

Charles E. Schmidt College of Science

STRATEGIC PLANNING 2012-17

A Start

The current Strategic Plan for the Charles E. Schmidt College of Science is consistent with the University Strategic Plan for 2006-2012. However, severe reductions to the college's operating budget in the past few years have led to several of the College's goals and objectives to be have been compromised. Steps towards developing a new Strategic Plan for the College are provided below:

- In summer 2010, as a prelude to Strategic Planning for 2012-17, the college began Budget and Planning exercises which continued into the Fall 2010. A report was produced and presented to the provost in January 2011. That report is provided below.
- In summer 2011, a College retreat was held with the college's executive committee, faculty and members of the College's Science Advisory Board to begin thinking about strategic planning for the college for the period 2012 - 2017. The retreat was moderated by a professional moderator, Ms. Deborah Mason, and a summary report of that retreat including Vision/Mission and a SWOTT analysis is provided below.
- Working with the College's Executive Committee, a survey conducted by the University's Strategic Planning Committee was completed in Summer 2011 and provided below.
- The university completed its strategic planning process and the BOT approved FAU's new Strategic Plan 2012-17 in February 2012.
<http://www.fau.edu/planning/feedback/>
- In Fall 2012, the college will begin the process to develop a strategic plan for the next 5 years, 2012-2017 to be consistent with the Strategic Plan of the University, 2012-17.

Budget and Planning for 2011-16

Report from Dean Gary W. Perry

Charles E Schmidt College of Science

Background:

In summer 2010, following the start to the 2010-11 academic year that saw not further reductions to college budgets, Provost John Pritchett instructed the Council of Deans to start to consider budget preparation and planning for a potential mid-year budget cut, which he thought unlikely, but more importantly plan for the following academic year's budget (2011-12) that should take in to consideration continued growth of the university with the possibility of further budget cuts if the state's anticipated revenue stream did not improve for FY 2011 and beyond. One goal was to consider how we would "reinvest" or "reallocate" resources. In Fall 2010, Interim Provost Diane Alperin requested a report of the College's deliberation by January 15, 2011.

Process:

After detailed discussions with the Executive Committee of the Charles E Schmidt College of Science we concluded that proposing and making a plan for specific reductions at that time was not necessarily the best use of our time. Rather, we decided we would use this as an opportunity to begin to start short/long term planning for the College, specifically to project the College's growth over the next 3 years in each area of our mission, based on the past 3 year period. However, when President Saunders announced that the BOT had decided that FAU would increase its enrollment to 36,000 students in five years, we revised our timeline to 5 years or 2015.

As a start we formed five committees which would review the resources of the College and make recommendations in preliminary reports. The committees were initially composed of associate deans, chairs and faculty, with more faculty members added at the beginning of the Fall 2010 semester. In addition, the College had come to the end of its prior strategic planning period (2004-2010) and a new College strategic plan needs to be developed. We decided that the outcomes from the five committees would form the basis for going forward with strategic planning in 2011. The five committees were organized around academic programs, research, e-learning, business operations and faculty workload. As a premise to start the process we assumed that the 2010-11 College budget was the *de minimis* budget necessary to deliver the programs of the College at

the current (2010-11) level of productivity in instruction, research and service. What follows are the preliminary reports of four of the committees. The fifth committee on faculty workload recommended that faculty workload based on a faculty members teaching, research and service assignments was working well within the departments and needed no changes at this time if the College was to meet its mission in teaching, research and service.

Report of the Business Resources Working Group

Committee members: Emily Cimillo, Jo Ann Jolley, Bill Kalies, Lucetta Richards, Lynn Sargent, Wendy Stephens (Chair), Jeanette Wyneken

Recommendations:

The committee developed a survey to determine the duties being performed in each department, by each staff member. The survey was designed to see how each department was handling their administrative workload, look for overlapping duties and ways to be more efficient in the assignment of duties and responsibilities.

Members of the committee met with each department chair to provide them with feedback from the survey. They received a copy of the survey summary for their department, high-lighting areas where the committee felt there were overlapping duties and where staffing efficiencies could be found. These were solely recommendations and the department chair is responsible for any decision to implement change.

Many of the survey respondents took the liberty of adding other duties they perform to the survey. It was both interesting and eye opening for the committee members and the department chairs to see this list of additional duties being performed, probably many without their supervisors knowledge that all these things are being taken care of "behind the scenes".

To accommodate research faculty and alleviate the need to "bother" department budget coordinators for grant financial information, the committee came up with the idea of providing limited, but detailed, Banner, EPrint and WebFinance, access to the faculty with minimal training required. The committee received approval from the university, for security access, and will provide the necessary training within the College. This access will give the faculty the freedom to access their grant financial information at anytime, from anywhere they have internet access, and without taking the time of their department coordinator.

Another time saving idea from the committee is the use of a Directed Independent Study form for students to complete when they come to department staff or faculty members wanting to enroll in DIS. Completing the form provides needed information to the department and provides the student with the web site links for all their required training. Again, saving time for all involved.

Potential Budget Cut Impact:

The committee spent two meetings discussing the potential impact of budget cuts to the administrative area of the College. The committee strongly feels that there is currently no place to cut in this area. The College is already “cut to the bone” and if there were additional administrative cuts it would be harmful to both the faculty and students. Tasks would have to be cut, leaving some duties uncompleted.

Over the last several years additional duties and responsibilities have been passed down from the central administration to the Colleges and departments. The College is already doing more, with three fewer staff positions.

The College currently has over 150 faculty members being serviced by less than 25 administrative and clerical staff members. These staff members are responsible for providing service to all faculty and students, including over 200 graduate Teaching Assistants throughout the College, as well as providing support and accountability for all financial matters in the departments and the College. This work simply cannot be competently performed with any fewer resources.

In comparison to other Science Colleges, our College is currently understaffed. Data for the College of Science at George Mason University in 2009 shows 256 full-time faculty members and 141 graduate Teaching Assistants with a support staff 70.

Other Science departments also demonstrate how understaffed our College is. At the University of Tennessee Knoxville, three of their science departments have the following staffing/admin support levels:

<u># of faculty</u>	<u># of staff & admin support</u>
29	7
26	8
38	7
In comparison our Math department has:	
40	2.5
University of Kentucky Math department has:	
43	4

Suggestions for Reduced Administrative Funding:

Return some administrative tasks back to the central administrative offices of Human Resources and the Division of Research.

Increase the rate of the indirect cost recovery to the Colleges for use in supporting administrative staffing specifically associated with grant/contract funding both pre- and post-award.

Comments:

With the Presidents focus on increased enrollment, the university needs more administrative support, not less. We recommend adding 2 staff members to each department over the next 3 years with 1 or 2 more by 2015 depending on the growth of the major.

If the College is forced to absorb another budget reduction the committee has agreed to reconvene, if required, to assist in this reduction.

