

**ANNUAL REVIEW OF ACADEMIC
PROGRAM CONTRACTS BETWEEN THE
STATE BOARD OF EDUCATION AND
FLORIDA INDEPENDENT
POSTSECONDARY INSTITUTIONS**

**Report and Recommendations of the
Florida Postsecondary Education Planning Commission**

AUGUST 15, 1996

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EXECUTIVE SUMMARY

In accordance with the provisions of the State Board of Education Rule A-10.032, the Postsecondary Education Planning Commission has conducted an annual review of the academic programs which received contract funding from the State Board of Education in 1995-96 to provide instruction to Florida residents at state tuition rates. Three five-year contract reviews were also conducted. This report provides a compilation of the contract reviews.

The 1997-98 contract funding recommendations represent a continuing request to restore the level of student support for a majority of the contracts to the funding levels recommended by the Commission for the past eight years. Since 1988, the Legislature has kept funding relatively constant which has resulted in a reduction in student support each year.

The Commission strongly believes that all postsecondary education resources in the State must be utilized to meet the education needs of a rapidly growing state. Within the current fiscal realities facing public education in Florida, contracting is a cost-efficient way to increase access for Florida residents to a postsecondary degree in fields in which graduates are in demand. Contract programs in such fields as biomedical engineering, nursing and social works are producing high quality graduates who are addressing local, regional and state workforce needs. The Commission urges the full commitment of the State to fund the current contracts at the level of student support recommended in the report. Below are the Commission's 1997-98 contract funding recommendations by institution and academic program.

1997-98 CONTRACT FUNDING RECOMMENDATIONS

<i>EXISTING CONTRACTS</i>	<i>1997-98</i>	
	<i>PEPC FUNDING RECOMMENDATION</i>	<i>SEMESTER CREDIT HOURS</i>
<i>FLORIDA INSTITUTE OF TECHNOLOGY</i>		
<i>BS/Engineering</i>	<i>\$ 878,200</i>	<i>2000</i>
<i>BS/Science Education</i>	<i>\$ 241,505</i>	<i>550</i>
<i>UNIVERSITY OF MIAMI</i>		
<i>BS/Industrial (Manufacturing) Engineering</i>	<i>\$ 251,267</i>	<i>370</i>
<i>BS/Architectural Engineering</i>	<i>\$ 203,730</i>	<i>300</i>
<i>MS/Biomedical Engineering</i>	<i>\$ 397,411</i>	<i>600</i>
<i>BS/Nursing</i>	<i>\$ 541,243</i>	<i>797</i>
<i>MS/Nursing*</i>	<i>\$ 370,846</i>	<i>595</i>
<i>Ph.D./Biomedical Sciences*</i>	<i>\$ 576,000</i>	<i>18 Students</i>
<i>Ph.D./Marine & Atmospheric Sciences</i>	<i>\$ 489,430</i>	<i>156</i>
<i>BS/Motion Pictures</i>	<i>\$ 305,595</i>	<i>450</i>

<i>EXISTING CONTRACTS</i>	<i>1997-98</i>	
	<i>PEPC FUNDING RECOMMENDATION</i>	<i>SEMESTER CREDIT HOURS</i>
<i>BARRY UNIVERSITY</i>		
<i>BS/Nursing (Accelerated Option)</i>	<i>\$ 332,310</i>	<i>1,100</i>
<i>MSW/Social Work</i>	<i>\$ 386,464</i>	<i>1,350</i>
<i>FLORIDA SOUTHERN COLLEGE</i>		
<i>BS/BA/Elementary Education</i>	<i>\$ 230,520</i>	<i>1,200</i>
<i>BS/Accounting</i>	<i>\$ 115,260</i>	<i>600</i>
<i>NOVA SOUTHEASTERN UNIVERSITY</i>		
<i>Osteopathy</i>	<i>\$ 2,888,000</i>	<i>380 Students</i>
<i>Pharmacy*</i>	<i>\$ 884,000</i>	<i>260 Students</i>
<i>Optometry</i>	<i>\$ 608,000</i>	<i>80 Students</i>
<i>MS/Speech-Language Pathology</i>	<i>\$ 326,389</i>	<i>700</i>
<i>TOTAL</i>	<i>\$ 10,026,170</i>	

* FIVE-YEAR REVIEW

I. INTRODUCTION

Since authorized by the Legislature in 1975, the state of Florida has contracted with independent colleges and universities for Florida residents to participate at state tuition rates in carefully selected academic programs. In 1981, the Florida Legislature transferred authority from the Board of Regents to the State Board of Education "to contract with (accredited) independent institutions . . . for the provision of those educational programs and facilities which will meet needs unfulfilled by the state system of postsecondary education" (S. 229.053 (2)(o), F.S.). The Postsecondary Education Planning Commission was assigned responsibility to "recommend to the State Board of Education contracts with independent institutions to conduct programs consistent with the state master plan for postsecondary education" (S. 240.147(4), F.S.).

The authority for academic program contracts, according to State Board of Education Rule 6A-10.032, FAC.:

is based upon the principles of efficiency, effectiveness, and economy. The State Board may contract for a program or for the use of an existing facility if it can be demonstrated that the state need for the program or facility may be met at lower cost or more effectively through contracting. In all cases, the program or facility obtained through contract must be of equal quality as similar programs and facilities in the state system of postsecondary education.

As envisioned in the 1982 ***Master Plan For Florida Postsecondary Education***, statute and rule, the contracting process is one manifestation of the recognition by the state of Florida that all postsecondary education resources must be utilized to meet the educational needs of a rapidly growing state. Florida's citizens are able to gain access to needed quality programs at competitive costs and at public tuition rates. The independent institutions involved in contracting benefit primarily from an increased pool of students who are better able, with state assistance, to afford to enter the selected contract programs. When the State enters a contract with an established academic program at an independent institution to provide a needed educational opportunity, it takes advantage of the institution's prior investment and avoids duplicative start-up costs. By design, the student may pay no more tuition under a contract than at a comparable public sector program.

In Challenges, Realities, Strategies: The Master Plan for Florida Postsecondary Education for the 21st Century, the 1993 Commission recommended to "increase utilization of independent schools, colleges and universities" as a strategy to increase the productivity of postsecondary education in Florida. In a discussion of *Flexible Management and Finance*, the Commission called for "stable, consistent funding to the independent sector to enhance access to postsecondary opportunities in Florida." Table 1 displays 1995-96 contract-supported students by program and ethnicity.

The Commission, in accordance with statute and rule, conducts a detailed evaluation of each proposal for a contract submitted by an independent institution. Since the Commission was assigned the responsibility for reviewing contract proposals in 1981, it has recommended that the State Board of Education enter into 16 contracts in addition to continuation of the three contracts recommended earlier by the Board of Regents. During this period, the Commission has reviewed and recommended against funding 39 additional proposals, primarily on the basis of lack of clearly

TABLE 1

**Contract-Supported Students by Ethnicity
1995-96**

CONTRACT PROGRAM	ETHNICITY					Total
	Black	White	Hispanic	Asian	Other	
<i>Florida Institute of Technology</i>						
BS/ Engineering	1	37	2	0	1	41
BS/Science Education	0	9	0	0	0	9
<i>University of Miami</i>						
BS/Industrial (Manufacturing) Engineering	2	2	11	1	0	16
BS/ Architectural Engineering	1	7	2	0	0	10
MS/ Biomedical Engineering	3	14	9	4	1	31
BS/ Nursing	5	25	14	2	2	48
MS/ Nursing *	11	53	15	2	0	81
Ph.D. Biomedical Sciences *	4	22	4	2	0	32
Ph.D. Marine & Atmospheric Sciences	0	19	1	0	1	21
BS in Motion Pictures	4	2	23	2	0	31
<i>Barry University</i>						
BS/ Nursing (Accelerated Option)	3	23	3	1	0	30
MSW/ Social Work	18	44	22	0	0	84
<i>Florida Southern College</i>						
BS/BA/ Elementary Education	0	19	0	0	0	19
BS/ Accounting	0	21	0	0	0	21
<i>Nova Southeastern University</i>						
Osteopathy	15	245	35	26	0	321
Pharmacy	11	133	54	42	0	240
Optometry	1	40	6	3	1	51
MS/Speech-Language Pathology	4	45	11	0	1	61
TOTAL	83	760	212	85	7	1,147

* 1994-95

demonstrated need. Historically, the Commission has recommended state support for an academic program at a level that does not encourage over-dependence on State funds for its viability. For many contracts, the FTE funding level has stabilized at from 40 to 60 percent of the total program enrollment.

The cost of the contract is the total cost to the State for the program at the independent institution. In contrast, public sector operating cost data do not include significant capital outlay expenditures for facilities and major equipment purchases or other start-up costs which would be necessary to duplicate an existing independent sector program. Calculating cost comparisons between academic program contracts and similar public sector programs has been problematic, as there appears to be

as much variation in program costs among similar programs at independent and public institutions as among such programs within the State University System.

For the 1995-96 year, 15 academic programs received annual reviews and these reviews are addressed in Chapter II. Simultaneously, comprehensive five-year contract reviews were conducted for three existing contract programs: the Ph.D. in Biomedical Sciences at the University of Miami, the Master's Degree in Nursing at the University of Miami, and the Doctor of Pharmacy at Nova Southeastern University. The program reviews and funding recommendations of these three contract programs appear in Chapter III. During the current cycle, there were no proposals approved by the Commission to establish a new academic contract, although one proposal is currently being evaluated by Commission staff.

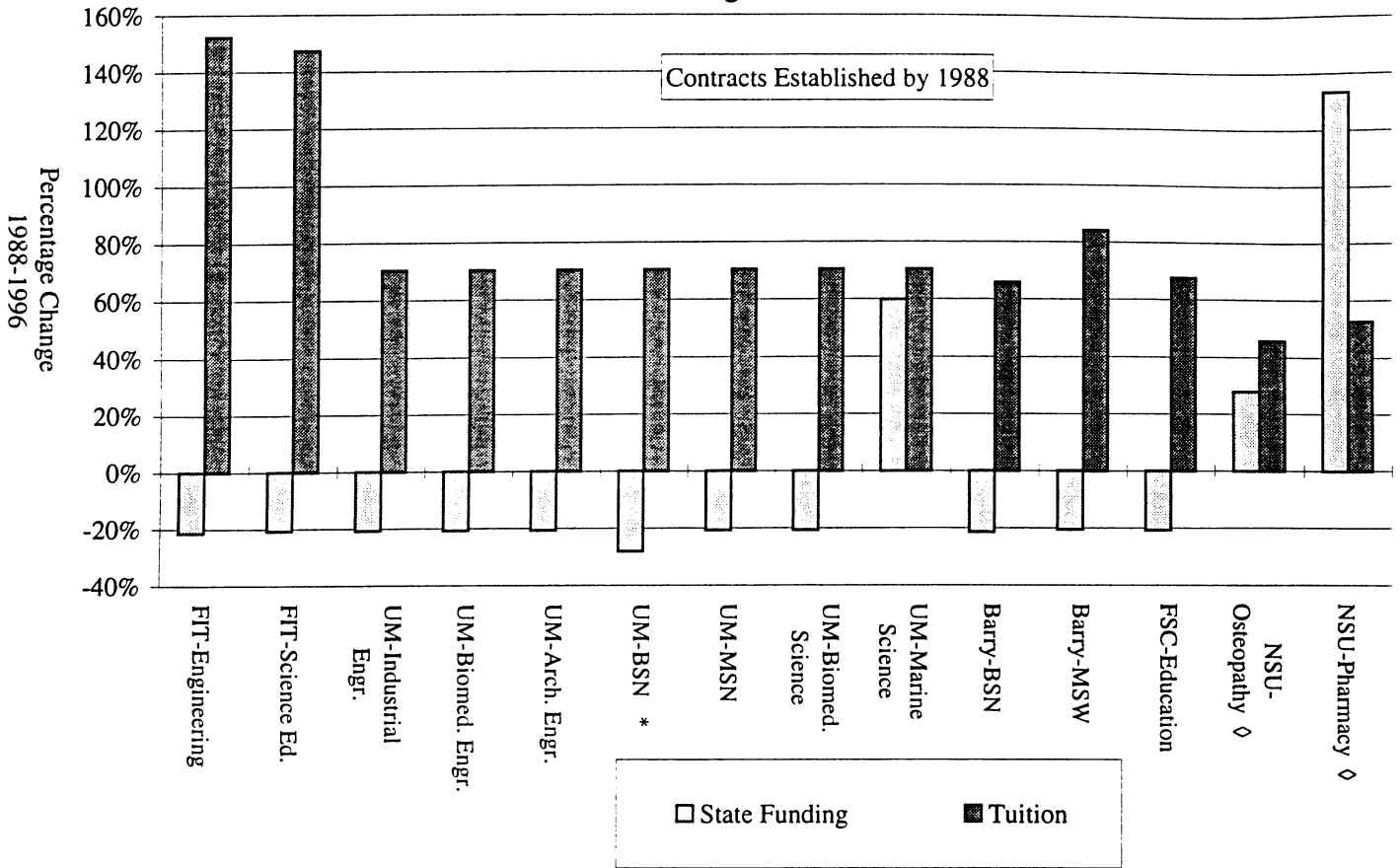
1996-97: Contract Support Continues To Decline

Since 1988, state support for the academic contracts has steadily declined as the Legislature has held the state appropriation for each contract relatively constant, in effect, "rolling over" the previous year's dollar amount. This has resulted in a continued erosion of the funding level, as increased tuition and program costs have steadily reduced the number of students supported each year. During this period, the level of student credit hour support stated in the specific legislative appropriation for each contract program has had no relation to the actual number of students served by the state dollars.

State funding for a majority of the contracts has been reduced over 20 percent since 1988. Table 2 displays tuition increases at contracting institutions as well as the decline of state contract funding. The disparity is most dramatic at the Florida Institute of Technology due to the university's 170 percent tuition increase since 1987. In addition, during the 1992-93 year, contract funding levels were reduced 6.6 percent due to across-the-board state budget reductions enacted by the Governor and Legislature.

For the 1996-97 year, the Commission recommended state funding for 18 academic contracts. With the exception of two contract programs, all of the contracts funded by the 1996 Legislature for the 1996-97 year were funded below the level recommended by the Commission. The Legislature appropriated funds for the Marine and Atmospheric Sciences program at the University of Miami and the Optometry program at Nova Southeastern University at a significantly higher level than was recommended by the Commission. The total appropriation was 76 percent of the recommended level and was approximately \$2.3 million dollars below the total recommended amount. (See Table 3) For the seventh straight year, the Legislature failed to fund the second year, phase-in funding for three contracts: Architectural Engineering at the University of Miami and Elementary Education and Accounting at Florida Southern College.

TABLE 2
Academic Contract Institutions
State Funding and Tuition Costs
Percent Change: 1988-96



Notes:

* First year funding in 1989.

◇ Under contract provisions as of 1992. (Tuition is per semester.)

For the first time, the Department of Education did not include the Commission's annual budget recommendations for the state academic contracts in its Legislative Budget Request for 1996-97, although this process is expressed in State Board of Education Rule 6A-10.032 (c)(e), Florida Administrative Code. As a result, in most cases, the 1996 Legislature appropriated the same dollar amount as previous years. The Commission, as well as the independent institutions, are concerned by the Department's decision not to adopt the Commission's contract funding recommendations.

