologies in Computer Science and Information Technology				
110101	Computer & Information Science	EH		
110401	Information Sciences & Systems	E		
110405	Information Studies	E		
111095	Information Technology	E		
140901	Computer Engineering	EH		
151202	Information Systems Technology (New)	E		
250101	Library/Information Studies	E		
521201	Management Information Systems/Business Data Process	EH		
CIP	Other (Specify)			
II.B.3.e. Emerging Technologies in Design and Construction				
040301	Urban & Regional Planning	E		
140801	Civil Engineering	EH		
150201	Civil Engineering Technology	E		
150504	Environmental & Urban Systems	E		
CIP	Other (Specify)			
II.B.3.f. Emerging Technologies in Electronic Media and Simulation				
090702	Multimedia Studies (Digital Communications) (New Program)	E		
300601	Modeling and Simulation	E		
500706	Digital Media	E		
CIP	Other (Specify)			
II.B.4. Other High-Wage Programs				
040201	Architecture	H		
130101	Education	H		
130301	Curriculum & Instruction	H		
130401	Ed. Admin/Leadership	H		
130901	Social Foundations of Ed	H		
131202	Elementary Teacher Ed	H		

PRO-GRAM CIP	PROGRAM TITLE	Criteria (C=Critical Need, E=Emerging Technology, H=High Wage	Levels for Expanded Programs (B, M, S, D, etc.)	Levels for New Programs (B, M, S, D, etc.)
131204	Pre-Elementary/Early Childhood Teacher Education	H		
131305	English Teacher Ed.	H		
131312	Music Teacher Ed.	H		
131314	Physical Ed. Teaching & Coaching	H		
131317	Social Science Teacher Ed.	H		
151001	Construction/Building Technician	H		
220104	Legal Specialization	H		
440401	Public Administration	H		
510202	Audiology	H		
520201	Business Administration and Management	H		
520301	Accounting	H		
520805	Insurance & Risk Management (New)	H		
521101	International Business Management (New)	H		
CIP	Other (Specify)			
II.B.5. Other Programs--Educated Citizenry and Workforce				
CIP	Title	Explanation		

Methodology for Determining Broad Program Headings for Y-Axis

Data used for *Targeting Baccalaureate Degree Programs for Florida Workforce Enhancements*, a report submitted to, and adopted by, the Workforce Estimating Conference in 2001, were updated and expanded to include graduate and professional programs.

The 2001 report identified baccalaureate degree programs that could be expected to have high demand for at least one of three reasons. Programs either:

- met critical state needs
- were identified by the Advisory Group on Emerging Technologies as being important to continued high-tech industry development in the state; and/or
- had a record of placing graduates in high-wage positions.

1. As in the 2001 report, the two areas identified as **critical state needs** are health care and education.

- The Florida Hospital Association released a report in December 2003 that indicates that Florida will need 61,000 more nurses in 2020 than are currently being produced, as determined by the National Center for Health Workforce Analysis. In addition to a shortage of nurses, faculty shortages in nursing programs were documented in a report released in May 2003 by the American Association of Colleges of Nursing.
- In its July 2000 report, *Shortages of Allied Health Professionals*, the Florida Hospital Association documents that hospitals are experiencing shortages in other key patient care positions, such as in Pharmacy and Medical Technology.
- Each year, the State Board of Education is statutorily required to identify teacher shortage areas. For the 2004-05 school year, the SBE identified the following subject fields as critical shortage areas:
  - Middle and high school level mathematics;
  - Middle and high school level science;
  - Reading;
  - Exceptional student education programs;
  - English for speakers of other languages (ESOL);
  - Foreign languages;
  - School psychologists; and
  - Technology education/industrial arts.

2. The Advisory Group on Emerging Technologies consisted of individuals from Florida industry and universities who were selected based on their broad knowledge of cutting edge scientific research and technological developments. The Group's basic methodology in 2001 is used with updated data to identify degree programs that support **emerging technologies**.

- The Advisory Group had merged targeted industry sectors identified in the Workforce Florida, Inc. 2000-2001 Strategic Plan with areas of research identified by the State University System 1998-2003 Strategic Plan as being important to economic development in Florida.
- The Workforce Florida/SUS targeted areas were analyzed by the Advisory Group to determine those areas in which Florida had an advantage or critical mass. From this analysis, Areas for Strategic Emphasis were developed.
- The Advisory Group then created a list of degree programs that prepared graduates for employment in each area.
- Because of the great overlap of degree programs associated with each area, the Advisory Group grouped the programs under broad descriptive headings as follows:
  - Mechanical Science and Technology Programs
  - Natural Science and Technology Programs
  - Medical Science and Technology Programs
  - Computer Science and Information Technology Programs
  - Analytical and Conceptual Programs
- The 2001 report included, within existing programs, tracks that could prepare graduates for employment in high-tech fields. For example, the Cognitive and Psycholinguistics track within Psychology could prepare students to work in the strategic area of Simulation Training and Modeling. Other programs, such as Landscape Architecture, do not have specific tracks, but a certain percentage of program graduates could be expected to work in a high-tech area. Since the present CIP Code system and the university databases are not configured to track students at either of these levels, the y-axis recommended for the Board of Governors Strategic Plan does not include the tracks and programs identified by either of these approaches.

3. The criteria used to determine **high-wage** programs were similar to those used in the 2001 *Targeting Baccalaureate Degree Programs for Florida Workforce Enhancements* report: (1) the program had to have at least 25 graduates and 15 in-state job placements and (2) the median salary of bachelor degree graduates had to be at least $32,000. This approach was expanded for graduate and professional degree programs – graduates had to earn an average of $50,000. If a program is listed under either of these categories (critical needs or emerging technologies), it is not listed again under high-wage.