Budget needed:

In year 01 (2011-12) add 1 FT staff/admin person to each academic department for a total cost of \$351,000 additional S&B, and by year 05 S&B of **\$1,053,000**.

Report of the Research Resources Working Group

Committee members: Ram Narayanan (Chair), Rod Murphey, Len Berry, Warner Miller, Herb Weissbach, Bill Kalies, Lyndon West, Ken Dawson-Scully, Jan Blanks, Dale Gawlik and Wendy Stephens

Recommendations:

- **Recognition of faculty successes** - Publicize different ways, eg Web page, College-wide BLAST, press releases, use faculty assembly to make announcements of faculty successes. No cost.
- **Post-doc culture** - Major gap in College programs. Use multiple sources of funding - PI-initiated, private money, presidential fellowship, corporate sponsorship, Division of Research fellowship etc. (similar to graduate students). Initially identify E&G funds to start a program (\$225,000)

- **Promote cross-disciplinary efforts and establish priority areas** - Establish 3-5 College-wide priority areas (consistent with national and regional priorities) for research for the next decade. Allow for joint hires, grants, shared instrumentation. Prioritize future hires to benefit a broader discipline. Cost to be shared with Division of Research -- \$1,500,000
- **Mentoring of junior faculty** – Establish a faculty listing across the College who would be mentors to junior faculty. The mentor’s role is to advise on grants submission, help with resubmission and publications. Create a Master Researcher similar to the Master Teacher category in the College. Recognize the mentors at occasions, eg College assembly, research day and provide a stipend of \$1000 per semester (total \$12,000)
- **Help with grants** - This is a critical need currently unmet. Identify sources (personnel, funds) to create an office of research within the College to facilitate 1) identification of multiple sources of funds, 2) converting grants into multiple proposals for different agencies and resubmission, 3) help with budget etc. and 4) identify grant writers available in the College. Cost for 3 grant facilitators \$107,250 per semester (use partly idc return)
- **Instrumentation** - Critical to maintain high state of the art instrumentation. Identify priority needs for the College. Cost for Instrument Service Contracts at \$100,000 (to be shared with DoR)
- **GAP funding** - interim funding to maintain research during periods of resubmission of grants is crucial to a successful sponsored research. Funding should be through DoR.
- **Graduate students support** - Ensure that every grant submitted has provision for at least one graduate RA. No cost.
- **Research open house** – expand the current annual open house/College Research Day to showcase research across the College. Invite public for this event to increase general understanding of “Science behind the buildings.” Current cost \$2,000 provided by philanthropic contributions. Develop an annual event (retreat) to share the College-wide research. Additional cost Cost \$2,000
- **Identify collaborations and new partnerships** – develop plans to capitalize on partnerships with a) MPFI, Scripps Florida, TPIMS, HBOI on the Jupiter campus (see Jupiter Business Plan), b) USGS, SFWMD, Everglades National Park Service, and HBOI and c) HBOI, SeaTech and OE. (Budgets tba)

Budget needed:

To meet the recommendations above approximately **\$1,841,000** will be needed. This should be met through E&G funds as well as grant funds and idc return.

General Recommendations:

Develop a goal to double the sponsored research funding in the College within the next five years. Work towards creating a stronger research culture.

Report of the eLearning Working Group

Committee members: Russ Ivy (Chair), Lee Klingler, Warner Miller, Rod Murphey, Cyril Parkanyi, Dave Wolgin, Tobin Hindle, Evelyn Frazier, Jenny Peluso, Jay Paredes

Recommendations:

The eLearning Working Group in the Charles E. Schmidt College of Science was formed during the summer of 2010 with an initial group of 6, but has grown to over 20. We started off with an attempt to assess where we are in the College in terms of eLearning offerings as well as our current knowledge base or skill set in teaching in such an environment.

The first task was to conduct a department by department inventory of eLearning offerings that currently exist in CESCOS. This helped to identify the key players in the College in eLearning. Three brownbags were then scheduled during the summer. This allowed an important dialogue to develop in the College and allowed us to learn from one another by sharing our eLearning experiences, questions, concerns, etc. as well as to share information about best practices, etc. From here we developed a CESCOS eLearning Community page in Blackboard where all shared information is deposited.

The brown bags raised clear issues and topics of concern among the Working Group, and as a result, a series of workshops were scheduled during the Fall 2010 semester utilizing IRM technical staff and instructional designers to address these concerns. Thus far, we have scheduled a total of 6 workshops—2 on Blackboard 9, 2 on Collaborative Learning/Work, as well as workshops on Engaging Students in an Online Environment and Academic Integrity.

Our next task is to determine where we would like to be in the College with respect to eLearning. What are our goals? What are our concerns and our resource needs that must be addressed in order to achieve those goals? The group decided that each

Department within CESCOS should research and debate these questions in the context of their own discipline, curriculum and faculty mix. We have asked for a report from each Department to be completed by February 2011. From these individual Department reports, an overall report will be compiled to deliver to the Dean of CESCOS and to the new Assistant Provost of eLearning during the Spring 2011 term.

One recommendation that was clear from the committee was to devote some space within the College to eLearning, especially an eLearning Testing lab where students taking eLearning courses would come to take exams.

Budget needed:

eLearning is a university wide initiative and any budget appropriated for eLearning activities will presumably come centrally through IRM and the new Associate Provost for eLearning. Nonetheless, we feel it important to develop a testing lab within the College. To renovate space identified for this activity would be about \$25,000 to be paid from renovation of S&E 43, and computers will be funded through Tech-Fee grants.

Report from the Academic Programs (Enrollment) Working Group

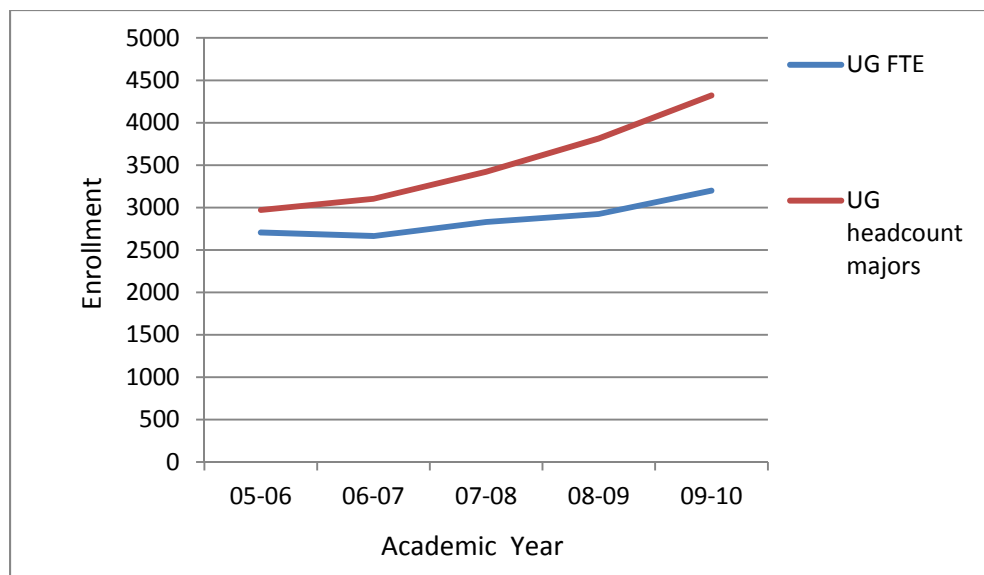
Committee Members: Ingrid Johanson (Chair), Jay Lyons, Dave Binninger, Jerry Haky, Jenny Peluso, Dave Wolgin, Rod Murphey, Russ Ivy, Dave Warburton, Monica Rosselli, Lee Klingler, Roger Goldwyn, Warner Miller