TABLE 3

**Academic Contracts
Legislative Funding Recommendations
1996**

EXISTING CONTRACTS	1995 LEGISLATIVE APPROPRIATION	1996 PEPC FUNDING RECOMMENDATION	1996 LEGISLATIVE APPROPRIATION
FLORIDA INSTITUTE OF TECHNOLOGY			
BS/Engineering	\$ 401,346	\$854,360	\$ 401,346
BS/Science Education	\$ 86,787	\$234,949	\$ 86,787
UNIVERSITY OF MIAMI			
BS/Industrial (Manufacturing) Engineering	\$ 182,082	\$239,087	\$ 182,082
BS/Architectural Engineering	\$ 74,222	\$193,854	\$ 74,222
MS/Biomedical Engineering	\$ 89,802	\$372,054	\$ 89,802
BS/Nursing	\$ 331,091	\$515,005	\$ 331,091
MS/Nursing	\$ 299,559	\$353,430	\$ 299,559
Ph.D./Biomedical Sciences	\$ 362,228	\$600,000	\$ 362,228
Ph. D./Marine & Atmospheric Sciences	\$ 289,430	\$453,888	\$ 489,430
BS in Motion Pictures	\$ 275,657	\$290,781	\$ 290,657
BARRY UNIVERSITY			
BS/Nursing (Accelerated Option)	\$ 189,989	\$313,698	\$ 189,989
MSW/Social Work	\$ 193,734	\$395,550	\$ 193,734
MSW/Social Work (Ft. Myers)	\$ 110,722	0	\$ 110,722
FLORIDA SOUTHERN COLLEGE			
BS/BA/Elementary Education	\$ 69,823	\$216,216	\$ 69,823
BS/Accounting	\$ 52,832	\$108,108	\$ 52,832
NOVA SOUTHEASTERN UNIVERSITY			
Osteopathy	\$ 2,283,900	\$2,755,000	\$ 2,283,900
Pharmacy	\$ 588,244	\$768,000	\$ 588,244
Optometry	\$ 331,974	\$592,000	\$ 969,400
MS/Speech-Language Pathology	\$ 215,280	\$306,600	\$ 215,280
TOTAL	\$ 6,428,702	\$ 9,562,580	\$ 7,281,128

II. ANNUAL CONTRACT REVIEWS

Each year the Commission conducts contract reviews to support its recommendations to the State Board of Education on the renewal of each contract and to formulate a budget recommendation. Annual contract reviews are conducted following a submission of an annual report form by the institution contract administrator. Statistical data on contract program enrollments and graduates is collected and compiled by the Department of Education Office of Postsecondary Coordination. The annual review of each contract program, including student/faculty ratio, admission practices, minority participation rate and student demand, may serve to identify a deterioration in quality of a contract that may warrant additional scrutiny. A copy of the annual contract report form appears in Appendix A.

During the annual review process, each program is analyzed for continued compliance with the provisions of State Board of Education Rule 6A-10.032, FAC. Specific review criteria include:

- Unmet needs (student demand)
- Adequacy of resources
- Employer demand
- Specialized accreditation
- State subsidy (cost)
- Capability of nearby state institutions
- Consistency with the State Master Plan
- Minority participation
- Ratio of students enrolled under the contract to the number of graduates produced.

Following each review, a funding level for state support for the contract for the 1997-98 year is recommended. Upon approval by the Commission, contract funding recommendations will be submitted to the State Board of Education and the Legislature.

FLORIDA INSTITUTE OF TECHNOLOGY - BS IN ENGINEERING

Contract Summary

- Initially funded by the 1981 Legislature at \$124,000. Contract funding for this program peaked in 1988 at \$512,293 for 120 FTE students. Since that year, contract dollars have remained relatively constant which has resulted in a drop in FTE student support.
- Provides support for Florida residents enrolled in BS programs in Chemical, Civil, Computer, Electrical, Environmental, Mechanical and Ocean Engineering.
- Florida Tech is the only university located in East Central Florida with ABET-accredited degree programs in these fields.
- The college reports that national demand for engineers is on the rise again and employment is up 11 percent from a ten-year low in 1993. Demographics favor a turnaround and an increase in engineering enrollments in the near future. The number of nineteen-year-old students choosing engineering, however, remains on the decline.

1995-96 Student Demand

Program Applicants	662
Applicants Admitted	558
Total Applicants Denied	104
Qualified Applicants Denied	0
Applicants Enrolled	198

- The college continues to actively recruit minority students. For black students in the contract program, the university pays the balance of tuition charges not paid by the grant.
- In the east central region, economic conditions are strong, although job growth related to NASA and the Kennedy Space Center remains stagnant.
- Of the 39 full-time faculty in the five departments, there is one Hispanic female, and three of the 38 males are Asian. Student-faculty ratio in the contract program is 15.56:1
- 1995-96 contract students: Graduates - four; New enrollments - four; Total contract enrollment - 41.
- During the 1993 five-year contract review, the Commission reviewed a strong academic curriculum and a well-coordinated contract directly linked to industry in the region. At that time, full state funding for the continuation of this contract was recommended.

- The 1995 Commission recommended \$854,360 to support 2000 student credit hours for the 1996-97 academic year. The 1996 Legislature, however, held the funding level constant at \$401,346.

Contract Enrollment (Unduplicated Headcount)

ETHNICITY							STATUS	
GENDER	ASIAN	BLACK	HISPANIC	WHITE	NOT REPORTED	ALL	FULL	PART
FEMALE	0	0	1	15	0	16	16	0
MALE	0	1	1	22	1	25	24	1
ALL	0	1	2	37	1	41	40	1

1995-96 Student Credit Hours

Total Student Credit Hours (SCH) - 959

Outcomes - Fundamentals of Engineering Examination - April 1994

Florida Tech graduates	72 percent passing rate
Florida (statewide)	57 percent passing rate
National average	70 percent passing rate

* Results for 1995-96 examination not yet available.

Placement of Graduates

LOCATION	IN FIELD	NOT IN FIELD	FURTHER EDUCATION	UNKNOWN	TOTAL
LOCAL/REGION	7	0	2	0	9
FLORIDA	0	0	0	0	0
OUT-OF-STATE	3	0	4	1	8
TOTAL	10	0	6	1	17

Funding History (1992-96)

<u>Year</u>	<u>PEPC/DOE Funding Recommendations (FTE/SCH)</u>	<u>Legislative Appropriation</u>
1992	\$806,603 (120/5760)	\$429,484
1993	\$1,428,372 (120/5760)	\$401,346
1994	\$907,501 (85.1)	\$401,346
1995	\$785,140 (2000)	\$401,346
1996	\$854,360* (2000)	\$401,346

* PEPC Recommendation Only

FLORIDA INSTITUTE OF TECHNOLOGY - BS IN ENGINEERING

1997-98 Contract Recommendation

University Request: State support for 2724 student credit hours (SCH)

Commission Recommendation: **\$878,200** for 2000 SCH

FLORIDA INSTITUTE OF TECHNOLOGY - BS IN SCIENCE EDUCATION

Contract Summary

- Initially funded by the 1983 Legislature at \$35,508. Contract funding for this program peaked in 1987 at \$115,354 for 27 FTE students. Since that year, contract dollars have remained relatively constant which has resulted in a drop in FTE student support each year.
- The contract program is unique in that it is offered by a major independent, technological university, is housed in the College of Science and Liberal Arts (as opposed to the College of Education) and is limited to the preparation of high school teachers.
- There continues to be a significant number of teachers of secondary science and math who are teaching out-of-field. Department of Education data reveal that in Fall 1992, 8.8 percent of science education and 13.6 percent of math teachers were out-of-field teachers. The department projects that there will be 606 science education vacancies in Florida in 1997.
- The program projects that demand for math and science teachers in the region will grow due to increases in the number of secondary students during this decade and the unusually large number of retiring teachers over the next five years.
- The 1993 Department of Education report: *Trends in the Supply of New Teachers in Florida* shows that, in 1983, 83 science teachers graduated from all teacher preparation programs in Florida. Ten years later, the number of graduates was only 125.
- 1995-96 contract students: graduates - one; new enrollment - zero; total contract enrollment - nine.
- There are 55 full-time faculty in the College of Science and Liberal Arts who are involved in courses taught in the contract program and seven full-time faculty in the Science/Math Education Department.
- FIT offers full scholarships for minority students who enroll in math/science education programs.

1995-96 Student Demand

Program Applicants	22
Applicants Admitted	5
Total Applicants Denied	17
Qualified Applicants Denied	14
Applicants Enrolled	5

- The 1994 five-year contract review found that the contract program has shown impressive growth and is strongly deserving of the continuation of state support. The review found that

the program attracts high quality students, provides vigorous science and math coursework, combines pedagogy with science throughout the curriculum, promotes an identity with the professional education community in Brevard County and East Central Florida, and produces graduates who become Florida teachers. Given the increase in tuition at FIT, the review consultant recommended to increase the size of the grant to support the intended number of students.

- Following the 1994 review, the Commission recommended that the contract be restored to its intended level of student support over a two year period.
- The 1995 Commission recommended \$234,949 to support 550 student credit hours for the 1996-97 academic year. The 1996 Legislature, however, held the funding constant at \$86,787.

Contract Enrollment (Unduplicated Headcount)

ETHNICITY							STATUS	
GENDER	ASIAN	BLACK	HISPANIC	WHITE	NOT RPTD	ALL	FULL	PART
FEMALE	0	0	0	6	0	6	6	0
MALE	0	0	0	3	0	3	2	1
ALL	0	0	0	9	0	9	8	1

1995-96 Student Credit Hours

Total Student Credit Hours (SCH) - 180

Outcomes

- All students who have graduated from the approved department programs passed the Florida Teacher Certification Examination (FTCE).
- All FIT graduates successfully completed the Florida Professional Orientation Program (POP).
- The department utilizes three formal evaluation processes in which faculty interaction as a group takes place. These include an annual department planning retreat, a semi-annual meeting of all undergraduate course instructors, and weekly department faculty meetings.

Placement of Graduates

LOCATION	IN FIELD	NOT IN FIELD	FURTHER EDUCATION	UNKNOWN	TOTAL
LOCAL/REGION	1	0	0	0	1
FLORIDA	0	0	0	0	0
OUT-OF-STATE	0	0	0	0	0
TOTAL	1	0	0	0	1

Position: High School Science Teacher

Funding History (1992-96)

<u>Year</u>	<u>PEPC/DOE Funding Recommendations (FTE/SCH)</u>	<u>Legislative Appropriation</u>
1992	\$197,710 (29/1421)	\$92,872
1993	\$220,000 (30/1440)	\$86,787
1994	\$303,504 (30/1440)	\$86,787
1995	\$227,463 (550)	\$86,787
1996	\$234,949* (550)	\$86,787

* PEPC Recommendation Only

FLORIDA INSTITUTE OF TECHNOLOGY - BS IN SCIENCE EDUCATION

1997-98 Contract Recommendation

University Request - State support for 750 student credit hours (SCH)

Commission Recommendation - \$241,505 for 550 SCH

UNIVERSITY OF MIAMI - BS IN INDUSTRIAL (MANUFACTURING) ENGINEERING

Contract Summary

- Initially funded by the 1983 Legislature at \$97,000. Contract funding for this program peaked in 1988 at \$230,083 for 30 FTE students.
- The University of Miami offers the only accredited manufacturing engineering program in Florida and is one of 14 accredited programs in the U.S.
- The department reports that the demand for manufacturing engineers in design manufacturing and Research and Development in Florida is increasing, the investment in manufacturing and manufacturing support services in Florida is increasing and the expectation for growth of the economy in South Florida is positive. The ongoing technological changes in industry are increasing the demand for better-trained manufacturing engineers.
- Southeast Florida industry is also served by the Florida International University Industrial Engineering program which has a manufacturing option.
- The department reports that the program has been strengthened by the establishment of a Computer Integrated Manufacturing Laboratory and an updating of curriculum. The laboratory houses state-of-the-art equipment to support applications of manufacturing technologies, processes and research.
- The department also operates an Ergonomics Laboratory, a noise and vibration lab, a systems and operations research lab, an industrial ventilation lab and a work design lab.
- Nine full-time faculty teach in the BS industrial engineering program. Qualified professionals (practicing engineers) in the region also teach courses on a part-time basis.

1995-96 Student Demand

Program Applicants	25
Applicants Admitted	3
Total Applicants Denied	22
Qualified Applicants Denied	0
Applicants Enrolled	2

- 1995-96 contract students: graduates - seven; new enrollments -four; total contract enrollment -sixteen.

- The 1994 five-year contract review found that the manufacturing engineering program is of high quality and is providing graduates who are in high demand. The review concluded that the program is meeting a need that is not now being met by other universities in the region.
- Following the 1994 review, the Commission recommended that the contract be restored to its intended level of student support over a two year period.
- The 1995 Commission recommended \$239,087 to support 370 student credit hours for the 1996-97 academic year. The 1996 Legislature, however, held the funding level constant at \$182,082.

Contract Enrollment (Unduplicated Headcount)

ETHNICITY							STATUS	
GENDER	ASIAN	BLACK	HISPANIC	WHITE	NOT RPTD	ALL	FULL	PART
FEMALE	1	1	2	1	0	5	5	0
MALE	0	1	9	1	0	11	11	0
ALL	1	2	11	2	0	16	16	0

1995-96 Student Credit Hours

Total Student Credit Hours (SCH) - 344

Placement of Graduates

LOCATION	IN FIELD	NOT IN FIELD	FURTHER EDUCATION	UNKNOWN	TOTAL
LOCAL/REGION	4	0	0	3	7
FLORIDA	0	0	0	0	0
OUT-OF-STATE	0	0	0	0	0
TOTAL	4	0	0	3	7

Funding History (1992-96)

<u>Year</u>	<u>PEPC/DOE Funding Recommendations(FTE/SCH)</u>	<u>Legislative Appropriation</u>
1992	\$341,451 (30/887)	\$194,848
1993	\$436,320 (30/887)	\$182,082
1994	\$418,428 (30/887)	\$182,082
1995	\$318,536 (520 SCH)	\$182,082
1996	\$239,087* (370 SCH)	\$182,082

* PEPC Recommendation Only

**UNIVERSITY OF MIAMI - BS IN INDUSTRIAL (MANUFACTURING)
ENGINEERING**

1997-98 Contract Recommendation

University Request: State support for 370 student credit hours (SCH)

Commission Recommendation: \$251,267 for 370 SCH

UNIVERSITY OF MIAMI - BS IN ARCHITECTURAL ENGINEERING

Contract Summary

- Initially funded by the 1989 Legislature at \$93,720 to support ten FTE as a first-year phase-in. Since the initial state appropriation in 1989, second year phase-in funding has not been appropriated by the Legislature.
- The university offers the only BS program in architectural engineering in Florida. The program is one of 13 U.S. programs accredited by the Accreditation Board of Engineering and Technology (ABET).
- Program graduates continue to be in demand due to the steady growth of the building and construction industries in South Florida, and due to the increasing complexity of building systems. The department reports that, responding to student demand, a number of universities nationally are contemplating architectural engineering programs, e.g., Rutgers, Duke, Portland State and Illinois Institute of Technology.
- The majority of Florida residents in the program are recruited as a result of the program's 2+2 articulation agreement with the pre-engineering programs at community colleges in Dade and Broward counties.

Student Demand

Program Applicants	17
Applicants Admitted	14
Total Applicants Denied	3
Qualified Applicants Denied	0
Applicants Enrolled	14

- Fall 1995 program enrollment was 84.
- 1995-96 contract students: Graduates - two; New enrollments - eight; Total contract enrollment - ten.
- Student to faculty ratio is approximately 13:1. Six full-time faculty teach in the BSAE program. Part-time faculty include practicing engineers and architects in the region and affiliated faculty from other school and engineering departments.
- The department utilizes nine laboratories for teaching and research in the architectural engineering program.

- The department operates an active recruitment program for minorities and women and provides a comprehensive retention program that includes seminars, early testing, tutoring and laboratory support.
- The 1995 Commission recommended \$193,854 to support 300 student credit hours for the 1996-97 academic year in a continuing request to fully fund the contract. The 1996 Legislature, however, held the funding constant at \$74,222.

Contract Enrollment (Unduplicated Headcount)

ETHNICITY							STATUS	
GENDER	ASIAN	BLACK	HISPANIC	WHITE	NOT RPTD	ALL	FULL	PART
FEMALE	0	1	0	2	0	3	3	0
MALE	0	0	2	5	0	7	6	1
ALL	0	1	2	7	0	10	9	1

1995-96 Student Credit Hours

Total Student Credit Hours (SCH) - 132.401

Placement of Graduates

LOCATION	IN FIELD	NOT IN FIELD	FURTHER EDUCATION	UNKNOWN	TOTAL
LOCAL/REGION	0	0	0	0	0
FLORIDA	0	0	1	0	1
OUT-OF-STATE	0	0	0	0	0
TOTAL	0	0	1	0	1

Funding History (1992-96)

<u>Year</u>	<u>PEPC/DOE Funding Recommendations (FTE/SCH)</u>	<u>Legislative Appropriation</u>
1992	\$230,970 (20/600)	\$79,426
1993	\$300,000 (20/600)	\$74,222
1994	\$348,690 (20/600)	\$74,222
1995	\$183,771 (300 SCH)	\$74,222
1996	\$193,854* (300 SCH)	\$74,222

* PEPC Recommendation Only

UNIVERSITY OF MIAMI - BS IN ARCHITECTURAL ENGINEERING

1997-98 Contract Recommendation

University Request: State support for 600 student credit hours (SCH)

Commission Recommendation: \$203,730 for 300 SCH

UNIVERSITY OF MIAMI - MS IN BIOMEDICAL ENGINEERING

Contract Summary

- Initially funded by the 1984 Legislature at \$40,680. Contract funding for the program peaked in 1988 at \$113,478 for 12 FTE students. Since that time, contract dollars have remained relatively constant which has resulted in a drop in FTE student support each year.
- The University of Miami provides the only programs in Florida that offer the MS and Ph.D. degrees in biomedical engineering.
- Following a five-year review of the contract in 1995, the Commission recommended that state support of the program be continued. The 1995 Commission recommended that funding be provided for 300 graduate SCH and 300 undergraduate SCH. The 1996 Legislature, however, kept the funding level for this contract the same as previous years at \$89,802. It is important to note that the department determined that baccalaureate students in the biomedical engineering program can only be supported by the contract if the additional state dollars are appropriated by the Legislature at the level recommended by the Commission.
- The department reports that the biomedical device industry in Florida remains healthy and that technical employment appears to be rising in the biomedical industry. Regardless of the anticipated restructuring of the health care field, the need for cost effective engineering solutions to the problems of health care is likely to continue. At the moment, employment opportunities are excellent and we expect the trend to continue.
- Several of the biomedical device firms in South Florida have been acquired by larger corporations who intend to expand the operations. These expansions are likely to translate into specific jobs.
- The department has nineteen faculty; fifteen Caucasian males, three Asian males and one Hispanic male. The student-faculty ratio is 9:6.
- 1995-96 contract students: Graduates - nine; New enrollments - seven; Total contract enrollment-31.
- The contract student enrollment maintains a broad representation of ethnic groups in the department: four Asian, three Black, nine Hispanic, one Native American, and fourteen White students.