Background

While this group was charged with looking at not only our current academic programs but also potential new programs it became very clear last Fall, with the decision to increase enrollment to 36,000, that this group would initially focus on what the College will need to manage this enrollment growth. New programs to meet the need of our service region will come later with strategic planning.

Recommendations:

Over the past 5 years, the Charles E. Schmidt College of Science has experienced considerable growth in numbers of FTE and numbers of majors in our disciplines (see Figure 1). In the past year alone, we have increased our FTE by 9.4% and our headcount majors by 13%. In the past 5 years, we have had a decline in our average funding per FTE and the number of regular faculty declined in the same time period, from 135 to 128.



Given our strong growth in the past 5 years, it is likely that the College will play a major role in achieving the goal of increased enrollment to 36,000 students at FAU by 2015. However, we can no longer do this “at the margin” – there are very few unclaimed seats in our classes that would allow increased enrollment at no additional cost. In fact, science courses are closing early in the registration cycle and our capacity to respond by increasing capacity or adding a section is severely limited by instructor/TA availability and by lack of classrooms.

The additional resources required are considerable. We need additional TAs each year to staff new lab sections. But the TAs cannot be used unless we have additional laboratory space. The graduate student TAs will not come to FAU unless they have faculty to work with, so we need additional faculty to mentor the graduate students and to teach added sections of courses. Non-tenure earning instructors are also required to cover additional sections of large-enrollment courses or to oversee running of the lower division laboratories.

Projected Enrollments 2010 – 2015:

The following Tables provide enrollment projections from Fall 2010 to Fall 2015, and indicate the number of sections that we anticipate having to add to the schedule in the next 5 years and those courses in which we would raise the cap (in red). The listed courses are those that are currently enrolled at 80% or more of capacity.

Facilities:

One challenge that we face is that we are running out of classroom space. Introductory biology and chemistry laboratories are currently scheduled from 8 am to 10 pm Monday to Thursday (8 am to 6 pm on Friday). Organic chemistry labs do not run in the evening because we do not have an instructor available to oversee evening labs.

Possible immediate solutions to lack of laboratory space include (1) add Saturday morning times for labs (2) teach introductory chemistry and biology on the Davie campus to utilize new Davie laboratories (3) extend teaching of CHM2211L into the evening (M-R). We recommend immediate implementation of these alternative venues for Fall 2011, assuming that we receive funding to cover the teaching of the class.

Biological Sciences:

COURSE	location	# sections in Fall 2010	average size of sect	Fall 2010	Fall 2015	# sections in Fall 2015	add sect:
BSC 1005L	Boca	25	24	591	952	39.66	15
BSC 1011L	Boca	23	24	547	881	36.71	14
BSC 2085L	Boca	24	24	573	923	38.45	14
MCB 2004L	Boca	9	18	157	253	14.05	5
MCB 3020L	Boca	11	18	172	277	15.39	4
MCB 3020L	Davie	3	16	48	77	4.83	2
PCB 3703L	Davie	10	16	144	232	14.49	4
BSC 1005	Boca	2	321	627	1010	3.15	1
BSC 1011	Boca	2	295	584	941	3.19	1
BSC 2085	Boca	2	346	687	1106	3.20	1
MCB 2004	Boca	1	169	162	261	1.54	raise cap
MCB 3020	Boca	1	190	161	259	1.36	raise cap
MCB 3020	Davie	1	70	65	105	1.50	raise cap
MCB 4503	Boca	1	175	175	282	1.61	raise cap
PCB 3063	Boca	1	320	292	470	1.47	1
PCB 3063	Davie	1	150	141	227	1.51	1
PCB 3352	Davie	2	40	79	127	3.18	raise cap
PCB 3703	Davie	1	191	191	308	1.61	1
PCB 4023	Davie	1	100	98	158	1.58	1
PCB 4043	Davie	1	120	112	180	1.50	1
PCB 4233	Davie	1	60	64	103	1.72	raise cap
PCB 4723	Davie	1	50	48	77	1.55	raise cap
PCB3352	Boca	1	118	118	190	1.61	raise cap
ZOO 4690	Boca	1	56	57	92	1.64	raise cap

Chemistry and Biochemistry:

COURSE	location	# sections in Fall 2010	average size of sect	Fall 2010	Fall 2015	# sections in Fall 2015	add sect:
CHM 2032L	Boca	2	24	42	68	2.82	1
CHM 2045L	Boca	33	24	778	1253	52.21	19
CHM 2046L	Boca	8	24	189	304	12.68	5
CHM 2211L	Boca	8	22	167	269	12.23	4
CHM 3120L	Boca	1	24	48	77	3.22	2
CHM 3609L	Boca	1	24	23	37	1.54	1
BCH 3033	Boca	1	295	263	424	1.44	1
CHM 1025	Boca	1	200	165	266	1.33	raise cap
CHM 2032	Boca	1	51	45	72	1.42	raise cap
CHM 2045	Boca	3	295	831	1338	4.54	2
CHM 2046	Boca	1	240	224	361	1.50	1
CHM 2210	Boca	1	346	330	531	1.54	1
CHM 2211	Boca	1	223	223	359	1.61	1
CHM 3120	Boca	1	51	53	85	1.67	raise cap
CHM 3400	Boca	1	25	23	37	1.48	raise cap
CHM 3609	Boca	1	24	26	42	1.74	raise cap
CHMC1020	Boca	1	138	136	219	1.59	raise cap

Geosciences:

COURSE	location	# sections in Fall 2010	average size of sect	Fall 2010	Fall 2015	# sections in Fall 2015	add sect:
ESC 2070	DL	1	300	300	483	1.61	1
EVR 2017	Boca	2	46	90	145	3.15	raise cap
GEA 2000	Boca	2	246	490	789	3.21	1
GEO 4602	Boca	1	100	91	147	1.47	raise cap
GEO2200C	boca	1	46	46	74	1.61	raise cap
GIS 4138C	Boca	1	25	25	40	1.61	1
GISC3015	Boca	1	100	90	145	1.45	raise cap
GLY 2010	Boca	1	180	168	271	1.50	1
GLY 2010L	Boca	6	30	165	266	8.86	3
GLY 2100	Boca	1	149	149	240	1.61	raise cap
GLY 4500C	Boca	1	20	21	34	1.69	1
GLY4700C	Boca	1	46	41	66	1.44	raise cap
MET 2001	Boca	1	222	222	358	1.61	1

Mathematics:

COURSE	location	# sections in Fall 2010	average size of sect	Fall 2010	Fall 2015	# sections in Fall 2015	add sect:
MAA 4200	Boca	1	35	32	52	1.47	1
MAC 1105	Boca	9	112	986	1588	14.18	5
MAC 1114	Boca	6	35	210	338	9.66	4
MAC 1140	Boca	6	35	206	332	9.48	3
MAC 1147	Boca	2	35	69	111	3.18	1
MAC 2233	Boca	16	43	666	1073	25.20	9
MAC 2281	Boca	5	35	184	296	8.47	3
MAC 2282	Boca	4	36	132	213	5.95	2
MAC 2311	Boca	3	41	119	192	4.71	2
MAC 2312	Boca	3	35	96	155	4.42	1
MAC 2313	Boca	5	35	160	258	7.36	2
MAD 2104	Boca	4	38	136	219	5.84	2
MAD 2502	Boca	1	30	27	43	1.45	0
MAP 2302	Boca	2	33	69	111	3.42	1
MAP 3305	Boca	3	35	99	159	4.56	2
MAS 2103	Boca	2	35	63	101	2.90	1
MAS 4107	Boca	1	30	29	47	1.56	1
MAT 1033	Boca	5	44	221	356	8.13	3
MGF 1106	Boca	4	100	366	589	5.89	2
STA 2023	Boca	7	100	691	1113	11.13	4
STA 4032	Boca	2	35	67	108	3.08	1

Physics:

COURSE	location	# sections in Fall 2010	average size of sect	Fall 2010	Fall 2015	# sections in Fall 2015	add sect:
PHY 2043	Boca	2	85	151	243	2.86	1
PHY 2044	Boca	1	149	111	179	1.20	raise cap
PHY 2048	Boca	1	50	41	66	1.32	raise cap
PHY 2048L	Boca	29	15	389	626	41.77	13
PHY 2049L	Boca	26	15	316	509	33.93	8
PHY 2053	Boca	2	149	293	472	3.17	1
PHY 2054	Boca	2	125	207	333	2.67	1
PSC 2121	Boca	1	147	141	227	1.54	1

Psychology:

COURSE	location	# sections in Fall 2010	average size of sect	Fall 2010	Fall 2015	# sections in Fall 2015	add sect:
CLP 4144	Boca	1	140	139	224	1.60	1
DEP 3053	Boca	2	160	310	499	3.12	1
DEP 4095	Boca	1	70	70	113	1.61	Raise cap
DEP 4130	Boca	1	90	91	147	1.63	1
EXP 3505	Boca	2	125	246	396	3.17	1
EXP 4204	Boca	1	100	100	161	1.61	Raise cap
PSB 3002	Boca	2	120	237	382	3.18	1
PSB 4006	Boca	1	25	24	39	1.55	Raise cap
PSB 4240	Boca	1	100	94	151	1.51	Raise cap
PSY 1012	Boca/dl	4	360	1104	1778	6.44	3
PSY 3213	Boca	1	102	99	159	1.56	Raise cap
PSY 3234	Boca	4	68	282	454	6.68	4
SOP 3004	Boca	2	110	212	341	3.10	1
SOP 4230C	Boca	1	60	55	89	1.48	1
STA 3163L	Boca	3	38	105	169	4.45	2
CLP 4144	Davie	1	60	59	95	1.58	Raise cap
DEP 3053	Davie	1	60	57	92	1.53	Raise cap
DEP 4305	Davie	1	60	61	98	1.64	Raise cap
EXP 3505	Davie	1	60	57	92	1.53	Raise cap
PPE 4003	Davie	1	60	60	97	1.61	Raise cap
PSB 3002	Davie	1	60	61	98	1.64	Raise cap
PSY 3213	Davie	1	60	53	85	1.42	Raise cap
PSY 3234	Davie	1	60	61	98	1.64	Raise cap
PSY 4604	Davie	1	60	57	92	1.53	Raise cap
SOP 3004	Davie	1	60	59	95	1.58	Raise cap
SOP 3742	Davie	1	60	57	92	1.53	Raise cap
STA 3163L	Davie	2	24	39	63	2.62	Raise cap
CLP 4144	MAC	1	40	40	64	1.61	Raise cap
EXP 3505	MAC	1	40	40	64	1.61	Raise cap
PSB 3002	MAC	1	60	57	92	1.53	Raise cap
PSY 3213	MAC	1	30	29	47	1.56	Raise cap

As a long-term solution, we recommend that the university make it a top priority to build a **science classroom building**, which should include: several (2-3) 500 seat auditoria; additional teaching laboratories for biology, chemistry, and physics; and a

large (100+ station) computer lab for online administration of exams, computer-based instruction, and distance learning.

Budget needed:

We need to have additional personnel support in order to respond to the projected need for these classes. The resources and budget required are shown in the tables below for each department/program, and include funds for TAs to handle laboratories and undergraduate instruction, adjunct funding, funding of laboratory supervisors, additional instructors, and additional faculty to mentor the increased number of graduate students. We will also need additional equipment money to outfit new laboratories.

Biological Sciences: increase of 66 sections of lecture courses & labs

	Current	Projected 2015
TAs	87	123
Instructors	3	6
Faculty (tenure-track)	23	30
Adjuncts	7	9

Budget:

TAs	\$716,949	\$1,013,618
Faculty/Instructor	\$2,199,491	\$3,000,632
Adjunct	\$31,500	\$39,000
Equipment/expense	\$150,463	\$210,648

Chemistry: increase of 38 sections of high enrollment courses/labs:

	Current	Projected 2015
TAs	46	64
Instructors	2	3
Faculty (tenure-track)	14	20
Adjuncts	0	0

Budget:

TAs	\$559,200	\$818,725
Faculty/Instructor	\$1,719,984	\$2,518,229
Adjunct	\$0	\$0
Equipment/expense	\$85,000	\$124,449

Geosciences: increase of 9 sections of high enrollment courses:

	Current	Projected 2015
TAs	20	26
Instructors	2	2
Faculty (tenure-track)	12	15
Adjuncts	2	2

Budget:

TAs	\$346,600	\$456,664
Faculty/Instructor	\$1,251,987	\$1,482,387
Adjunct	\$18,000	\$18,000
Equipment/expense	TBD	TBD