Student Demand

Program Applicants	87
Applicants Admitted	74
Total Applicants Denied	13
Qualified Applicants Denied	0
Applicants Enrolled	14

Contract Enrollment (Unduplicated Headcount)

ETHNICITY							STATUS	
GENDER	ASIAN	BLACK	HISPANIC	WHITE	AMER. IND.	ALL	FULL	PART
FEMALE	0	1	1	1	0	3	2	1
MALE	4	2	8	13	1	28	21	7
ALL	4	3	9	14	1	31	23	8

Student Credit Hours

Total Student Credit Hours (SCH) - 153

Placement of Graduates

LOCATION	IN FIELD	NOT IN FIELD	FURTHER EDUCATION	UNKNOWN	TOTAL
LOCAL/REGION	6	0	2	1	9
FLORIDA	0	0	0	0	0
OUT-OF-STATE	0	0	0	0	0
TOTAL	6	0	2	1	9

Specific Placement/Location

Engineer, Intelligent Hearing System -- Miami
 Research Scientist, ITI - Miami
 Engineer, EPI - West Palm Beach
 Medical Physicist, University of Miami - Miami
 Engineer, Mekanika - Miami
 Engineer, President, Intelligent Hearing System - Miami
 Medical Student - University of Miami Medical School - Miami
 Ph.D. Student, University of Miami, Department of BME - Miami

Funding History (1992-96)

<u>Year</u>	<u>PEPC/DOE Funding Recommendations (FTE/SCH)</u>	<u>Legislative Appropriation</u>
1992	\$200,158 (15/450)	\$96,098
1993	\$212,000 (15/450)	\$89,802
1994	\$158,700 (10/300)	\$89,802
1995	\$260,011 (450)	\$89,802
1996	\$372,054* (600)	\$89,802

* PEPC Recommendation Only

UNIVERSITY OF MIAMI - MS IN BIOMEDICAL ENGINEERING

1997-98 Contract Recommendation

University Request: State support for 540 student credit hours (SCH) for undergraduate students and 180 SCH for graduate students.

Commission Recommendation: \$285,222 for 420 undergraduate SCH
112,189 for 180 graduate SCH

\$397,411

UNIVERSITY OF MIAMI - BS IN NURSING

Contract Summary

- Initially funded by the 1979 Legislature at \$200,000 at a time when the university was the only institution in the region offering the RN-to-BSN academic program option. Contract funding for this program peaked in 1988 at \$460,673 for 60 FTE students. In 1989, the Commission recommended that the contract be reduced to 40 FTE for the 1990-91 and 1991-92 academic years. Since that year, funding has remained relatively constant which has resulted in a gradual reduction in state support.
- The program focuses on transcultural nursing and continues to respond to the multi-cultural needs of the Southeast Florida communities.
- The demand, particularly in South Florida, for nurses with specific specialty training is expected to continue to exceed the supply. The reorganization of health care resulting from the increase in managed care and the shift of care from hospitals to non-hospital environments is increasing the demand for nurses prepared for leadership roles and for community-based delivery systems.
- The recent trend toward hospital downsizing in South Florida has resulted in a perceived decrease in the number of nursing positions available. But the shift has been in the location and requirements for available positions. BSN prepared nurses are now moving into community-based and ambulatory settings as well as case management and entry-level administrative positions.
- The department predicts that home-based care and out-patient centers will demand greater numbers of nurses as the population ages. A higher level of education is required of nurses in these settings to enable them to function independently.
- The department's report identified efforts within the profession to make the baccalaureate degree the minimum standard for professional practice. The Florida Department of Health and Rehabilitative Services reports that currently 25 percent of all nursing positions in HRS require a minimum of the BSN. Four of the largest hospital employers of nurses in Dade County (Jackson Memorial, Baptist, South Miami, and Mt. Sinai) all require the BSN as a minimum requirement for individuals hired into Nurse Manager positions.
- In keeping with the current trends, the School of Nursing has elective courses that address the older adult in health and illness and womanhood across the lifespan.
- There are 26 full-time and seven part-time faculty in the school. Student-faculty ratio averages 10:1 for BSN courses as required by the Florida Board of Nursing.
- During the 1995-96 year, the school had 714 inquiries from registered nurses interested in the RN/BSN program, and reports that all qualified applicants are accepted.

Student Demand

Program Applicants	89
Applicants Admitted	72
Total Applicants Denied	16
Qualified Applicants Denied	0
Applicants Enrolled	18

- 1995-96 contract students: Graduates - 30; New enrollments -18; Total contract enrollment-42.
- The 1995 Commission recommended \$515,005 to support 797 student credit hours for the 1996-97 academic year. The 1996 Legislature, however, held the funding level constant at \$331, 091.

Contract Enrollment (Unduplicated Headcount)

ETHNICITY							STATUS	
GENDER	ASIAN	BLACK	HISPANIC	WHITE	NOT RPTD	ALL	FULL	PART
FEMALE	1	5	13	24	2	45	21	24
MALE	1	0	1	1	0	3	3	0
ALL	2	5	14	25	2	48	24	24

1995-96 Student Credit Hours

Total Student Hours (SCH) - 666

Placement of Graduates

LOCATION	IN FIELD	NOT IN FIELD	FURTHER EDUCATION	UNKNOWN	TOTAL
LOCAL/REGION	18	0	8	0	26
FLORIDA	0	0	0	0	0
OUT-OF-STATE	0	0	0	0	0
TOTAL	18	0	8 *	0	26

* All are part -time students and employed in Nursing in Florida.

Specific Placements (Partial List)

Nurse Manager
FIU MSN Student
Home Health Coordinator
Employee Health Nurse
Home Healthcare Field Nurse

Psychiatric Charge Nurse
Critical Care Staff Nurse
Case Manager
Staff Nurse
University of Miami Graduate MSN student
Barry University MSN student

Funding History (1992-96)

<u>Year</u>	<u>PEPC/DOE Funding Recommendations (FTE/SCH)</u>	<u>Legislative Appropriation</u>
1992	\$533,748 (40/1200)	\$320,561
1993	\$450,000 (40/1200)	\$331,091
1994	\$697,380 (40/1200)	\$331,091
1995	\$488,218 (797 SCH)	\$331,091
1996	\$515,005* (797) SCH)	\$331,091

* PEPC Recommendation Only

UNIVERSITY OF MIAMI - BS IN NURSING

1997-98 Contract Recommendation

University Request: State support for 840 student credit hours (SCH).

Commission Recommendation: \$541,243 for 797 SCH

UNIVERSITY OF MIAMI - PH.D. IN MARINE AND ATMOSPHERIC SCIENCES

Contract Summary

- Initially funded by the 1985 Legislature at \$150,000. The funding level was gradually increased through 1987 to \$323,691 to support eight FTE students. The 1988 Commission recommended a funding increase to 10.5 FTE, but the funding increase was not appropriated.
- The Rosenstiel School is organized in the following divisions: Applied Marine Physics and Ocean Engineering with its Ocean Pollution Research Center, Marine and Atmospheric Chemistry, Marine Affairs, Marine Geology and Geophysics, and Meteorology and Physical Oceanography.
- The Ph.D. program at the Rosenstiel School is recognized in the field as one of the top four oceanographic institutes in the United States. The school reports a severe shortage in the U.S. of trained scientists in marine science. As a result of increased attention to the earth's environment, the school reports a high demand for its oceanography, marine physics and geology graduates in university research and academic faculty, government agencies and private industry positions.

Student Demand

Program Applicants	1
Applicants Admitted	1
Total Applicants Denied	0
Qualified Applicants Denied	0
Applicants Enrolled	1

- Following a five-year review of the contract program in 1991, the Commission recommended that funding be restored to support 10.5 FTE students.
- Student/faculty ratio is approximately 2:1. The school has 89 faculty members, 14 females and 75 males. All faculty have Ph.D. degrees.
- The school reports that the recruitment of Florida residents has been forestalled due to the reduction in contract funding. Recruitment has not been implemented because the current tuition equalization moneys are scarcely enough to fund the tuition costs for students currently enrolled.
- 1995-96 contract students: Graduates - three; New enrollments - one; Total contract enrollment - 21. Contract-supported students comprise 11 percent of the total program enrollment.

- Since its establishment, this contract has been based on the full cost of instruction and not on a tuition differential.
- The 1995 Commission recommended \$453,888 to support 128 student credit hours for the 1996-97 academic year. The 1996 Legislature, however, increased the funding level to \$489,430.
- A five-year contract review is scheduled for this program in 1997.

Contract Enrollment (Unduplicated Headcount)

ETHNICITY							STATUS	
GENDER	INDIAN	BLACK	HISPANIC	WHITE	NOT RPTD	ALL	FULL	PART
FEMALE	0	0	1	7	0	8	8	0
MALE	1	0	0	12	0	13	13	0
ALL	1	0	1	19	0	21	21	0

Student Credit Hour

Total Student Hours (SCH) - 134

Placement of Graduates

LOCATION	IN FIELD	NOT IN FIELD	FURTHER EDUCATION	UNKNOWN	TOTAL
LOCAL/REGION	1	0	0	1	2
FLORIDA	0	0	0	0	0
OUT-OF-STATE	1	0	0	1	3
TOTAL	2	0	0	1	3

Specific Placement Locations

National Hurricane Center
 Professor/Kean College
 Unemployed

Funding History (1992-96)

<u>Year</u>	<u>PEPC/DOE Funding Recommendations (FTE/SCH)</u>	<u>Legislative Appropriation</u>
1992	\$542,421 (10.3/248)	\$309,722
1993	\$344,076 (6.54/157)	\$289,430
1994	\$325,000 (3.94/94.52)	\$289,430
1995	\$439,680 (128 SCH)	\$289,430
1996	\$453,888* (128 SCH)	\$489,430

* PEPC Recommendation Only

UNIVERSITY OF MIAMI - PH.D. IN MARINE AND ATMOSPHERIC SCIENCES

1997-98 Contract Recommendation

University Request: State support for 175 student credit hours (SCH)

Commission Recommendation: **\$489,430** for 156 SCH

UNIVERSITY OF MIAMI - B.S. IN MOTION PICTURES

Contract Summary

- The contract was initially recommended by the 1989 Commission to support 15 FTE incoming junior students to be followed by a second class of juniors and seniors the following year for a total contract of 30 FTE students. The 1989 contract proposal by the University of Miami was in response to the Commission's 1987 study of *Postsecondary Education Needs of the Film Industry in Florida*, which was conducted in cooperation with the Florida Motion Pictures, Television and Recording Industry Advisory Council. The study found that there was an unmet need in Florida's film industry for postsecondary film graduates. The University of Miami offers the only baccalaureate film program in South Florida.
- The program is ranked among the top five film programs in the U.S.
- South Florida remains the center of film and television production in Florida and ranks third in the nation behind New York and Los Angeles among all metropolitan areas. There are more than 300 production and production-related companies based in South Florida with more than 8,000 employees. The relatively new studio facilities in Orlando, at Universal Pictures and Walt Disney Productions, have heightened the demand for well-trained, film professionals.
- The South Florida film industry is establishing an expanding number of linkages to the Caribbean and Latin America. The Motion Picture and Television Advisory Council and the Florida Motion Picture and Television Bureau, an agency of the Department of Commerce, has gone on record as advocating more university training of film personnel to help staff the State's growing motion picture and television industries.

Student Demand

Program Applicants	38
Applicants Admitted	31
Total Applicants Denied	0
Qualified Applicants Denied	0
Applicants Enrolled	31

- During the 1995-96 year, there were 264 students enrolled in the baccalaureate program and 42 graduates students. Enrollment of minority students is 40 percent, with a male to female ratio of 65:35 percent.
- The 1996 Legislature funded the contract for 1996-97 at the level recommended by the 1995 Commission to support 450 student credit hours at \$290,657.

Contract Enrollment (Unduplicated Headcount)

ETHNICITY							STATUS	
GENDER	ASIAN	BLACK	HISPANIC	WHITE	NOT RPTD	ALL	FULL	PART
FEMALE	1	3	14	2	0	20	18	2
MALE	1	1	9	0	0	11	10	1
ALL	2	4	23	2	0	31	28	3

1995-96 Student Credit Hours
Total Student Hours (SCH) - 442

Placement of Graduates

LOCATION	IN FIELD	NOT IN FIELD	FURTHER EDUCATION	UNKNOWN	TOTAL
LOCAL/REGION	3	0	0	0	3
FLORIDA	1	0	0	0	1
OUT-OF-STATE	1	0	0	0	1
TOTAL	5	0	0	0	5

Specific Placement

Associate Producer
 Assistant Producer
 Freelancer

Funding History (1995-96)

<u>Year</u>	<u>PEPC/DOE Funding Recommendations (FTE/SCH)</u>	<u>Legislative Appropriation</u>
1995	\$275,657	\$275,657
1996	\$290,781*	\$290,657

* PEPC Recommendation Only

UNIVERSITY OF MIAMI - B.S. IN MOTION PICTURES

1997-98 Contract Recommendation

University Request: State support for 34 students

Commission Recommendation: \$305,595 for 450 SCH.

BARRY UNIVERSITY - BS IN NURSING

Contract Summary

- Initially funded by the 1989 Legislature at \$242,330 to support 20 FTE. First-year contract review was completed by Commission in 1990. Since 1989, state funding has gradually been reduced each year to the point that the 1994 legislative appropriation is 22 percent less than the 1989 appropriation.
- State contract supports the only baccalaureate accelerated option program in the State that is designed to prepare an individual possessing a bachelor's degree in any field with the necessary training to be employed as a registered nurse. The program is a 12 month curriculum.
- Program addresses the shortage of baccalaureate-trained nurses and the supply of registered nurses, particularly in Southeast Florida. The department also reported that other nursing programs including state universities are limiting enrollment, so the number of new graduates is decreasing.
- Grade point average requirement for admission continues to be 3.0, and two starting dates are offered during the year for the program.
- The 1995 five-year contract review commended the program "for increasing the baccalaureate preparation of nurses with other degrees and providing a shorter educational time and earlier entry to work." It was recommended that the contract program be continued "with the highest priority."
- The 1995 five-year review also noted that the contract program has eroded over the last five years due to rising tuition and program costs and recommended that the contract be fully funded by the state. Since 1990, funding of this program has decreased by 20 percent while tuition has increased by 31 percent. The 1995 Commission recommended an increased level of support for the program.
- 1995-96 contract students: Graduates - 16; New Enrollments - 14; Total contract enrollment - 30.

Student Demand

Program Applicants	118
Applicants Admitted	87
Total Applicants Denied	20
Qualified Applicants Denied	0
Applicants Enrolled	47

- The department has 23 full-time faculty, all faculty hold at least an MSN in the clinical specialty they teach. The clinical ratio in the program is 1:9-10.

- The school reports that graduates with two baccalaureate degrees are in high demand by hospitals, healthcare agencies and the military services. All graduates take the NCLEX - RN exam to obtain licensure to practice as RN nurses. The success rate for graduates of the accelerated option program is 96 percent on the first attempt. All others succeeded on their second attempt.