Mathematics: increase of 52 sections of high enrollment courses:

	Current	Projected 2015
TAs	50	75
Instructors	12	17
Faculty (tenure-track)	28	38
Adjuncts	2	0

Budget:

TAs	\$814,787	\$1,386,037
Faculty/Instructor	\$3,656,713	\$4,856,013
Adjunct	\$7,200	\$0
Equipment/expense	\$50,000	\$80,000

Physics: increase of 25 sections of high enrollment courses/labs:

	Current	Projected 2015
TAs	29	39
Instructors	3	4
Faculty (tenure-track)	11	14
Adjuncts	3	3

Budget:

TAs	475,576	\$639,568
Faculty/Instructor		\$1,482,387
Adjunct	13,500	\$13,500
Equipment/expense		\$50,000

Psychology: increase of 16 sections of high enrollment courses:

	Current	Projected 2015
TAs	47	78
Instructors	3	7
Faculty (tenure-track)	21	30
Adjuncts	13	15

Budget:

TAs	\$850,958	\$1,443,600
Faculty/Instructor	\$2,823,998	\$3,217,998
Adjunct	\$58,500	\$67,500
Equipment/expense		Extra expense associated w/additional personnel

In summary, the College will have to add **200+ sections** of lectures and labs in order to respond adequately to the increased enrollment projected in the next several years. To cover the classes and labs, we project a need for an **additional 126 GTAs** and **14 instructors**. We also project a need **for 38 tenure track faculty**, to serve both in teaching undergraduate courses and to mentor the additional graduate students.

A corresponding growth in majors will also necessitate the hiring of additional advising staff. The current Fall 2010 headcount majors in Science is 4322 undergraduates served by 8 advisors. At a projected growth rate of 10% per year, the Fall 2015 headcount would be 6960. Keeping the same advisee:advisor relationship (540:1) would require hiring an additional 5 advisors; hiring to achieve NACADA standards of 300:1 would mean hiring an additional 15 advisors.

Recruitment and Retention:

To achieve the university goal of increasing enrollment and retention without sacrificing quality, we recommend a number of initiatives, including establishment of a College honors program; organizing a majors fair to improve retention and degree completion; making use of high school pipelines to recruit outstanding science students; and developing a College recruiting video.

Honors Program:

In order to continue attracting top quality students to our programs, we recommend the establishment of a College Honors Program. This program will have both lower-division and upper-division components. First, we recommend that each department establish an upper division honors program (similar to those in Psychology and Biology). Second, we recommend the creation of a lower division science honors, integrated with the current university lower division honors program. We envision having a Science Honors Learning Community for incoming freshmen that would allow them to take courses together; have an honors section of laboratory; and participate in an interdisciplinary seminar on scientific thinking and communication. If feasible, we would like their section of English to focus on scientific communication and reading. We also recommend that emphasis be placed on identifying scholarship money as an inducement for students accepted into this lower division honors program at FAU.

Majors Fair:

We recommend holding an annual “majors fair” in which we expose students to our majors, with emphasis on degree requirements, DIS opportunities, career possibilities, and graduate school information (i.e., something for each level from freshman to senior). By providing students with this type of information, beginning early in their academic career, we hope to achieve better retention and progression toward an FAU science degree.

High School Pipelines:

We recommend working with Admissions into making use of existing outreach programs to area high schools (such as Math Days, Pumpkin Drop, and Science Olympiad) to create pipelines of top students into our programs.

Recruiting Video:

Finally, we recommend that we invest some resources into creating a professionally-made recruiting video for the College that emphasizes the unique nature of the experiences students can have at FAU.

Meeting SACS requirements 2011-12:

In Fall 2010, John Pritchett conducted a study to understand what would be the needs of the university to meet current SACS requirements as we go into the SACS Reaffirmation process in 2012/13. This report has been presented to the provost but essentially as far as the Charles E. Schmidt College of Science is concerned the proposal is to make changes in the course numbering system in science that will go a long way in addressing SACS issues of TAs in teaching labs must be instructor of record and thus have at least 18 graduate credit hours under their belt. Thus, new incoming freshman TA's cannot be the IoR. The new resources that will be needed to meet this requirement were calculated by John Pritchett based on College TA stipend support, and in his report Dr. Pritchett finds an additional \$750,000 will be needed by the Charles E. Schmidt College of Science to hire additional TA's/Instructors to meet this need *in Fall 2011*.

Expanding Academic Programs on Partner Campuses:

Recent decisions by the university to grow enrollment to 36,000 by 2015 as well as the possibility to expand our program offerings at the lower division to partner campuses will necessarily play a critical role in future planning, although we have not had time to fully embrace this in this report. Some of this has been addressed above; however, what additional courses we can offer remains to be determined. Nonetheless, expansion of our programs is addressed in the Business Plan we have put forward for Jupiter. Conceivably, some of the budget request in that plan could be used to offset the anticipated E&G budget needs identified in this report.

Overall E&G needs by 2015:

In order to meet the projected UNDERGRADUATE enrollment growth (note the prior Tables list only undergraduate sections) and SACS requirements while maintaining our trajectory in graduate education, research and sponsored research funding, the College will need an additional \$9.5 million in E&G funds by 2015. **Is this reasonable?**

The answer to the question is yes for the following reasons. In 2010-11, the total budget for the College is \$23,226,478 which generates approximately 3800 annualized FTE (graduate and undergraduate) or about \$6000/aFTE. If the projection is correct that to reach 36,000 students by 2015 we will need to increase enrollment by about 10% per

year for the next 4-5 years, then the additional recovery from annualized FTE generated by the College will be about \$25,632,403 in additional funds to the university (see Table below) based on current revenue generation by the colleges. If we assume a “university load” of 50% and that the revenue generated by graduate students is not “real” money since it returned as tuition waivers, then the College will generate \$11,874,240 in new funding for its use from additional undergraduate FTE. And this does not take into consideration increases in tuition through 2015 or in-state versus out-of-state tuition.

B&P Report (by 2015)	HDCT	Ann FTE	\$/FTE	Total \$FTE	Total \$Tuition	Total \$
Additional Graduates	126	91.64	10,000	916,364	967,559	\$1,883,923
Additional Undergraduate FTE*		2160.45	5,000	10,802,250	12,946,230	\$23,748,480
Total revenue generated						\$25,632,403

*assume 10% increases over 2010-11 aFTE through 2015

Clearly, the additional revenue generated by additional FTE and tuition by the College is sufficient to cover the increase needed in the College budget by 2015.

Current E&G Budget: 4% budget reduction

As part of the Budget and Planning process, we have also provided a plan below should we need to cut to budget for 2011-12. How much we might need to reduce our budget is not known therefore we have used a figure of 4% which is the budget cut that the College has sustained in the last several years. Needless to say, any cut to the College budget while trying to increase enrollment at levels discussed above will be near catastrophic with unfavorable consequences on the College’s mission in instruction, research and service.

The following Table shows the current E&G budget and breakdown that is responsible for generating about 24% of the FTE generated at FAU, second only to the Dorothy F. Schmidt College of Arts and Letters (28%). Science eclipsed Business several years ago.

E&G: FY 10-11								
Department	T/T earning S&B	Non-tenure earning S&B	SP staff S&B	AMP staff S&B	OPS	TA's	Expense	TOTAL
Dean's office	\$331,295		\$239,633	\$672,089	\$13,778		\$45,000	\$1,301,795
Stud. Services	\$130,620		\$92,115	\$363,127	\$40,000		\$15,000	\$640,862
Chemistry	\$1,221,879	\$553,627	\$59,499	\$167,464	\$100,532	\$509,250	\$85,335	\$2,697,586
Math	\$3,147,514	\$696,379	\$46,439	\$98,082	\$108,565	\$617,050	\$50,000	\$4,764,029
Physics	\$1,488,530	\$341,549	\$44,057	\$135,483	\$143,671	\$376,250	\$40,000	\$2,569,540
Biology	\$2,059,646	\$282,898	\$142,693	\$433,322	\$97,903	\$954,956	\$90,000	\$4,061,418
Environ. Science	\$98,207					\$67,452	\$10,000	\$175,659
CMBB			\$53,558	\$77,270	\$101,450		\$8,000	\$240,278
Psychology	\$2,718,250	\$194,152	\$124,994	\$89,554	\$30,000	\$602,416	\$81,000	\$3,840,366
CCS	\$261,848		\$63,983	\$61,615		\$135,450	\$25,000	\$547,896
Geoscience	\$1,063,830	\$222,510	\$41,864	\$83,726	\$22,826	\$265,650	\$28,000	\$1,728,406
CES	\$186,813		\$73,276	\$139,116	\$3,778		\$17,128	\$420,111
HBOI	\$93,482				\$85,000	\$30,050	\$30,000	\$238,532
TOTAL	\$12,801,914	\$2,291,115	\$982,111	\$2,320,848	\$747,503	\$3,558,524	\$524,463	\$23,226,478

Essentially as seen from the table above, the College budget is about 97.75% fixed costs in S&B with only \$524,463 in expense. All carry forward or “reserves” have been expended to meet earlier budget cuts. Thus, any cut to the College budget will necessarily lead to loss of personnel, especially instructional personnel. A 4% cut represents about \$930,000 of the College budget. We cannot reduce expenses any further than we already have over the last several years to meet budget cuts, nor can we reduce the number of admin/staff positions to any lower than it is. Thus, we would propose to reduce primarily the OPS category of the above budget. This category of costs includes primarily adjunct instructors, additional TAs when needed, research staff and a few part-time workers. However, this group collectively does generate considerable FTE (about 370 aFTE) and their loss would reduce the revenue generated by the College by about \$4 million. Clearly, we would need to offset this loss and thus the courses/sections would be reassigned to regular faculty and multi-year contract instructors. However, reassigning regular faculty to additional teaching above their current loads will clearly affect research productivity and sponsored funding generated by the College. Working with the chairs we will do our best to ameliorate this.

RETREAT SUMMARY

Charles E Schmidt College of Science
Strategic Planning Retreat: A Start
May 13 2011
10:00 am to 4:00 pm
Room 226, Physical Sciences Building

Preamble:

An initial one-day retreat was organized in order to start to engage the College in Strategic Planning in parallel with University Strategic Planning. The following members of the College's leadership, faculty and Science Advisory Board (SAB) attended: Gary Perry, Charles Roberts, Wendy Stephens, Jay Paredes, Avy Weberman, Rod Murphey, Cyril Parkanyi, Lee Klingler, Warner Miller, Dave Wolgin, Russ Ivy, Jan Blanks, Herb Weissbach, Len Berry, Claire Thuning-Roberson, Jim Tisdale, Marsha Rimockh, Ozzie Osborne, Mike Budd, John Wiesenfeld, Nat Dean, Dale Gawlik, Jerry Haky, Markus Schmidmeier, Fred Hoffman, Armin Fuchs, Elan Barenholz, and Sarah Milton.

An outside moderator, Ms. Debbie Mason, APR, Strategists Inc., was hired to lead the group through the day. Prior to the retreat a survey of the participants and their units was conducted using questions assembled by the dean, chair of the SAB and Ms. Mason. A summary of responses was prepared by Ms. Mason. See Appendix for questions and a summary of some of the trends that came out of the surveys.

The participants were divided in to 5 work groups with administrators, faculty and SAB members represented in each of the 5 groups. The day began with Welcome and Introductions by the dean and an overview of the day's agenda by Ms. Mason.

Session 1: Review of the College Mission Statement

Current Mission Statement –

The mission of the CESCOS is to provide the benefits of scientific understanding to our students and the public through teaching, research and service.

In teaching, our mission is to provide excellent, accessible, affordable education in science through degree programs at the bachelor's, masters' and doctoral levels, and through general education in science for all FAU students.

In research, our mission is to apply the power of discovery to fundamental problems of scientific importance, as well as to subjects of current topical interest.

In service, our mission is to provide scientific expertise that supports the needs of our region.

Each group was asked to work in their group on elements of what they thought should be in a mission statement. Following review of each of the groups list of elements, each group was then asked to return to group discussion and to select a maximum of three elements for the final mission statement. Each of the group 3 elements was reviewed. The following three common elements surfaced (edited by Mason/Perry):

1. *Provide excellence in both disciplinary and interdisciplinary science education*
2. *Apply the power of discovery to fundamental problems of scientific importance to find solutions to societal challenges in a culture of research, partnership and scholarship*
3. *Develop internationally recognized research and teaching programs with regional partners to meet the needs of the region and the nation.*

However, a final mission statement was not drafted at the time.

Session 2: A College Vision Statement

In the next session, the group moved to a discussion of a Vision Statement. The College does not have a formal Vision Statement, at least not one that is published on our website or elsewhere.

Each group was asked to discuss the next 10 years of the College and its vision of the College in terms of its standing, accomplishments, how it would be perceived, etc and to draft a Vision Statement.

Each group presented its statement. The larger group then began a discussion of how to refine the vision statement. Although the group did not complete the exercise as there was a consensus this task needed more time, a preliminary effort was as follows (edited by Mason/Perry):

To be a college of choice and international destination for highly qualified students with internationally recognized professionals in a family of vibrant programs engaged in scientific research and science education.

A final Vision Statement needs to be drafted.