Contract Enrollment (Unduplicated Headcount)

ETHNICITY							STATUS	
GENDER	ASIAN	BLACK	HISPANIC	WHITE	NOT RPTD	ALL	FULL	PART
FEMALE	1	2	1	17	0	21	21	0
MALE	0	1	2	6	0	9	9	0
ALL	1	3	3	23	0	30	30	0

Student Credit Hours

Total Student Hours (SCH) - 622

Placement of Graduates

LOCATION	IN FIELD	NOT IN FIELD	FURTHER EDUCATION	UNKNOWN	TOTAL
LOCAL/REGION	9	5	0	0	14
FLORIDA	2	0	0	0	2
OUT-OF-STATE	0	0	0	0	0
TOTAL	11	5	0	0	16

Funding History (1992-96)

<u>Year</u>	<u>PEPC/DOE Funding Recommendations (FTE/SCH)</u>	<u>Legislative Appropriation</u>
1992	\$257,015 (20/1100)	\$203,309
1993	\$257,015 (20/1100)	\$189,989
1994	\$210,360 (15)	\$189,989
1995	\$207,145 (780)	\$189,989
1996	\$313,698* (1100)	\$189,989

* PEPC Recommendation Only

BARRY UNIVERSITY - BS IN NURSING

1997-98 Contract Recommendation

University Request: State support for 1,100 student credit hours (SCH).

Commission Recommendation: \$332,310 for 1,100 SCH.

BARRY UNIVERSITY - MS IN SOCIAL WORK

Contract Summary

- Initially funded by the 1979 Legislature at \$62,126. Contract funding for this program peaked in 1990 at \$252,680.
- The MSW degree is a prerequisite for social work licensure. Florida Statutes require that most social agencies providing social work services employ only licensed providers.
- The contract responds to the rapid growth in South Florida and resultant demand for social services by preparing persons with BA and BSW degrees for professional social work practice in social, health and welfare agencies. In South Florida, increased demand is due to needs posed by urban poverty, new arrivals, a high proportion of senior citizens and recovery from the devastation of Hurricane Andrew.
- Within the Florida Department of Health and Rehabilitative Services, there is now a commitment to "professionalize" its staff and hire master's level personnel. HRS has accelerated its employment of new MSW graduates in the Child, Youth and Family Program areas through revisions of career services rules and regulations.
- The Florida Department of Labor Bureau of Labor Market Information includes social workers among the top 90 job producing occupations in the 1990s.
- The increased student demand for contract support has resulted in students receiving smaller allotments of credit support. Student requests for state grant support have doubled during the past five years.

Student Demand

Program Applicants	336
Applicants Admitted	305
Total Applicants Denied	31
Qualified Applicants Denied	0
Applicants Enrolled	186

- The 1995-96 faculty consists of 29 full-time and one-half-time persons. In addition, 15 adjunct faculty were employed. Sixteen of the full-time faculty are women and nine faculty members are either Hispanic or African American. Twenty of the faculty have either the Ph.D. or DSW degree. Student-faculty ratio is 12:1.
- 1995-96 contract students: Graduates - 25; New enrollments - 40; Total contract enrollment - 84.

- Curriculum modifications in the past two years include the infusion of more content on race, ethnicity and culture, the strengthening of the practice content in clinical courses and enrichment of the research courses as they relate to practice outcome evaluation.
- According to the school, the contract supports a significant proportion of all minority social work students in training statewide. In 1995-96, 48 percent of contract students on the Miami contract were minorities. This diversity results in a cadre of trained social workers who more closely approximate the client group which they will service.
- A survey of graduates by the department confirmed that over 90 percent found employment within a few weeks of their job search.
- The 1995 Commission recommended \$395,550 to support 1350 student credit hours for the 1996-97 academic year. The 1996 Legislature, however, held the funding level constant at \$193,734.
- Barry University has phased out its MSW-Fort Myers program (a separate contract program), due to the establishment of an MSW program by the University of South Florida (and eventually Florida Gulf Coast University).
- The 1995 Commission recommended that the Fort Myers contract allocation be transferred to the Miami contract. The 1996 Legislature, however, appropriated funds for the Fort Myers contract at the previous year's level: \$110,722.

Contract Enrollment (Unduplicated Headcount)

ETHNICITY							STATUS	
GENDER	ASIAN	BLACK	HISPANIC	WHITE	NOT RPTD	ALL	FULL	PART
FEMALE	0	16	18	41	0	75	38	37
MALE	0	2	4	3	0	9	5	4
ALL	0	18	22	44	0	84	43	41

1995-96 Student Credit Hours

Total Student Hours (SCH) - 661

Placement of Graduates

LOCATION	IN FIELD	NOT IN FIELD	FURTHER EDUCATION	UNKNOWN	TOTAL
LOCAL/REGION	20	0	0	0	20
FLORIDA	1	0	0	0	1
OUT-OF-STATE	0	0	0	0	0
TOTAL	21	0	0	4	25

Specific Placement/Location (Partial List)

Position

Social Worker
 Social Worker
 Clinical Social Worker
 Crisis Counselor
 Therapist
 Social Worker
 Social Work Intern
 Clinical Social Worker
 Case Manager
 Social Worker
 Clinical Therapist
 Social Work Intern
 Support Coordinator
 Senior Training Associate
 Clinical Director
 Mental Health Practitioner
 Support Coordinator
 Clinical Social Worker

Location

Vencor Hospital
 Visiting Nurse Association
 Youth & Family Development
 JMH/Rape Treatment Center
 Mental Health Center
 Hospice by the Sea
 Hospice of P.B. County Inc.
 South County Mental
 Henderson MHC Inc.
 League Against AIDS
 Center for Children in Crisis
 The Counseling Centre
 Advocates for Opportunity
 University of Miami
 Economic Opportunity Family Health Center
 Harbor Behavioral Health Care Institute
 Children's Home Society
 Metro Dade CAA Head Start

Funding History (1992-96)

<u>Year</u>	<u>PEPC/DOE Funding Recommendations (FTE/SCH)</u>	<u>Legislative Appropriation</u>
1992	\$230,780 (35/1050)	\$207,317
1993	\$230,780 (35/1050)	\$193,734
1994	\$261,450 (35/1050)	\$193,734
1995	\$281,841 (1050 SCH)	\$193,734
1996	\$395,550* (1350)	\$193,734

* PEPC Recommendation Only

BARRY UNIVERSITY - MS IN SOCIAL WORK

1997-98 Contract Recommendation

University Request: State support for 1350 student credit hours (SCH)

Commission Recommendation: **\$386,464 for 1350 SCH**

**FLORIDA SOUTHERN COLLEGE - BS/BA IN ELEMENTARY/EARLY
CHILDHOOD EDUCATION**

Contract Summary

- Initially funded by the 1989 Legislature at \$88,164 to support 40 FTE students. First-year contract review completed in 1990.
- Intent of the original contract recommendation by the Commission was to phase in the second year of enrollment to 80 FTE for 1990-91. However, since 1989, the Legislature has failed to fund the second year of the contract.
- The state contract addresses the demand for and shortage of teachers in the rapidly growing tri-county area of Polk, Hardee and Highlands counties. The department reports a 42 percent increase in elementary teacher vacancies between 1985 and 1990. These trends are expected to continue through the 1990s.
- The contract is one of a number of state efforts to increase the postsecondary education opportunities in the region. FSC has developed cooperative articulation agreements with Polk Community College and the USF-Lakeland campus.

Student Demand

Program Applicants	51
Applicants Admitted	20
Total Applicants Denied	31
Qualified Applicants Denied	31
Applicants Enrolled	19

- Renewed efforts are occurring to increase minority enrollment at the college and in the School of Education.
- 1995-96 contract students: Graduates - three; New enrollments - ten; Total contract enrollment -19.
- Eight full-time faculty teach in this contract program. Student-faculty ratio remains 15:1.
- The department reports that although budget cuts have decreased available positions in all areas of teaching throughout the State, population increases and replacement needs indicate the continuing need for well-trained, certified teachers. Program graduates have an excellent record as "preferred job candidates" and are readily hired in the area schools.

- The department anticipates that new state preschool/primary education certification requirements will significantly increase the credit hours required in this certification area. New rules have been adopted and the program is adjusting its curriculum to accommodate new requirements.
- The 1995 Commission recommended \$216,216 to support 1200 student credit hours for the 1996-97 academic year in a continuing request to fully fund the contract. The 1996 Legislature, however, held the funding level constant at \$69,823.
- A five-year contract review is scheduled for this program in 1997.

Contract Enrollment (Unduplicated Headcount)

GENDER	ETHNICITY						STATUS	
	ASIAN	BLACK	HISPANIC	WHITE	NOT RPTD	ALL	FULL	PART
FEMALE	0	0	0	18	0	18	17	1
MALE	0	0	0	1	0	1	1	0
ALL	0	0	0	19	0	19	18	1

1995-96 Student Credit Hours

Total Student Hours (SCH) - 1,183

Placement of Graduates

Follow-up data and employment status will be submitted in September. From previous years, between 80 - 90 percent contract program graduates are employed annually in the region as certified teachers.

Funding History (1992-96)

<u>Year</u>	<u>PEPC/DOE Funding Recommendations (FTE/SCH)</u>	<u>Legislative Appropriation</u>
1992	\$226,624 (80/2400)	\$74,718
1993	\$226,624 (80/2400)	\$69,823
1994	\$213,780 (40/1200)	\$69,823
1995	\$192,684 (1200)	\$69,823
1996	\$216,216* (1200)	\$69,823

* PEPC Recommendation Only

**FLORIDA SOUTHERN COLLEGE - BS/BA IN ELEMENTARY/EARLY
CHILDHOOD EDUCATION**

1997-98 Contract Recommendation

College Request: State support for 1200 student credit hours (SCH)

Commission Recommendation: **\$230,520** for 1200 SCH

FLORIDA SOUTHERN COLLEGE - BS IN ACCOUNTING

Contract Summary

- Initially funded by the 1990 Legislature at \$63,686 to support 20 FTE students, pending confirmation by the Commission of the hiring of a Ph.D. faculty member in the college's accounting department. During the 1990-91 academic year, confirmation was received by the Commission of a Ph.D. hire for the department. Accordingly, the appropriated contract funds were released to the college on a prorated basis by the Department of Education.
- Since 1991, the Legislature has failed each year to fund the Commission's request to phase-in of the second year class to a total 40 FTE.
- The department identifies a growing need in Florida for trained accountants. The department states that the nine state universities are not producing accounting graduates to keep pace with the state's rapid growth. Student demand for baccalaureate programs continues to decline.

Student Demand

Program Applicants	196
Applicants Admitted	194
Total Applicants Denied	2
Qualified Applicants Denied	0
Applicants Enrolled	194

- Two full-time faculty teach upper division courses in this program. Student-faculty ratio for the college is 21:2.
- 1995-96 contract: Graduates - seven; New enrollments - 17; total contract enrollment - 21.
- The 1995 Commission recommended \$108,108 to support 600 student credit hours for the 1996-97 academic year in a continuing request to fully fund the contract. The 1996 Legislature, however, held the funding level constant at \$52,832.
- A five-year contract review is scheduled for this program in 1997.

Contract Enrollment (Unduplicated Headcount)

ETHNICITY							STATUS	
GENDER	ASIAN	BLACK	HISPANIC	WHITE	NOT RPTD	ALL	FULL	PART
FEMALE	0	0	0	14	0	0	10	4
MALE	0	0	0	7	0	0	3	4
ALL	0	0	0	21	0	0	13	8

1995-96 Student Credit Hours

Total Student Hours (SCH) - 234

Placement of Graduates

LOCATION	IN FIELD	NOT IN FIELD	FURTHER EDUCATION	UNKNOWN	TOTAL
LOCAL/REGION	0	0	1	0	1
FLORIDA	0	0	0	0	0
OUT-OF-STATE	1	0	0	0	1
TOTAL	1	0	1	5	7

Specific Placement/Location

Position

Staff Accountant
MBA Student

Location

Out of State
Florida Southern College

Funding History (1992-96)

<u>Year</u>	<u>PEPC/DOE Funding Recommendations (FTE/SCH)</u>	<u>Legislative Appropriation</u>
1992	\$141,384 (40/1200)	\$50,536
1993	\$141,384 (40/1200)	\$52,832
1994	\$106,890 (20/600)	\$52,832
1995	\$96,342 (600 SCH)	\$52,832
1996	\$108,108* (600 SCH)	\$52,832

* PEPC Recommendation Only

FLORIDA SOUTHERN COLLEGE - BS IN ACCOUNTING

1997-98 Contract Recommendation

College Request: State support for 600 student credit hours (SCH)

Commission Recommendation: **\$115,260** for 600 SCH

NOVA SOUTHEASTERN UNIVERSITY - OSTEOPATHY

Contract Summary

- The College of Osteopathic Medicine at Nova Southeastern University remains the only college of osteopathic medicine in the Southeastern U.S. The mission of the college is to produce primary care physicians that will address the shortage of generalist physicians in Florida. The college emphasizes training for family care in rural areas and with high geriatric populations, areas of particular need in Florida.
- A recent study has verified that, since the graduating class in 1985, 72 percent of graduates have entered into primary care practice or are pursuing graduate training in a primary care discipline (percentage of graduates going into family practice almost six times the national average).
- The college has merged with Nova University to become a College of Nova Southeastern University. The Health Professions Division is now housed in a new facility (a \$42 million, one million square feet complex) adjacent to the original Nova University.
- At the NSU College of Osteopathic Medicine, all students take a course in rural medicine followed by a required three month rotation in a prescribed rural environment. In addition, the college requires a classroom course in geriatrics followed by a mandatory geriatrics rotation. The college also operates two urban clinics in underserved black communities that are a part of the student rotation.
- The college first received state funding with the enrollment of its charter class in 1981 for 32 students at \$3,125 per student. The level of state support and specific appropriation per student steadily increased during the decade. For the first time since 1984, the 1996-97 capitation amount per student (\$6,900) has not equaled the amount specified in the interstate contract through the Southern Regional Education Board (SREB) for osteopathic medical education (\$7,250).
- The college now awards eight full four-year scholarships for minority students per year. The Committee on Admissions has been restructured and charged with increasing the number of female and minority students accepted.
- The college has established a seven year track in family medicine (SYFAM) to streamline the educational process to produce family medicine practitioners. In addition to the four-year medical track, internship and residency experiences are included in the program.

Student Demand

Program Applicants	3,717
Applicants Admitted	187
Total Applicants Denied	3,530
Qualified Applicants Denied	163
Applicants Enrolled	150

- The college employs 72 full-time faculty, including four Hispanics, seven Blacks and eight Asian faculty.
- The 1995-96 college enrollment was 534 students. The minority student enrollment consisted of 35 Hispanic students, 15 Black students, and 26 Asian students.
- The university operates with an annual tuition charge and does not calculate tuition in terms of credit hours (full-time equivalent students). The 1996-97 tuition for a Florida resident is \$16,750 and for a non-Florida resident is \$21,150.
- The 1995 five-year contract review found that this contract program has an outstanding record in responding to the State's workforce goals of enhancing access by excellent primary care physician output, substantial minority enrollment in the medical school, and addressing geographic distribution of physician graduates in underserved areas. Increased state support of the program was recommended by the 1995 Commission.