Session 3: SWOTT Analysis

In the third session, the groups tackled a SWOTT analysis, first working on the Strengths of the College. A compilation of the groups perceived Strengths, Weaknesses, Opportunities, Threats and Trends are as follows:

Strengths:

Faculty

Diverse student body

Partnerships developed

Diverse campuses

Location-

- aids recruitment for students and faculty
- longest stretch of coastline for marine research
- powerful in recruiting partners
- fabulously wealthy donor body
- center of South Florida population
- no private competition close by
- facilities
- specialized strengths /interdisciplinary programs

- access to strong high school population
- young dynamic university, young faculty
- only regional public university with doctoral programs in all science disciplines
- more choice and opportunity in scientific programs
- community outreach
- developing, growing strong research emphasis
- growth in enrollment of highly qualified undergraduate students
- close link with policy making agencies for environmental programs

Weaknesses:

- Distant campus's dilute resources –
 - communications, e.g. distance learning and meetings
 - lack of long term clear mission for those campuses
- Lack of policy development for interdisciplinary programs
- Shortage of faculty and shortage of research intensive faculty
- Infrastructure for research and students, limited number of labs and classrooms scheduling problems
 - can't accommodate volume of students
 - lack of adequate student advisors
- Too dependent on legislative funding
- Second tier university
- Expensive real estate for campus and expensive for student life
- Graduate student stipends not competitive and no health benefits
- National reputation is nonexistent
- On campus life for student is lacking in choices, no college town, no academic clubs
- Faculty salaries lower than other universities
- Limited tuition increase
- Lack of social media skills of faculty
- Students
 - heavily part time student orientation creates higher overhead
 - academic quality of students is lower than preferred
- Insufficient building of business community allies for funding
- Lack of institutional planning by university
- University does not tap internal resources
- Local residents have donor commitments up north
- Woeful lack of adequate funding compared to other colleges

Opportunities:

- Use location to gain national exposure for unique programs—camps, outreach and for recruitment
- Take advantage of partnerships—state and national- public and private
- Leverage/utilize distributed campuses
- STEM federal support unique on campus among other colleges
- Leading edge of global warming, aging population, urban water and pollution issues
- Fundraising population
- Green energy
- Aggressive economic corporate development
- Increase in student body means increase in FTE and tuition dollars
- Massive investment in student life to convert students to FT
- Dovetail in political infrastructure in Jupiter
- Better promotion of faculty innovation and research
- Everglades restoration

- Promotion of outreach programs
- Work with college of business and engineering to tie to businesses
- Higher profile based on partnerships, to grow reputation –executing on potential
- Brazil partnership with Ministry of Science through environmental science---Harbor Branch
- Student recruitment and retention strategies --- include recruit international students
- Better use of social media
- Develop creative relationships with other colleges
- New president, new provost coming

Threats:

- Chronic lack of adequate funding
- Lack of predictability of funding – little structural relationship between activities and funding
- Lack of ability to service students properly
- Retention of best faculty and students
- Expansion of other entities into area - universities and state colleges
- Distance education eroding base of strength
- Lack of state structure for higher education—Board of Governors, Board of Community Colleges
- Competition from Broward College, IRSC, and PBS
- Lack of real commitment to education by state of Florida
- Degradation of public school funding, classes, teachers
- Inadequate enlistment of support of local and business community
- Lack of framework for planning
- Lack of comprehensive donor development plan at university level
- No university focus to promote college of science
- Stadium takes all resources and hurts academic support

Positive Trends:

- Growth of partners and their satellites
- Corridor for biotech/ Florida I-95 life science corridor
- Student applications in science-increase in number and quality
- Florida lambda rail
- STEM education emphasis
- Stronger, smarter students
- Distance learning
- Rising sea level
- Interdisciplinary research and STEM education between life sciences public, private and inter and intra collegiate is stronger here – competitive advantage
- Interdisciplinary education trend is growing
- Environmental trends
- Low cost, high value education
- Increased students, increased dollars, hire additional faculty to build more interdisciplinary programs
- Students out of inter-disciplinary programs have problem solving skills across multiple niches
- Law increasingly important for students
- Outcome is increased opportunity for graduates
- Science problems are more interdisciplinary
- Growth of production of scientists
- Interdisciplinary means more efficiency in workplaces

- Continue to break down barriers between academic programs
- Research is now more of a team concept and CoS has more than 25 years of experience at this
- Recruit faculty from industry
- Solutions oriented research versus curiosity based research
- Expectations of incoming students and parents will be different looking for more of a collegiate experience as FT students
- Operate more as a business based on prioritizing resources

Negative Trends:

- Dwindling federal and state funds
- Lack of distance learning infrastructure between campuses
- Growth in Ph.D. graduates means more competition for graduates for employment

The SWOTT analysis clearly revealed that the group saw a lot of strengths, opportunities and positive trends for the College, while acknowledging some very real weaknesses and negative trends, probably the most disturbing was dwindling state and federal funds. The next step in the strategic planning process will need to carefully consider this analysis while formulating goals for the future.

Session 4: Competitive distinguishing characteristics

In session 4, the groups were asked to highlight the College's competitive distinguishing characteristics. A compilation of the groups responses are as follows:

- Enrollment growth
- Biotech partners in Jupiter
- Location and geoscape
- Potential for increased research dollars
- Potential for higher recognition of FAU through College of Science
- Good potential for employment for graduates in region and nationally
- Marine programs that others do not have
- Proximity of Everglades
- Jupiter is a unique global campus- could create post doc fellows program there—Max Planck--- has buy in from community—campus feeling---Science Community-research and science culture
- USGS FAU partnership on Davie campus
- Partnership with Harbor Branch and Dania Beach
- Potential partnerships with state colleges to create feeder system
- Let Broward and Port St. Lucie become research locations
 - **Undergraduate**
 - Opportunities for research
 - Educators who are active researchers
 - Diverse student
 - Accessible
 - Diversity of unique programs strong field research
 - Research unique to South Florida

- **Graduate**
 - Partnerships
 - Instrumentation for hands on experience
 - Interdisciplinary
 - Research centers of excellence
 - Faculty
 - Lifestyle, south Florida appeal

- **Faculty**
 - Student emphasis
 - Accessible
 - Unique areas of expertise
 - Interdisciplinary
 - Collegiality
 - Faculty involvement with partners
 - Opportunity for spousal employment

- **Research**
 - Interdisciplinary
 - Partnerships
 - Facility accessibility
 - Florida environment
 - Unique local funded research opportunities, SFWMD, USGS, etc.
 - Inexpensive travel port/great destination for visiting researchers

Negative points

- Lack of infrastructure support for research and TAs, post doc fellows
- High cost of living in SE Florida

Session 5: Gaps and Priorities

This session was tabled due to lack of time and will be taken up at the next forum.