Contract Enrollment (Unduplicated Headcount)

GENDER	ETHNICITY						STATUS	
	ASIAN	BLACK	HISPANIC	WHITE	NOT RPTD	ALL	FULL	PART
FEMALE	14	7	11	76	0	108	108	0
MALE	12	8	24	169	0	213	213	0
ALL	26	15	35	245	0	321	321	0

1995-96 Student Credit Hours

Total Student Hours (SCH) - 275

Placement of Graduates

LOCATION	IN FIELD	NOT IN FIELD	FURTHER EDUCATION	UNKNOWN	TOTAL
LOCAL/REGION	30	0	0	0	30
FLORIDA	15	0	0	0	15
OUT-OF-STATE	77	0	0	0	77
TOTAL	122	0	0	0	122

Funding History (1992-96)

<u>Year</u>	<u>PEPC/DOE Funding Recommendations</u>	<u>Legislative Appropriation</u>
1992	\$1,856,000 320 STUDENTS \$5,800 PER STUDENT	\$1,391,375 297 STUDENTS \$4,685 PER STUDENT
1993	\$1,984,000 320 STUDENTS	\$1,749,142 320 STUDENTS \$5,466.07 PER STUDENT
1994	\$2,096,000 320 STUDENTS	\$1,854,091 320 STUDENTS \$5794.03 PER STUDENT
1995	\$2,283,900 331 STUDENTS \$6,900 PER STUDENT	\$2,283,900 331 STUDENTS \$6,900 PER STUDENT
1996	\$2,755,000* 380 STUDENTS \$7,250 PER STUDENT	\$2,283,900 315 STUDENTS \$7,250 PER STUDENT

* PEPC Recommendation Only

NOVA SOUTHEASTERN UNIVERSITY - OSTEOPATHY

1997-98 Contract Recommendation

College Of Osteopathy Request

1. State support for 380 students.
2. \$7,600 per student capitation(1997 SREB level)
3. 1997-98 budget request: \$2,888,000

Commission Recommendation: \$2,888,000 to support 380 students

NOVA SOUTHEASTERN UNIVERSITY - OPTOMETRY

Contract Summary

- The NSU College of Optometry was established in 1989. Initial state funding occurred in 1990 when the Legislature appropriated \$88,500 for 15 optometry students at \$5,900 per Florida resident, which was the Southern Regional Education Board (SREB) interstate contracting level.
- The mission of the college is to produce primary care optometrists, particularly to meet the needs of the State's growing geriatric population.
- The NSU College of Optometry is the only Florida institution that trains optometrists. The college reports increasing demand for its graduates in the State due to the increase in the scope of practice of optometry, the increasing "greying" of the population and the trend toward greater access to primary care. The college has experienced a significant increase not only in numbers, but also by professional setting, e.g. community, hospital, consulting, managed care and nursing homes. This year, there were over 600 applicants for 100 seats.
- The college reports that important changes have occurred that have elevated the status of optometry as a health profession. All states permit optometrists to use diagnostic drugs and most states now allow the use of therapeutic drugs. Medicare has increased compensation for optometric services.
- The College of Optometry Bachelor of Science Program in Visual Science and its Doctor of Optometry (O.D.) are fully accredited by the American Council on Optometric Education. In October of 1995, the College of Optometry received its status of "Conditional Accreditation" for two years with self study and site visit required in April 1997.
- There are 34 optometric unique faculty; twelve are female, one is Hispanic and two are black.
- Although minorities remain underrepresented in optometry and colleges of optometry, the NSU College 1995-96 contract enrollment was 51 students, with 23 female students, 6 Hispanic students, 1 black student and 3 Asian students.

1995-96 Student Demand

Program Applicants	617
Applicants Admitted	100
Total Applicants Denied	517
Qualified Applicants Denied	61
Applicants Enrolled	100

- Tuition is not calculated on a per credit hour basis. Tuition for 1996 for in-state students is \$10,900 per year and for out-of-state students is \$14,900. The average academic load is 18 semester hours.
- The Southern Regional Education Board (SREB) contracts with Southern College of Optometry in Memphis and the University of Houston for Florida residents are no longer operational.
- In 1995, the ratio of contract-supported students to the total program enrollment was 51:374. Twelve contract-supported students graduated during 1995-96.
- The 1995 Commission recommended \$592,000 to support 80 students for the 1996-97 academic year. The 1996 Legislature, however, increased the funding level to \$969,400.
- A five-year contract review is scheduled for this program in 1997. During this review, the level of state support for optometry students will be evaluated, based on current and projected workforce needs in Florida.

Contract Enrollment

ETHNICITY							STATUS	
GENDER	ASIAN	BLACK	HISPANIC	WHITE	NOT RPTD	ALL	FULL	PART
FEMALE	1	1	4	16	1	23	23	0
MALE	2	0	2	24	0	28	28	0
ALL	3	1	6	40	1	51	51	0

1995-96 Student Credit Hours

Total Student Hours (SCH) - 176

Placement of Graduates*

*no data available

Funding History (1992-96)

<u>Year</u>	<u>PEPC/DOE Funding Recommendations</u>	<u>Legislative Appropriation</u>
1992	\$96,000 15 Students \$6,400 per Student	\$158,586 30 Students
1993	\$399,500 51 Students	\$313,183 51 Students
1994	\$455,400 66 Students	\$331,974 51 Students
1995	\$536,250 75 Students	\$331,974 51 Students
1996	\$592,000* 80 Students	\$969,400 131 Students

* PEPC Recommendation Only

NOVA SOUTHEASTERN UNIVERSITY - OPTOMETRY

1997-98 Contract Recommendation

College of Optometry Request: State support for 180 students at \$7,600 per student capitation (1997 SREB level).

Commission Recommendation: \$608,000 to support 80 students

NOVA SOUTHEASTERN UNIVERSITY - MS IN SPEECH/LANGUAGE PATHOLOGY

Contract Summary

- The establishment of a state academic contract for 30 FTE students in this program was recommended by the Commission in 1991. The 1994 Legislature funded this contract for the 1994-95 year at \$215,280 to support 30 FTE students.
- Speech-language pathology continues to be designated by the Department of Education as a critical shortage area. There continues to be a shortage of speech-language pathologists in Florida, and a compelling need in Southeast Florida. According to the Council of Graduate Program in Communication Sciences and Disorders, job postings by school districts and private sector facilities indicate fewer graduates than needed to fill available positions.
- The university has increased space allocation for the program by 8,000 square feet to accommodate more students and faculty.

1995-96 Student Demand

Program Applicants	251
Applicants Admitted	184
Total Applicants Denied	22
Qualified Applicants Denied	0
Applicants Enrolled	143

- The contract enrollment includes eleven Hispanics and four blacks. Additional multi-lingual support services have been provided in the program. Eighty-five percent of the enrollment are female students.
- The program has 22 full-time and three part-time faculty. Sixteen of the 25 faculty are female. Faculty-student ratio is 1:5.2.
- The program was site visited by ASHA's ESB in May 1995 for reaccreditation and was found to be in compliance with all standards.
- A recent study of data over a five year period indicates that the overall pass rate on the National Exam (NESPA) is 97 percent.
- The 1995 Commission recommended \$306,600 to support 700 student credit hours for the 1996-97 academic year. The 1996 Legislature, however, held the funding level constant at \$215,280.

Contract Enrollment

ETHNICITY							STATUS	
GENDER	ASIAN	BLACK	HISPANIC	WHITE	AMER. IND.	ALL	FULL	PART
FEMALE	0	2	9	40	1	52	1	51
MALE	0	2	2	5	0	9	0	9
ALL	0	4	11	45	1	61	1	60

1995-96 Student Credit Hours
Total Student Hours (SCH) - 491

Placement of Graduates

LOCATION	IN FIELD	NOT IN FIELD	FURTHER EDUCATION	UNKNOWN	TOTAL
LOCAL/REGION	6	0	0	0	6
FLORIDA	0	0	0	0	0
OUT-OF-STATE	0	0	0	0	0
TOTAL	6	0	0	0	6

Positions

SLP in Dade County Schools
 Rehabilitation Agency

Funding History (1994-96)

<u>Year</u>	<u>PEPC/DOE Funding Recommendations</u>	<u>Legislative Appropriation</u>
1994	\$215,280	\$215,280
1995	\$281,410	\$215,280
1996	\$306,600*	\$215,280

* PEPC Recommendation Only

NOVA SOUTHEASTERN UNIVERSITY - MS IN SPEECH/LANGUAGE PATHOLOGY

1997-98 Contract Recommendation

University Request: State support for 700 student credit hours (SCH)

Commission Recommendation: \$326,389 for 700 SCH

III. FIVE YEAR ACADEMIC CONTRACT REVIEWS

As required in statute, the five year review of existing academic program contracts began in 1988. Five year reviews are coordinated by the Department of Education's Office of Postsecondary Coordination with the support of Commission staff. The five year review is a comprehensive study of the contract and is more rigorous than the annual review process. It is similar to the initial proposal evaluation conducted by the Commission before a contract is recommended to the State Board of Education for approval. (See Appendix B) In most cases, an external consultant with expertise in the specific discipline of the contract is retained to facilitate the review. A Review Team, typically consisting of the external consultant, Office of Postsecondary Coordination staff and Commission staff, review a five-year report on the contract program submitted by the contract administrator of the independent institution and visit the campus to tour the educational facilities and interview administrators, faculty and students. This year, five year reviews were conducted for the following contract programs:

A. University of Miami - Ph.D. in Biomedical Sciences

B. University of Miami - Master's Degree in Nursing

C. Nova Southeastern University - Doctor of Pharmacy

The results of the five year reviews and the Commission's recommendations regarding continued funding for the three contracts follow. The consultant reports appear in the Appendices.

A. UNIVERSITY OF MIAMI - Ph.D. IN BIOMEDICAL SCIENCES

Introduction

The state academic contract for the Ph.D. in Biomedical Sciences at the University of Miami was initially funded by the 1985 Legislature at \$100,000. The funding level increased in subsequent years and the contract was fully funded in 1988 to support 16 FTE students at \$457,596. Since then, the level of funding steadily dropped due to legislative budget cuts and increased tuition and program costs. Although the 1994 Commission recommended \$600,000 to support 20 students for the 1995-96 academic year, the Legislature has since held the funding level constant at \$363,228.

Since its establishment, this contract has been based on the *full cost of instruction* and not on a tuition differential. Thus, along with one other University of Miami contract, the Ph.D. in Marine and Atmospheric Science, the Ph.D. in Biomedical Sciences is unique among the 19 existing contracts. For instance, Florida residents who are selected as contract students or "Florida Scholars" as they are deemed at the university, do not receive reduced tuition costs because their tuition is already waived by the University and they are awarded an annual stipend of at least \$11,000 to cover other expenses. Thus, money from the State is provided as a pool of funds for all participating departments within the school of medicine. These funds or "seed monies" have helped garner more than \$100 million annually in federal grant support for biomedical research at the University of Miami. Each year, administrators at the University of Miami attempt to report the expenditure of state contract funds based on the number of semester credit hours taken by students in the program. However, many contract students are not enrolled in classwork, but are conducting research or writing dissertations as part of their doctoral work. Semester credit hours vary or are not assigned to these activities. Consequently, in an attempt to adhere to State Board of Education Rule (6A-10.032 F.A.C.) that mandates that contracts "shall be on a flat fee basis per credit hour," contract administrators have attempted to artificially link funds with SCHs for reporting purposes.

School of Medicine - University of Miami

The School of Medicine has four basic missions: biomedical research, medical education, clinical care and community service. Ph.D.s are awarded in the areas of biotechnology, molecular biology, physiology and biophysics, cell biology, neuroscience and developmental biology. *Science Watch Journal* ranked the college's neuroscience program as 7th in the world. Since the original contract, the Center for Health Technologies in Miami (CHT) was established and 31 companies have emerged from that entity. Significant grants for the city of Miami and the Department of Defense have been used for equipment, laboratory support, etc. In addition, the 1994 Legislature appropriated \$350,000 for expanded incubator operations. There are no comparable Ph.D. programs in Florida. The University of Florida has a biomedical research track under the MD in Medical Sciences, but those graduates are practicing physicians, not research scientists.

Facilities

The University of Miami School of Medicine and the UM/Jackson Memorial Medical Center represent the busiest single medical complex in the United States. In addition, the Medical Center is the largest single biomedical research and training entity in the Southeastern U.S. The School of Medicine has undergone a major renovation and construction period for the past five years. More than 200,000 square feet of laboratory and office space for the basic science departments have been renovated and state-of-the-art laboratory equipment has been purchased. The completion of the Molecular Biology Research Building and the Diabetes Research Institute, increased the wet laboratory space available for the Ph.D. programs to over 300,000 square feet. In addition, the school houses two floors of self-contained animal research facilities.

Curriculum

Graduate students must successfully complete all required courses in their discipline with a minimum of 60 credits, 36 of which are in coursework and 24 in research. Students select a mentor and begin their research dissertation on the second year of studies. Realistically, it takes four to five years to complete the 74 credit hours necessary to obtain the Ph.D. There are no licensing examinations required. According to the consultant, Dr. Henry Besch, Professor and Chair of the Department of Pharmacology at Indiana University, the college and the Ph.D. curriculum at Miami have "an outstanding reputation" among scholars and biotechnical engineers.

Students

Entrance requirements are the same for both contract and non-contract students. All applicants must place in the 80th percentile or higher on the Graduate Record Examination (GRE), a 3.0 minimum GPA and a score of at least 550 on the TOEFL examination for those whose native language is not English. Candidates should have completed the bachelors' degree with a strong record in their area of interest. A number of undergraduate research programs are conducted by School of Medicine to recruit students. Undergraduates from around the country are given the opportunity to participate in the school's summer/winter programs that included time in research laboratories and scientific lectures. Other activities to expose prospective students to the program include: the Minority Access to Research Career (MARC) Program, the Minority Student Health Career Motivation Program, and the Research and Academics for Minorities (RAMP) Program. According to Dr. Robert Rubin, Dean for Research and Graduate Studies, "The College of Medicine gives preference to minority students for stipends and admission to the Ph.D. program."

Total applications and admissions to the program have decreased slightly in the last few years due to the development of similar programs outside of Florida, many of which offer higher stipends to potential students. According to the review submitted by the College of Medicine, the total number of contract-supported students has ranged from 26 to 31 over the last three years. (See Table 1) However, according to Dr. Rubin, the figure is actually closer to 13-15 full-time contract students. The discrepancy reveals the difficulty of attempting to match SCHs with dollars for students, many of whom are not enrolled in classwork but are conducting research under a mentor's guidance.

Finally, Dr. Rubin noted that the college turns away at least 20 students who could qualify as "Florida Scholars."

TABLE 1

Total Enrollment in Program

YEAR	NON-CONTRACT STUDENTS	CONTRACT STUDENTS
1992-93	85	26
1993-94	89	31
1994-95	84	30

As noted above, the college supports several recruitment strategies to increase the percentage of minority students within the Biomedical Sciences Program. The percentage of black contract students increased last year.

TABLE 2

Percentage Program Enrollment by Gender and Ethnicity of all Students

YEAR	FEMALES	MALES	ASIANS	BLACK	HISPANIC	WHITE
1992-93	63	37	18	3	8	71
1993-94	59	41	19	4	7	70
1994-95	60	40	17	4	8	71

TABLE 3

Percentage Program Enrollment by Gender and Ethnicity of Contract Students

YEAR	FEMALES	MALES	ASIANS	BLACK	HISPANIC	WHITE
1992-93	58	42	8	4	15	73
1993-94	58	42	7	3	13	77
1994-95	57	43	7	7	13	73

The site team interviewed approximately 10 current students and alumni. All were enthusiastic about the quality of the Biomedical Sciences Program and of their training in the various fields. Although their research expectations were global in scope, many students expressed a strong desire to stay in the South Florida area, particularly in Miami.

Faculty

Dr. Besch reported that the UM School of Medicine faculty are highly qualified for their positions as instructors and "world-class" researchers. Materials submitted to the Commission by the college testify to the prolific publishing record of the 118 member faculty as well as their ability to attract millions of dollars in federal and private grant monies. Currently, 36 percent of the faculty are full professors, 35 percent are associate professors and 28 are assistant professors.

Workforce Supply and Demand

The Ph.D. program in biomedical sciences continues to respond to the growth of biotechnology and pharmaceutical industries, particularly in Southeast Florida. Dr. Besch concluded that the key to the growth of these "burgeoning" industries is a trained workforce, particularly at the scientist level. Dr. Besch spoke with biotechnology entrepreneurs with roots in Florida companies who testified to the outstanding reputation of the biomedical graduate program. Because all graduates of the program continue in post-doctoral positions, many of them out of state, for several years upon completion of their Ph.D., it is difficult to assess the specific impact on local industries at this time. (See Table 4) However, according to experts in the field, the Ph.D. program has rejuvenated the biotechnology and pharmaceutical industries in the region.

TABLE 4

Contract Graduates Employed in Florida Within one year of Graduation

YEAR	Contract Graduates	Employed in Florida	Employed Outside of Florida
1992-93	2	0	2
1993-94	4	1	3
1994-95	6	5	1

* All of the above graduates employed in Florida are at the post-doctoral or resident level

Contract for State Support: Issues and Recommendations

Dr. Besch concluded, as did the staff of the Department of Education and the Commission, that based on the need for trained biomedical research scientists in Southeast Florida, state support for the exemplary Ph.D. program in Biomedical Sciences at the University of Miami should be continued. However, all parties, including those at UM, agreed that the funding needs to be on a per student basis, not on a set number of semester credit hours. As noted above, the unique training requirements of biomedical research scientists does not fit into a set funding formula based on a flat fee basis per credit hour. When the program was first reviewed for a state contract in 1984, the contract was approved at a cost of \$30,000 per student for seven students. That figure was based on an average cost per student including an administrative overhead charge of 61 percent of "the direct costs of faculty salaries, graduate stipends and supplies and equipment." The most recent audited

cost study conducted in the late 1980s, set the average cost per student at \$32,000. After the contract was fully funded in 1988, legislative funding began to drop and the college reported more FTE contract students (and SCHs) in an attempt to garner more state funding. This contract with the state ensures that qualified Florida residents will be included in a program that recruits among the brightest students around the world.

For the 1997-98 year, the College of Biomedical Sciences recommends state support for 18 students at a cost of \$576,000 for the full cost of instruction.

For the 1997-98 year, the Commission recommends that the Biomedical Sciences Ph.D. contract be funded at \$576,000 to support 18 students at the full cost of instruction.

B. UNIVERSITY OF MIAMI - MASTER'S DEGREE IN NURSING

Introduction

The state academic contract for the Master's Degree in Nursing at the University of Miami was established by the 1985 Legislature at \$350,400 to support 40.3 FTE students. Although state funding was determined initially on the basis of estimated costs rather than tuition, since 1987 the program has been funded based on a tuition differential. Since the initial legislative appropriation, annual contract funding has remained relatively constant. Due to the steady level of funding since 1988, there has been a resultant decrease in the number and percentage of students supported by the contract. In subsequent years, the Commission has recommended annually that the level of funding be restored to its original level of support. Since 1988, the Legislature has failed to increase the annual appropriation for this contract.

To assist in the five-year review of the state contract, the Department of Education's Office of Postsecondary Coordination contracted with Dr. Sheila Ryan, Dean of the School of Nursing and Director of Medical Center Nursing at the University of Rochester, New York. The comprehensive review included faculty, student and alumni interviews, and phone conferences with the following employers of program graduates: the Veterans Administration Medical Center, Baptist Hospital, Mount Sinai Medical Center and the State Department of Health. Dr. Ryan's consultant report appears in Appendix D.

Graduate Nursing Education in Florida

According to the Commission's 1995 *Florida Health Professions Education Profiles*, master's degree programs are offered at five state universities: Florida Atlantic University (FAU), Florida State University (FSU), Florida International University (FIU), the University of Florida (UF), and the University of South Florida (USF). In the SUS, fall enrollments doubled between 1987 and 1993 (from 340 to 681). In the past four years, the number of degrees granted increased 50 percent (from 127 in 1991 to 190 in 1994). The Board of Regents most recent program review of nursing education in the State University System (1992) identified "a need for additional master's degree programs in the SUS to serve the growing health care needs in the state."

Master's degree programs are also offered at two independent universities: Barry University and the University of Miami. The focus of the University of Miami's MSN program is on advanced clinical specialization, research and transcultural nursing. The School of Nursing was the first program in Florida to prepare nurse practitioners and nurse midwives and is the only program preparing nurse midwives south of Jacksonville. Students commute from Ft. Myers, Naples, Ft. Pierce and Stuart to enroll in this specialty. The MSN program is especially known in Florida for its preparation of culturally competent advanced nurse practitioners. The school's review materials state that the need for clinicians skilled in culturally-focused nursing care is self-evident in a region of Florida that has had and will continue to have large influxes of immigrants, migrant workers and refugees.

Three universities in South Florida, Barry University, FAU and FIU offer the master's degree in nursing and practitioner role options similar to the UM-MSN program. The FAU-MSN program

offers tracks in Nurse Practitioner (Family concentration and Adult concentration), Nurse Administrator and Clinical Nurse Specialist. The FAU program tracks currently enroll 139 students and the School projects enrollment increases of 15-20 percent for the next five years. The graduate program coordinator reports that over 20 local employers are actively recruiting FAU-MSN graduates.

Facilities

The School of Nursing has relocated its campus from the medical center to the Coral Gables campus. Dr. Ryan reports that office space and furnishings are appropriate and library holdings are appropriate for graduate nursing education. Computer facilities for students, faculty and staff have been expanded. The school is seeking technology improvements for the program, including additional hardware, interactive multimedia and database-searching resource expansion.

Curriculum

The curriculum leading to the Master of Science in Nursing prepares students for advanced nursing practice with a primary-care or acute-care focus. Total program requirements are 39 credits for those not choosing an additional six credit thesis option. All students are required to complete a series of eight core courses, one elective and three specialty focused clinical courses. Students who select the primary-care focus may choose a program of study preparing them for practice either as a family nurse practitioner or a nurse mid-wife. Individuals who select the acute-care focus prepare for advanced nursing practice in acute-care settings. All graduates of the program are eligible to apply for licensure as Advanced Registered Nurse Practitioner (ARNP) in the state of Florida. The school's report notes that the presence of a doctoral program within the School enhances the scholarly and academic characteristics of graduate study which are integrated into the strong clinical preparation at the MSN level.

The school has recently implemented a graduate entry option for students with degrees in other disciplines and plan to augment enrollment with an additional 15 students from these non-traditional backgrounds. Two additional practitioner specialty options projected are the OB-GYN Nurse Practitioner and the Critical Care Nurse Practitioner. Feasibility studies have been conducted and each program is being developed in a "partnership" model with physicians and other disciplines in the medical center environment.

Both formative and summative evaluation measures are used throughout the program to assess the student's progress and to provide guidance in achieving course and program objectives. In a 1993 survey by the School of MSN graduates using the Educational Testing Service Graduate Program Self-Assessment Service, the respondents rated the quality of the teaching and learning environment impressively high. They reported that faculty were genuinely interested in their welfare and development, were well-prepared, used appropriate teaching methods, were fair in their evaluations and were aware of new developments in the field.

Students

Total applications and admissions to the MSN program have remained relatively stable during the past five years. See Table 1. Approximately 40 percent of all applicants are admitted and the admissions to enrollment yield during this period has ranged from 62 percent (1994) to 97 percent (1993).

TABLE 1

Admissions 1992-1995

	1992	1993	1994	1995
Total Applicants	88	53	83	88
Incomplete/Withdrawn	34	19	15	34
Applicants Admitted	52	29	63	48
Applicants Denied	2	5	5	6
Admitted and Enrolled	44	28	39	36

The total number of contract-supported students has ranged from 81 to 86 over the last three years, most of them being part-time students. Most students are employed in nursing positions in the Miami area and the attrition rate (five percent) for the MSN program remains low. The school has found that contract-supported students have completed the program an average of 1.2 semesters sooner than non-grant-supported graduated.

Regarding the awarding of state contract subsidy to enrolled MSN students, the school reports that priorities for award are: (a) state of Florida resident; (b) registered nurse licensure in the state of Florida; (c) need and lack of other sources to fund academic study; (d) intent for full-time study; and (e) assessed ability to meet academic requirements. Table 2 displays the number of contract-supported students during the past three years.

TABLE 2

Contract-Supported Students and Credit Hours

YEAR	FULL-TIME FUNDED		PART-TIME FUNDED		TOTAL HC	TOTAL SCH
	HC	SCH	HC	SCH	FT & PT	FT & PT
1992-93	11	138	75	471.20	86	609.20
1993-94	5	59	80	508.05	85	567.05
1994-95	20	218.49	61	315.50	81	533.99

The School of Nursing continues an aggressive recruitment and retention program for minorities which is reflective of the faculty and administration's increased cultural sensitivity within the program's curriculum and total environment. The minority enrollment is remarkably high, averaging 37 percent. (See Table 3) This represents an increase from 19 percent at the time of the 1991 contract review. This percentage is three times higher than the national average of 11.6 percent for MSN programs and 60 percent higher than the state of Florida average of 22 percent. In its multicultural community, the program is able to offer students diverse clinical experiences, ranging from rural to urban settings. Male enrollment is also representatively higher than both national and state averages.

TABLE 3

Gender and Ethnicity of Contract-Supported MSN Students

YEAR	FEMALES	MALES	AMER. IND.	ASIANS	BLACK	HISPANIC	WHITE	OTHER
1992-93	80	6	0	2	11	15	58	0
1993-94	81	4	0	3	12	14	56	0
1994-95	76	5	0	2	11	15	53	0

The consultant team interviewed approximately twelve students and alumni. The students and alumni spoke fervently of the high quality of the MSN program, their intent to practice in South Florida and the importance of special transcultural education to improve the health status of residents of this region. The students confirmed that it is necessary to work part-time while pursuing the MSN and reported that the availability of state tuition assistance was critical to their being able to enroll and complete the graduate degree.

Faculty

Dr. Ryan reports that the UM-MSN nursing faculty are appropriately qualified for graduate nursing education. Eight of 27 faculty are tenured and there is a healthy diversity of preparation from various schools across the country. Faculty innovations in community-based practices began in response to Hurricane Andrew and are characteristic of a faculty readying for the future. Dr. Ryan found that scholarship and extramural grants are adequate for a faculty of this size. Two nurse-managed health centers provide excellent clinical education and research opportunities for these students.

Faculty representatives reported that the program recognizes the need for nurses prepared as leaders in home health, managed care, school and environmental health and community-based long term care. The review materials state that the research and practice experience of this faculty in transcultural nursing and curriculum development for the advanced practice specialties have been used as models by other graduate programs.

There are approximately 28,000 advanced registered nurse practitioners in the country, including 1,000 practitioners and 350 certified nurse-midwives practicing in Florida. The majority practice in underserved, Medicare/Medicaid dependent populations. An example is a family nurse practitioner working in a Florida community of 5,000 people where pediatric care is acutely lacking. She collaborates with an internist and typically sees 20-30 individuals daily. It is now clearly recognized that nurse practitioners are able to manage from 50 percent to 90 percent of clients coming into ambulatory settings and that their level of competency in their area of preparation demonstrates their ability to provide quality services.

In the past five years, the University of Miami School of Nursing reports that its MSN program has graduated 35 nurse midwives, 59 nurse practitioners and 76 clinical nurse specialists. The majority of graduates (95 percent) remain in Florida as contributing nurse professionals. Table 4 shows that most contract-supported students continue to be employed in Florida following graduation from the MSN program.

TABLE 4

**Contract-Supported MSN Graduates
Employed Within One Year of Graduation**

YEAR GRADUATED	TOTAL PARTICIPATING GRADUATE	EMPLOYED IN FLORIDA	EMPLOYED OUTSIDE OF FLORIDA	UNKNOWN
1992-93	21	10	3	8
1993-94	30	26	1	3
1994-95	24	22	2	0

TABLE 5 displays placement information for 1994-95 MSN graduates.

TABLE 5

Employment of 1994-95 UM-MSN Graduates

POSITION	EMPLOYER	LOCATION
Maternity Nursing Director	Kendall Regional Medical Center	Miami
NP Emergency Room	Baptist Hospital	Miami
Nurse Educator	St. Mary's Hospital Trauma Team	Broward
Clinical Educator	Jackson Memorial Hospital	Miami
Certified Nurse-Midwife	MD/CNM Practice	Ft. Lauderdale
Certified Nurse-Midwife	Broward Memorial Hospital: SunLife/Coastal	Ft. Lauderdale
Nurse Practitioner	Congregate Living Facility	Miami
Advanced Practice Nurse	Jackson Memorial Hospital	Miami
Neonatal Clinical Nurse Educator	Jackson Memorial Hospital	Miami
FNP	FNP Practice	Montana
FNP	Indian Health Services	Montana
FNP	Jackson Memorial Hospital	Miami
FNP - Emergency Room	Mercy Hospital	Miami
Oncology/Hematology Specialist	Miami Children's Hospital	Miami
Certified Nurse-Midwife	Birth Etc. Private Practice	Miami
FNP	Private Physician's Office	North Miami
Wound Care Specialist	Mercy Hospital	Miami
FNP	MD/FNP Private Practice	Ft. Myers
Certified Nurse-Midwife	MD/CNM Practice	Ft. Lauderdale
Educator	Miami-Dade Community College	Miami
Oncology Specialist	Baptist Hospital	Miami
FNP Pediatric ER	Baptist Hospital	Miami
Open Heart Surgery Team	Broward General Hospital	Ft. Lauderdale
FNP AIDS Project	Broward County Hospital District	Broward County

The managed care environment, nationally and in Florida, continues to cause downsizing of hospital beds. In South Florida, Jackson Memorial Hospital has reduced from 1,500 to 500 beds, Baptist Hospital has reduced from 1,100 to 400 beds, and the Veterans Administration Medical Center has 900 of its 1,100 beds currently open and plans additional reductions. Dr. Ryan reports, however, that

the market for advanced practice nurses continues to grow as evidenced by increasing demand, growing acceptance by other disciplines and changes in the regulatory and reimbursement climate for nurse practitioners. From telephone interviews by the consultant team, the Veterans Administration Hospital System reports using nurse practitioners in its long-term care units for physician back-up. Institutional salary ranges for new hires were from \$44,000 to \$58,000. The Baptist Health System also reports a high demand for hiring nurse practitioners. The Florida State Health Department reports a five percent growth rate for nurses, with priority for those with graduate preparation.

Dr. Ryan reports that, increasingly, health care administrators are calling for expanding nurse practitioner programs that prepare nurse practitioners and nurse midwives and other non-physician providers in order to increase the primary care workforce rapidly and at a lesser cost. Additionally, the need has been recognized for programs that will increase career orientation toward service in community health centers in minority and other underserved population areas. Special attention has been focused on regions of the Southeast that tend to have higher concentrations of underserved counties with inadequate physician supply.

The RN vacancy tends to be higher for Florida than elsewhere (six percent as compared to four percent nationally). However, the vacancy rate for Advanced Registered Nurse Practitioners (ARNP) is highest at 22.2 percent (Florida Nurse 1995 Fact Sheet). Vacancies for critical care nurses, emergency room nurses and medical-surgical units are higher than for overall staff nursing. Nationally, the workforce employment in hospitals was reported to be 55 percent, nursing homes at ten percent, MD offices at seven percent and community home health at five percent. The U.S. Department of Health and Human Services predicts a continued downward trend through the year 2020. Considering the demand for nursing services due to factors such as aging of the population (particularly in Florida), Dr. Ryan believes that the reported shortage is more likely a chronic condition.

The School of Nursing faculty reported postings of 25-30 job openings at any given time and, according to the Midwifery Resource Council, 1994, 40 percent of 374 Florida obstetricians were planning to hire nurse midwives in the next two years. The School reports that nurse-midwives in Florida have been credited with the reduction of infant mortality and morbidity through their model of care that promotes preventive care practices. Nurse-midwifery care is increasingly becoming the standard of care for low risk pregnant women.

The school reports that in Florida and throughout the U.S., policy is being developed by nurse education leaders that will require a masters degree for licensing and certification to practice in an advanced role. Certification preparation will no longer be acceptable. Dr. Ryan confirmed that state legislation for advanced practice that requires graduate preparation has passed with implementation by 1998.

In summary, the projected market demand for both primary and acute care practitioners is high for ambulatory, rural health, low risk pregnant women's health, long term care and home health care. To respond to the above projected needs, the UM School of Nursing has high minority enrollment, community-based centers and nurse practitioner and nurse midwife programs. The UM MSN

program has been contributing to this workforce of providers since 1978, and graduates are employed in community and ambulatory settings, managed care organizations and acute and critical care hospital settings.

Contract for State Support: Issues and Recommendations

Dr. Ryan concluded, as did the staff of the Department of Education and the Commission, that the University of Miami's Master's Degree in Nursing Program is an excellent one and that state support for the program should continue. The combined curriculum focus of advanced preparation to meet the health care needs in a multicultural population is unique and graduates of this program are specifically prepared to effectively serve in South Florida.

Dr. Ryan found that the MSN program is "competent, mature and responsive to the needs and changes in its community" and the faculty "are seasoned, stable and innovative at minority recruitment and retention and nurse-managed practice centers." The consultant team was impressed with the motivation, determination and leadership qualities of the contract-supported students. Dr. Ryan stated that the contract program's "return to the Florida marketplace is very high and the quality of preparation is outstanding." She concluded that "the state of Florida is to be commended for its visionary support and utilization of these excellent resources for improving the preparation of advanced practice nurses for serving its people's healthcare needs."

From 1985 through 1988, the state contract was funded for 40 FTE students. Since 1988, however, state support has steadily declined as the Legislature has held the state appropriation for each contract relatively constant, in effect, "rolling over" the previous year's dollar amount each year. This has resulted in a continued erosion of the funding level, as increased tuition and program costs each year have steadily reduced the number of students supported each year. During this period, the level of student credit hour support stated in the specific legislative appropriation for each contract program has had no relation to the actual number of students served by the state dollars.

Board of Regents' cost data on graduate nursing education in the State University System reveals that approximately \$ 290 is the average total expenditure per student credit hour in graduate nursing, with a range from \$ 400 per student credit hour at Florida Atlantic University to \$ 189 per student credit hour at the University of Central Florida.

State support for the contract peaked in 1988 at \$ 378,259. Since that year, additional state budget reductions further reduced the level of funding for the contract. Since 1993, the annual appropriation has held constant at \$299,599.

The 1995 Commission recommended state support for 595 student credit hours for the 1996-97 academic year. For the first time, however, the Department of Education did not include the Commission's annual budget recommendations for the state academic contracts in its Legislative Budget Request for 1996-97. As a result, the 1996 Legislature appropriated the same dollar amount as previous years: \$299,599.