Session 6: Next Steps

To “round out” the day, a series of questions were developed by the whole group that would provide the premise for our next steps in the Strategic Planning process. They are:

- What is the budget?
- What are university priorities?
- What happened to top down strategic planning?
- What do we want to say to the university?
- How can we use advisory board?
- How we utilize multiple campuses most effectively? Case studies of others? Eg. George Mason, City University NY, Arizona State.
- Honors program?
- Environmental scan of outside factors:
 - High school population decline or up?

- Distance learning?
- Where are opportunities with:
 - Partners?
 - State colleges?
 - Other universities?
 - Other departments/colleges on campus?
- Who are the players in the I-95 corridor?

Summary

Much was discussed during the course of the day. Clearly, the College is well positioned to grow and continue to contribute significantly to the overall success of FAU. However, critical to our success will be to develop a plan that allows for limited increases in resources for the College despite constrained funding.

A majority of participants believed the day had been worthwhile and was a good start to our Strategic Planning process. An important part of the next step in the process will be to have an understanding of where the University's Strategic Planning process is and what is being proposed by the University Strategic Planning Committee. A report from that group is due in late Summer/Fall. Dean Perry closed the session by thanking all who attended. He noted that he would create assignments for participants for Fall and then determine when to reconvene after some of the questions could be answered.

APPENDIX

Charles E Schmidt College of Science: Strategic Planning Questions for Discussion

RESEARCH

What are regionally relevant research opportunities for the future?

How best should we be involved with those now?

How best should we follow up on the "research theme" exercise by the Division of Research?

Using "market" demand as our criteria, on which programs should we focus resources?

Based on regional and future market needs, what are the new areas in which we should venture?

TALENT DEVELOPMENT

How can we best meet the increase in undergraduate enrollment?

How can we differentiate our undergraduate programs from those offered at the state college level?

Where are the future market opportunities for graduate degree programs?

How should we be involved with the local K-12 system?

GENERAL

Where will we invest new resources for research and instructional programs?

How can we best utilize the multiple campus structure of the university to our best advantage?

How can we best use programs on partner campuses?

Summary of some trends that came out of the review of the surveys

In order to meet the burgeoning demand for serving more students and to cross the boundary issues of multiple campuses there was great consensus for”

- Distance learning technology, coursework and faculty capable of using effectively
- Increased TAs
- Increased faculty
- Focus on high achieving students to keep them, rather than lower achievers to remediate them

Using the multiple campuses:

- Each campus develop some type of specialization and avoid duplicating too much of the other areas.

- Develop campus strategic plans within disciplinary areas and in conjunction with partners
- Transportation system to and from Boca to other campuses for specialized programs
- Push undergraduate “basic” programs into the state college system so FAU can focus on specialization and more advanced programs for higher achieving students.

For differentiation of FAU the following were most commonly mentioned:

- Leverage Scripps, Max Planck and Torrey Pine relationships, USGS, SFWMD, National Parks, HBOI....
- Develop more cross-disciplinary degree programs, particular at the master’s level, more BS/MS programs.

Differentiation of the undergraduate experience:

- Provide research experience to undergrads
- Teach certificate programs for applied areas
- Interdisciplinary degrees
- Science and technology honors program

Areas of specialization on which to focus were mentioned as:

Most commonly mentioned:

- Bioinformatics
- Biomed/biotech research
- Environmental, solar, climate change, green energy
- Marine, sea levels, marine medicine/drug discovery, salt water intrusion
- Everglades
- Aging, medical and psych
- Neuroscience, brain imaging

Also mentioned:

- Cryptography
- Space time physics
- Medical physics
- Information security
- Port security
- Nano-med
- Mathematical sciences
- Brain imagery

Future markets mentioned:

- Biotech/biosciences
- Pharma
- Government agencies
- Applied fields such as artificial intelligence, forensics and others

Charles E Schmidt College of Science-Dean Gary Perry, May 18, 2011

1. What does FAU do well?

- Provides access for students seeking higher education in a wide variety of programs
- Serves a diverse student population from its service region
- Provides students with an excellent education at low cost
- Has provided its colleges the opportunity to develop programs to meet local and national needs
- Has provided its colleges with the flexibility to meet challenges and to respond to change quickly
- Attracts and hires excellent faculty
- Provides an atmosphere of collegiality and promotes/supports cooperation among programs

2. What should FAU do in the next five years to become a distinctive and distinguished institution?

- Invest in those programs that will bring high visibility and “brand” the university
- Hire more research active faculty with the ability to garner outside funding—this is the only way to become a top-tier research university
- Hire some superstar faculty
- Address faculty development issues to not only recruit but also retain the best faculty
- Continue to raise entrance requirements
- Continue to increase enrollments if budget is FTE driven
- Explore ways to deliver the curriculum across all campuses
- Consider consolidating/redefining partner campuses
- Find opportunities and ways to interact more closely with others in our service region
- Develop an international signature
- Market ourselves better nationally and internationally; international programs
- Win bowl games

3. What should your unit do in the next five years to become a distinctive and distinguished college?

- Hire additional research active faculty capable of generating outside research funding in areas of our programmatic strength
- Increase outside funding among current faculty
- Continue to develop interdisciplinary research areas identified in the Research Priority exercise as programs of strength while identifying other research priority areas for support
- Complete the Jupiter Science and Technology Initiative
- Work more with agencies and companies to identify employment opportunities for our graduates (eg. through internships, work experience).
- In order to meet the burgeoning demand for serving more students and to cross the boundary issues of multiple campuses

- Increase distance learning technology, coursework and faculty capable of using effectively
- Increase TAs
- Increase faculty
- Focus on high achieving students to keep them at FAU
- Differentiate the undergraduate experience:
 - Provide research experience to undergraduates
 - Teach certificate programs for applied areas
 - Develop Interdisciplinary degrees; more combined BS/MS opportunities
 - Develop a Science and Technology honors program
- Identify opportunities for new programs as needed
- Identify and seize upon opportunities to develop programs with area partners such Max Planck, Torrey Pines, Scripps, SFWMD, National Parks, USGS, and with other units inside FAU as well as other regional research universities.

4. What challenges does FAU face today?

- Servicing the increased enrollment as FAU moves toward 36,000 undergraduate students
- Less than optimal infrastructure for instruction and research (Faculty, TAs, physical plant, central services) to meet the needs
- How to reallocate diminished resources to meet FAU goals
- Continuing to increase student success
- Decreased faculty morale who see a “prospering” FAU but their “lot” does not seem to get any better

5. What challenges does your unit face today?

- Improving the infrastructure for teaching and research (Faculty, TAs, physical plant, central services)
- How to service increased enrollment needs without adequately increased resources
- Competitive faculty salaries
- Competitive start-up funding for new faculty; identify stable source of start-up funding
- Losing research productivity as a result of losing research active faculty
- Student:Faculty ratio too high for a research university
- How to provide research opportunities for an increasing undergraduate population
- We are not competitive in graduate stipends and benefits
- Getting the message out about the breadth and quality of our programs