The School of Nursing summarized its report by stating that the current and projected need for MSN-prepared is great and that cost is the greatest deterrent to the enrollment of MSN students. University of Miami tuition for the 1996-97 academic year is \$742 per student credit hour. For the 1997-98 year, the School of Nursing recommends state support for 595 student credit hours.

For the 1997-98 year, Commission staff recommends that the MSN contract be funded at \$370,846 to support 595 student credit hours.

C. NOVA SOUTHEASTERN UNIVERSITY - DOCTOR OF PHARMACY (Pharm.D.)

Introduction

Entry-level pharmacy education is offered at three Florida institutions: the University of Florida, Florida Agriculture and Mechanical University, and Nova Southeastern University, the only private institution. The College of Pharmacy (COP) at Nova Southeastern University (NSU) was founded in the fall of 1987. NSU is the product of the merger of Nova University and Southeastern University of the Health Sciences. It is the mission of the COP:

to serve the pharmaceutical health care needs of Florida by educating pharmacists to be able to provide contemporary as well as innovative pharmacy services. The College will offer dynamic curricula which include a broad base of didactic and experiential components, enabling the graduate to develop practice skills to function effectively and efficiently in a changing and challenging health care environment. Consistent with this mission, contribution to the body of knowledge through scholarly activity, and service as appropriate are also important goals.

The Doctor of Pharmacy Program at NSU has been granted full accreditation status by the American Council on Pharmaceutical Education (ACPE), the national agency for the accreditation of professional programs in pharmacy (June 1993). The NSU COP is a member of the American Association of Colleges of Pharmacy. NSU is accredited by the Commission on Colleges of the Southern Association of Colleges to award bachelor's, master's, educational specialist, and doctoral degrees.

To assist in the five-year review of this academic contract, the Commission contracted with Ronald W. Maddox, Pharm.D., Dean and Professor, School of Pharmacy, Campbell University (Buies Creek, North Carolina). Dr. Maddox's report appears in Appendix E.

Nova Southeastern University's College of Pharmacy

The NSU COP pharmaceutical program is described as comprehensive and holistic. NSU COP's program emphasizes education to prepare students as primary care pharmacists to serve the nation's growing need for total health care services and to reach underserved rural, minority, geriatric and indigent populations. The college's commitment to preparing primary care practitioners to serve the needs of the citizens of Florida is demonstrated in its curricular design. For example, the COP is one of the few colleges in the United States that requires clinical geriatric pharmacy rotations to address the growing demands on the health care system by the elderly. Students are educated in health care facilities which serve the minority populations of South Florida such as Jackson Memorial Hospital, Miami Children's Hospital, and community pharmacies throughout South Florida.

The college's academic leadership is experienced and innovative. The Dean of the COP reports directly to the Executive Vice Chancellor and Provost as well as the Vice Chancellor for Academic Affairs. The Dean has the authority and responsibility for pharmacy education.

The faculty, which consists of 35.5 full time equivalents, has been strengthened in numbers and quality in the recent year. With the merger of institutions, the COP faculty now are included in the University's retirement benefits (TIAA/CREF), which further support faculty recruitment and retention efforts. The faculty are student (teaching) centered; all faculty practice an open door policy. The faculty are enthusiastic about the quality of students and the role they serve as mentors to their students. Dr. Maddox summarized the strengths and challenges of the COP faculty:

"the faculty is capable and hard-working, and demonstrates their dedication to teaching as well as to the professional development of their students. The challenge of the future will be to maintain and sustain the momentum, energy-level, and competence of the faculty. Thus, a comprehensive faculty development will be critical."

Curriculum

The college has offered the doctor of pharmacy curriculum as its only professional program since its inception in the fall of 1995. This programmatic change permitted the college to focus its resources on one professional program. The transition to the new curriculum is being accomplished through the work of a faculty curriculum committee. Over the past three years, this committee has worked to communicate with all faculty, administrators, and students; has revised the curriculum to be more experiential; and has designed "directed observations" into the first and second year of study to compliment course work. The new curriculum integrates technology into the learning experience for both students and faculty. Emphasis has also been placed on expanding clerkships and integrating quality control and standardization of experience. Dr. Maddox advised that:

"Curricular review should continue to be guided by the principles of pharmaceutical care, and study should be given to new teaching strategies. Emphasis should also be placed on the refinement of the clerkships and externships, upon quality assurance, standardization of experiences and consistency of student evaluation."

The college shares basic science faculty with other health professions schools on campus, providing substantial economy of scale and fostering a team approach in the delivery of health care. There is a great deal of student access to faculty for mentoring purposes; the students report that the faculty is approachable and caring.

Facilities

In June 1996, the COP and the other colleges of the Health Professions Division relocated to a new \$40 million health professions building on the main campus of NSU in Fort Lauderdale. The new space includes an administration building, classroom structure, three-story library-laboratory building, and medical services building.

With the relocation to the main campus of NSU, the COP will increase its use of technology for faculty, administration, and students. The new campus and integration with the operations and administration of NSU will enhance the college's utilization of computer technology and access to

instructional technology. For example, the COP, along with the other colleges of the Health Professions Division, will share lecture/classrooms including both a 250 and 500 seat auditoria and eight 125 seat auditoria, all of which will be equipped with state-of-the-art audio visual technology. All offices and laboratories will be linked through a network for computer and telephone communication. Further unique laboratories and specialized resources, such as the drug information center and industrial pharmacy laboratories, are incorporated into the COP's space. The consultant stated that the "campus will provide an excellent environment for teaching and learning." The Dean, administrative officials, and students were optimistic and enthusiastic in regard to the move to the new campus.

Student Demand

The COP uses a variety of strategies to recruit students to the pharmacy program. For example, the COP participates in a summer program sponsored by the Area Health Education Center (AHEC) which hosts 100 youths and introduces the students to 70 health professions. The college's admissions officer also recruits at public community colleges in Florida. In addition, a joint effort with the undergraduate admissions program at NSU was initiated this year through which five high school graduates will enroll this fall who are promised admission to the pharmacy program as juniors as long as they maintain established academic performance.

Students are admitted to the COP on the basis of grade point average, PCAT scores (national Pharmacy College Admission Test), and personal interview. The COP received 4.6 applications for every accepted student for the class entering in Fall 1996 (approximately 4.0 applications). Applications increased from 300 in 1992 to 529 in 1996. (Table 1)

TABLE 1

**College of Pharmacy
Doctor of Pharmacy (Pharm.D.)
Applications and Class Enrollments by Gender and Race/Ethnicity
1992 to 1996**

	APPLICATIONS	ENROLLED (AVG. GPA)	MALE	FEMALE	BLACK	HISPANIC	ASIAN/PACIFIC	NATIVE AMER	WHITE	OTHER
1996*	529	115 (3.26)	52	63	4	22	20	1	66	2
1995	460	101 (3.3)	39	62	4	21	16	0	56	4
1994	410	100 (3.2)	41	59	4	14	22	0	58	2
1993	354	101 (3.1)	38	63	3	26	13	0	56	3
1992	300	100 (3.13)	38	62	5	25	16	0	50	4

*Of the 529 applicants, the COP anticipates that 115 will enroll.

Students

During the past five years, between 90 and 95 percent of all students admitted (and matriculated) to the COP have been residents of Florida. Students from Dade, Broward, and Palm Beach counties account for 54 percent of the class admitted in the fall of 1995. Non-white students comprise between 40 and 50 percent of the matriculated students during the past five years. (Tables 1 and 2) Hispanics comprise 22 percent of the students (1992-1996) and Asian/Pacific Islander students, 18 percent. Black students (primarily Caribbean) comprised three to five percent of the past five classes of students. Between 55 and 62 percent of the past five classes of students have been women.

TABLE 2

**College of Pharmacy
Doctor of Pharmacy (Pharm.D.)
Total Enrollment and Grant Recipients by
Gender and Race/Ethnicity, 1992-93 to 1995-96**

	TOTAL	GRANT RECIPIENTS	MALE	FEMALE	BLACK	HISPANIC	ASIAN/PACIFIC	NATIVE AMERICAN	WHITE
1995-96	389	240	78	162	11	54	42	0	133
1994-95	382	240	89	151	13	65	34	0	128
1993-94	353	240	102	138	11	87	25	0	117
1992-93	339	223	88	135	11	72	30	0	110

On the national level, enrollment in first professional pharmacy degree programs has increased approximately 1.3 percent per year since 1984. The percentage of females now approaches 65 percent, and underrepresented minorities account for approximately 11 percent.

Incoming COP students are eligible for federal grants and loans, but not for state programs as they are not considered undergraduates (Pharm.D. is considered a graduate level program). Some institutional merit aid is available to students who prove to be academically capable and have need. A number of private aid programs have been established in the COP and funded through external resources. The Health Professions Division sponsors the Chancellors's minority scholarship for two students annually that provides full tuition for four years of enrollment. The COP experiences low student attrition which in part is credited to the limited financial aid and the institution's policy that "the primary financial responsibility for a student's education rests with the student and his or her family."

The consultant team interviewed students and found a high level of professionalization demonstrated by the students. The consultant credited this professionalization to the administrative officers' and faculty's commitment to the students' academic, professional, and personal development. The consultant found the students exceptionally well-motivated and committed to improvement in the

quality of pharmaceutical care. The students are active in professional societies (national and state) and are dedicated to the COP.

Graduates of the COP consistently passed the National Association of Board of Pharmacy Licensing Examination (NABPLEX), at a rate higher than the state and national average. For example, for the June 1995 examination, the COP passage rate was 93 percent compared to 87 percent for Florida and 90 percent for the nation.

Employer Demand

Like many other health related disciplines, the profession of pharmacy will experience considerable change in the future. The consultant stated that the use of new information, communication, and robotics technologies have already made obsolete the traditional functions performed by pharmacists, such as inventory and dispensing of pharmaceuticals and quality control. This trend will produce a reduction in the future in opportunities for pharmacists in traditional dispensing roles such as retail and hospital pharmacy.

New opportunities for pharmacy services are evolving. Dr. Maddox cited the provision of comprehensive drug therapy management as an emerging area of pharmacy practice. Comprehensive drug therapy management is the collaborative process of selecting appropriate drug therapies, educating patients, monitoring patients, and continually assessing outcomes of therapy. Comprehensive drug therapy management can play a significant role in helping to reduce cost, improve outcome, and engage practitioners and patients in improving the quality of care.

Geriatric consulting practice will be an exceptional opportunity for future pharmacy practice. The Social Security Administration has projected that for the years 2000 to 2040 the population in excess of 65 years of age will increase from 13 percent to 17 percent of the total population. Considering that this group of patients per capita medical care expenditure is about three time greater than that of patients under 65, this will have a significant impact of pharmacy practice. Also, numerous studies have documented the benefits of pharmacist-conducted drug regimen reviews for elderly patients. Improved patient outcomes result from reducing drug interactions, adverse drug reactions, and unnecessary drug use. The NSU COP specifically addresses this need through its clinical geriatric pharmacy rotations that are required of all students.

The Florida Department of Labor and Employment Security, Bureau of Labor Market Information projects that between 1994 and 2005, the average number of openings for pharmacists in Florida will increase by about 421 openings per year. The Bureau projects a growth rate of approximately 27 percent for the pharmacy profession between 1994 and 2005. The growth of the Florida population, together with its aging, increases demand for pharmacists.

During the past five years, approximately 95 percent of grant program participants have remained in Florida following graduation. The number of graduates who participated in the grant program fluctuated from a low of 54 in 1994-95 to a high of 89 in 1992-93; there were 76 grant-participating graduates in 1995-96. Based upon a survey of the 1995 graduating class of the COP, 71 percent

chose employment in Dade, Broward, and Palm Beach counties; approximately 92 percent of the class remained in Florida.

Graduates of the COP are employed in numerous practice sites: traditional pharmacy positions such as hospital and community pharmacy, health care organizations, pharmacy benefits companies, home health care companies, and consulting groups. Graduates of NSU COP are now being employed by health care organizations not normally included in traditional labor market surveys. For example, 15 graduates accepted residencies for purposes of specializing in such areas as ambulatory or primary care. Several graduates were employed by HMO's for purposes of drug utilization functions and optimizing therapeutic outcomes.

Contract for State Support: Issues and Recommendations

Dr. Maddox summarized the review of the COP by stating the college:

"has progressed very well through its developmental stages. It appears that the merger with and movement to the Nova University's Davie campus has facilitated this process. Strengths of the program include the new facility, the dedication and commitment of the students to the College, and the tremendous clinical training potential in south Florida."

"To enhance the quality of the program, I believe that the following issues should be addressed. First, the curriculum committee should move with some degree of haste with the entry-level doctor of pharmacy curriculum. Due to the fact that the first entry-level class entered in the fall of 1995. Secondly, faculty numbers will need further strengthening to successfully implement the new curriculum. Thirdly, a comprehensive faculty development program should be developed."

"Based on the admissions and employment data presented in this report, I firmly believe that there is a critical shortage of pharmacists in the state of Florida. With the College of Pharmacy's movement to the Davie campus it has taken its rightful place as an established institution of pharmaceutical education in the United States. Hence, I strongly endorse continuation of the state's support of pharmaceutical education through its contract with Nova Southeastern University."

Staff analysis of the COP also recognized the dedication and enthusiasm of the dean and faculty, commitment to educating primary care pharmacists, and attention to the underserved populations in Florida as strengths of the program. The COM's administration acknowledged areas deserving continued attention that directly or indirectly affect the quality of the pharmacy graduates. For example, a lack of technology, i.e., computers, was a commonly expressed frustration and perceived impediment by faculty and administrators. Admissions staff is interested in analyzing persistence in relation to admission criteria, focusing recruitment and marketing efforts where most productive, and planning admissions operations and activities. Faculty are interested in introducing new instructional techniques, increasing efficiency and productivity of their teaching efforts, and

communicating with faculty/administration who have different schedules and work at different sites. Following the physical move to the new campus and a more complete integration with Nova, this issue should be addressed.

Another issue raised by a number of faculty concerned the historical, institutional policy that focuses faculty efforts on teaching to the exclusion of research. They expressed interest in "scholarship by choice," i.e., research opportunities for faculty who are interested in research. They felt strongly that more research opportunities were instrumental for offering students the opportunity to be involved in research as a part of their educational experience and in attracting and retaining qualified faculty.

Student issues identified through the review of NSU COP include enrollment of African/American students and student financial assistance. In the past five entering classes of over 100 students, no more than three to five students have been black, and they were described by the institution as typically Caribbean. (Table 1) Fewer than five percent of grant participants are black, and recruiting African/American students was described by administrators as "traditionally, not a priority." (Table 2) Limited financial aid, both merit scholarships and need-based aid, was cited as primarily a recruitment limitation, especially for diversity. It was perceived as less of a problem for retention, since applicants are fully notified of aid limitations prior to matriculation. Students in need are thus counseled out of matriculation.

The COP has received state funds since 1987-88. The COP has utilized state funding to reduce tuition for Florida residents in the program. Students expressed that the lower tuition provided an incentive to remain in Florida and to enroll in pharmacy education. Tuition for a Florida resident is \$11,000 and for a non-Florida student is \$14,375 (1996-97). The Commission recommended that the 1996-97 academic program contract with the COP be funded at \$768,000 to support 240 students at \$3,200. For the first time, the Department of Education did not include the Commission's annual budget recommendations for the state academic program contracts in its Legislative Budget Request for 1996-97. The 1996 Legislature funded the COP for Fall 1996 at \$588,244 (240 students at \$2,451.02, the same level since 1994).

The COP requests capitation for 360 students to be phased in over three years at a rate of 40 additional capitated students per year. Enrollment for 1995-96 was 389 students, and the COP is increasing the total number of students to 400. Since approximately 95 percent of the students have historically been Floridians, capitation for 360 Florida residents is proposed by the COP as a conservative number of students to serve. The COP requested that the per student appropriation be increased to \$3,400.

Based on the college's strong record in enrolling residents and placement of graduates in Florida and the increasing cost of tuition for the student, **Commission staff recommend that the NSU Pharmacy contract be funded for the 1997-98 year to support 260 students (an additional 20 students) at \$3,400 per student for a total budget request of \$884,000.**

APPENDIX A

Annual Contract Renewal Report

**POSTSECONDARY EDUCATION PLANNING COMMISSION
ANNUAL CONTRACT RENEWAL REPORT
1995-96**

INSTRUCTIONS: Following the Outline below, answer each question and provide requested information on your contract program. You may attach additional sheets, but **BE CONCISE**.

CONTRACT PROGRAM: _____

DEPARTMENT/COLLEGE: _____ INSTITUTION _____

CONTRACT ADMINISTRATOR: _____

PHONE #: _____ FAX # _____

E MAIL: _____

I. DATA REPORT

A. Student Demand - For all program applicants, include the following admissions statistics (by semester/quarter):

	<u>Fall</u>	<u>Spring</u>	<u>Summer</u>	<u>Total</u>
Program Applicants	_____	_____	_____	_____
Applicants Admitted	_____	_____	_____	_____
Total Applicants Denied	_____	_____	_____	_____
Qualified Applicants Denied	_____	_____	_____	_____
Applicants Enrolled	_____	_____	_____	_____
TOTAL PROGRAM ENROLLMENT	_____	_____	_____	_____

B. Contract Enrollment (Unduplicated Headcount)

ETHNICITY							STATUS	
GENDER	ASIAN	BLACK	HISPANIC	WHITE	NOT RPTD	ALL	FULL	PART
FEMALE								
MALE								
TOTAL								

C. Total 1995-96 Student Credit Hours in contract program:

D. Ratio of contract-supported students to the total program enrollment.

E. Ratio of 1995-96 contract-supported graduates to "new" enrollments.

F. Faculty - State the Student/Faculty ratio in the contract program.

G. Placement of 1995-96 Graduates

LOCATION	IN FIELD	NOT IN FIELD	FURTHER EDUCATION	UNKNOWN	TOTAL
LOCAL/REGION					
FLORIDA					
OUT-OF-STATE					
TOTAL					

List positions or job titles of Contract Graduates Below. (If needed, use additional sheets)

IN FIELD	NOT IN FIELD
_____	_____
_____	_____
_____	_____
_____	_____

If graduates are pursuing additional education, identify:

DEGREE	INSTITUTION
_____	_____
_____	_____
_____	_____
_____	_____

H. Tuition 1996-97 cost per student credit hour in contract program. (Attach a statement from an official college/university publication that verifies the tuition.)

I. 1996-97 Support Specify the number of semester credit hours (SCH) which you are requesting for 1997-98 including costs to maintain the current level of enrollment in the contract program. (Additional credit hours that are requested should be justified in NARRATIVE section.)

II. NARRATIVE REPORT

- A. Demand for Graduates** Provide evidence that verifies and/or demonstrates the extent of future local, regional or state employment needs for graduates of your program.
Discuss any changes in demand or employability, either an increase or decrease, during the past year, including national and regional trends and trends in the profession. Include any information on projected demand for the next few years.
- B. Faculty** State the size, level, qualifications and sex/ethnic composition of the contract program instructional faculty in the 1995-96 program. Discuss any anticipated changes for the coming year.
- C. Accreditation** Identify any change in the accreditation status of the institution and the contract program.
- D. Outcomes** Describe outcomes assessment activities for the contract program to assess quality and measure attained competencies, e.g., results on certification or licensing examinations, etc. Report on the results of these activities.
- E. Overall Academic Program** Discuss any modifications in the program that will affect the State contract, including admission/retention policies, facilities/program resources and recruitment strategies, particularly for minority students.

Statistical data on contract-supported students collected by the Department of Education's Office of Postsecondary Coordination will supplement the information collected for the academic year 1995-96 and will be used by the Commission for its annual budget request and contract report to the State Board of Education.

Please return the completed report by **May 31, 1996** to:

Dr. Jon Rogers
Educational Policy Director
Postsecondary Education Planning Commission
Florida Education Center
Tallahassee, Florida 32399-0400

Phone No.: 904-488-0981
Fax No.: 904-922-5388
E Mail: ROGERSJ @ mail.doe.state.fl.us

APPENDIX B

Five Year Contract Report Form

FORMAT FOR REPORTING
INFORMATION FOR FIVE-YEAR PROGRAM REVIEW

INSTRUCTIONS: Following the outline below, answer each question and provide the requested information on your contract program. Do not answer on this form. Use separate paper.

1. Name of institution
2. College/school & department
3. Degree program name
4. Project/grant number
5. Name of respondent
6. Date of response
7. State the mission of the institution and the major long-term goals of the department, then explain how the degree program and project grant which are the subject of this review relate to the mission of the institution and the long-term goals of the department.
8. In what ways and to what extent has the State of Florida and its citizens received benefits from this project during the past five years?
9. Please provide a written discussion of future employment opportunities and manpower needs for graduates of the program under review. Provide evidence that verifies and/or demonstrates the extent of local, state, or national manpower needs.
10. How does this degree program at this institution differ from other degree programs in the same academic discipline or field of study in Florida?
11. What strategies are used to recruit students into the program?
12. What criteria are used to determine eligibility and ineligibility of students to receive reduced tuition benefits offered through this project?
13. For the contract program, include admissions statistics on the following:

	1992	1993	1994	1995
Program Applicants:				
Applicants Admitted:				
Applicants Denied:				

Admitted and Enrolled:

14. For each of the years 1992-95, report the following:

- a. the average number of credit hours taken to complete the degree for all program graduates and for all contract-supported graduates.
- b. the number of semesters needed to complete the degree for all program graduates and for all contract-supported graduates.

15. Describe outcomes assessment activities used in your department to assess quality and measure attained competencies, e.g., certification or licensing examinations for program graduates. Report on the results of these activities.

16. Extent to which the program is supported by the grant:

- a. Number of students (HC=headcount) who actually received reduced tuition benefits through the grant and number of Funded Student Credit Hours (SCH) during the current and preceding years:

	Full-time Funded		Part-Time Funded		Total HCa (FT+PT)	Total SCHa (FT+PT)
	HC	SCH	HC	SCH		
1992-93	_____	_____	_____	_____	_____	_____
1993-94	_____	_____	_____	_____	_____	_____
1994-95	_____	_____	_____	_____	_____	_____

- b. Number of students (HC=headcount) in the program who did not receive reduced tuition benefits through this project and Non-Funded Student Credit Hours (SCH) during the current and preceding years:

	Full-time Non-Funded		Part-Time Non-Funded		Total HCb (FT+PT)	Total SCHb (FT+PT)
	HC	SCH	HC	SCH		
1992-93	_____	_____	_____	_____	_____	_____
1993-94	_____	_____	_____	_____	_____	_____
1994-95	_____	_____	_____	_____	_____	_____

- c. Ratio of grant-support to total program:

	Headcount HCa/(HCa+HCb)	Student Credit Hours SCHa/(SCHa+SCHb)
1992-93	_____	_____
1993-94	_____	_____
1994-95	_____	_____

17. Number of graduates who received the tuition reduction grants who were employed within one year of graduation:

Year Graduated	Total Participating Graduates	Employed In Florida	Employed Outside Florida
1992-93	_____	_____	_____
1993-94	_____	_____	_____
1994-95	_____	_____	_____

18. For program graduates employed in Florida, report the following:

<u>Position</u>	<u>Employer</u>	<u>Location</u>
_____	_____	_____

19. Gender and ethnicity of students:

a. All students in the major, including students receiving tuition reimbursement grants:

	Females	Males	Am Ind	Asians	Black	Hispanic	White	Other
1992-93								
1993-94								
1994-95								

b. Students receiving tuition reimbursement grants:

	Females	Males	Am Ind	Asians	Black	Hispanic	White	Other
1992-93								
1993-94								
1994-95								

20. Describe any new facilities or equipment acquired by this program during the last five years.

21. Number of full-time-equivalent faculty & staff dedicated to this degree program:

	Faculty	Support staff
1992-93	_____	_____
1993-94	_____	_____
1994-95	_____	_____

22. Briefly describe each faculty member dedicated to this degree program as to length of service, earned degrees, experience, specialization, awards, recognitions, and tenure status.

23. For the grant program faculty, briefly describe or list research, public service, and development activities for the last three years.

24. Operating expenses for the program:

	Capital Equipment	Travel	External Research	Equipmt Maint	Average Salaries	
					Asst Prof	Assoc Prof
1992-93	_____	_____	_____	_____	_____	_____
1993-94	_____	_____	_____	_____	_____	_____
1994-95	_____	_____	_____	_____	_____	_____

25. Briefly describe the most immediate resource needs of the program.

26. If the tuition reimbursement grant is continued, how do you expect the program to develop over the next five years?

27. If this project were no longer supported by state funds, what adjustments would be required to maintain the quality of the degree program and the department?

OPEC/rc/rev 1/29/86

APPENDIX C

Consultant Report: Ph.D. in Biomedical Sciences

University of Miami

Final Report to the
Postsecondary Education Planning Commission
Florida Department of Education

Henry R. Besch, Jr., Ph.D.
Showalter Professor of Pharmacology
Chairman of the Department of Pharmacology and Toxicology
Professor of Medicine
Director Emeritus, State Department of Toxicology

Executive Summary

This report addresses the legislatively mandated five-year review of Florida funding of a program in support of Florida residents enrolled at the University of Miami, School of Medicine, who seek doctoral training in the sciences basic to medicine. Specifically, the program is labeled the Doctor of Philosophy in Biomedical Sciences degree program. Written materials on the program were supplied in advance to the reviewers by Dr. Robert W. Rubin, Vice Provost and Deputy Dean for Research and Graduate Studies, the University of Miami School of Medicine. These materials responded to a questionnaire from the Florida State Board of Education, Postsecondary Education Planning Commission (PEPC). Apparently, the format for reporting on the program's progress is restricted to answering 27 questions that apply lock-step to all Florida contract programs. After a few weeks for review of the documentation, a site visit was made to the School. This was a one-day visit on May 16, 1996 during which the reviewers were afforded substantial additional information on, and first-hand interaction with, the faculty and students in the program.

According to administrative documents, review of the contract program should center on two elements: program quality and the manpower needs of the state of Florida. Information permitting evaluation of program quality is publicly available and readily accessible. However, manpower assessments specific to a subregion of an individual state require a host of prognostications that even the best database on past performance cannot rationally predict. The present review, therefore, focuses primarily on elements of quality of the program, and for the most part, leaves to Florida's local experts the evaluation of whether this program is cost-effective in its local environment. It is noteworthy, however, that the less-than-mature pharmaceutical and biotechnology industries in South Florida have benefited and will continue to do so from an increased local availability of highly trained biomedical scientists. Although Florida's social amenities have accounted for part of this increase, nourishment of scientific training of young Floridians by this contract program is no doubt of some contribution, as well. Furthermore, in an increasingly scientific and technological national and global environment, competitiveness in every economy hinges more and more on its scientifically-trained population base. This is at least as true in Florida as it is elsewhere in America and perhaps more so. Florida's superb climate and its entrepreneurial spirit continue to propel population increases, which in turn sustain a competition base vital to local progress.

In spite of these caveats about assessment vagaries, the review team is confident that this contract program with the University of Miami School of Medicine has real merit. The graduate students at the School receive first-class research training. Furthermore, the proficiencies garnered from their training and education in the especially competitive, fast-paced research environment at the School prepares them to assume leadership positions not only within an academic setting but also in the burgeoning pharmaceutical and

biotechnology industries of southeastern Florida. The investment of the state in this program is but a tiny fraction of the total funds committed toward future economic viability of the population-dense region in southeastern Florida. The site visit team concluded that by any reasonable qualitative measure, the return on this investment substantially leverages state seed monies and that its demonstrated accomplishment in this arena merits its continuation funding. The superior quality of the program fully justifies its continuation, and in fact, merits its funding at an increased level.

Historical Perspective

In response to an acceleration of biomedical industrial concerns that had recently located in the Miami area in the early 1980's, needs grew for doctorally-trained scientists with skills and experimental competence in the basic medical sciences fundamental to medicine, drug discovery, and biotechnology. This prompted local industry leaders to urge Florida educators to develop programs to meet these needs. The program under review was designed to recruit Florida residents to the graduate program at the University of Miami School of Medicine. Its initial support by Florida's legislature was one means by which they responded to these concerns. The program providing partial support of graduate biomedical education has been successful in fostering local scientific talent by subsidizing matriculation of local students. The logical expectation that native Floridians might remain in the area after graduation, and thereby enrich the manpower to fuel the pharmaceutical and biotechnology expansion of the southeastern Florida economy has been substantiated by experience. Florida residents receive from this program a funded incentive to remain in Florida for their doctoral training. Therefore, they remain Florida residents at the end of their training, when they begin to assess their options for future employment. Many, perhaps most, of them have significant personal reasons that motivate them to remain Florida residents. Florida Scholars logically should become Florida scientists.

The students receiving "contract" support are accorded status in the graduate program as "Florida Scholars", and that distinction, too, helps cement their ties to the state.

Itinerary

The site visit conducted as an integral component of the Five-Year Review process of the Florida Scholars Program was held at the University of Miami School of Medicine by a Site Visit Team consisting of Dr. Glenda Rabby, Post Education Planning Commission; Mr. Taylor Cullar, Office of Post Secondary Education Coordination; and, Dr. Henry Besch, Jr., Consultant, from the Indiana University School of Medicine. We began our visit early on May 16, 1996, in an administrative session with Dr. Robert W. Rubin, Alina Padron and Maria Zayas and thereafter we visited selected research facilities and laboratories, where we met with many of the current Florida Scholars. We were then hosted for lunch by a group consisting of Department Chairs, Graduate Advisors, Alumni and current Florida Scholars. We then visited for a half hour with a small group of alumni and graduate students, and then during an additional half hour with Basic Science Department Administrators. Thereafter, the site visit team met in Executive Session to discuss our finding, impressions and evaluations.

Current Program

The present program consists of a seamless integration of about 25 students seeking the doctoral degree into the overall cadre of approximately 115 graduate students in the basic biomedical sciences of the University of Miami School of Medicine. The requirement that supported Florida Scholars ("contract students") must be Florida residents affords a favorable admission advantage to students who may be by personal circumstance or choice "place bound." A central tenet of the program is that such recruits to the graduate program are likely to remain in Florida after graduation. In all other respects, the Florida

Scholars appear to be fairly representative of the remainder of students in the graduate program. However, they are unique in having been drawn from the local environment, rather than from the far-larger national and international pool of graduate school applicants.

Currently, Florida Scholars represent approximately 25% of the total graduate student population enrolled. Over the last four years, about half the accepted applicants matriculated. However, in the last two years, there has been a substantial increase in applicants. Funding restraints have precluded an expansion. In fact, the group size has continued to dwindle for several years, as inflation has eroded the purchasing power of a constant level of funding.

Critique

The data on "Florida Scholars" presented in the advance documentation, and supplemented during the site visit clearly substantiate the quality of the doctoral program experience at the University of Miami School of Medicine. The mentors' credentials clearly establish their world-class research endeavors, funded in large part by the very highly competitive mechanisms of the National Institutes of Health. Federal monies highly leverage the impact of the local support of the graduate program, and vice-versa.

The NIH CRISP on-line database of currently funded grants and contracts awarded to Floridians reports 385 funded studies at the University of Miami, the large majority of which are to School of Medicine faculty. These funds exceeding \$100 million a year, support a vigorous faculty who conduct their research in laboratories that are, for the most part, available to Florida Scholars supported in part by the program under review. There is no question but that the faculty and the Scholars are engaged in a beneficial relationship that redounds to the mutual advantage of each, and has a positive impact on Florida's economy.

Comment is also warranted on assessment by the Florida citizens who directly benefit individually from the program. The Florida Scholars we interviewed were enthusiastic about and appreciative of their support by the Florida Scholars program. They were global in fitting their research contributions into not only local biomedical endeavors but national and international research frontiers, as well. The enrolled students presented a clear indication that their graduate education experiences not only met but in most instances, exceeded the expectations they held before matriculating.

Regarding the quality of the program, this reviewer consulted three independent, non-interacting sources. The first, and most comprehensive, is the NIH CRISP database of federally funded research projects. The positive outcome of that query is mentioned above. Next, I sought opinion of two successful entrepreneurs with personal experience in the Southeast Florida biomedical area, Dr. Alec D. Keith and Dr. Steve J. Kennedy. Both of these nationally prominent biotechnology entrepreneurs have roots in Florida companies in Miami. Each has gone on to successful ventures elsewhere. Their experienced judgment, although anecdotal, was uniformly positive. Third, I spoke with Dr. George Walker, Vice President for Research and the University Graduate School, Indiana University. Here too, I found clearly articulated evidence of an outstanding reputation of the biomedical graduate program at the University of Miami School of Medicine. This reputation is all the more remarkable given the short history of graduate education at Miami.

The Florida Scholars program is known and envied by graduate schools in other states. Based largely on the Florida model, Indiana University administration proposed to the Indiana legislature in the 1992 biennium budget, and again in 1994, a Hoosier Scholars program akin to the progressive, documentably successful program in Florida. This Indiana proposal, as well as Illinois and Ohio counterparts have

yet to be considered favorably by the respective legislatures. Nevertheless, the flattery of attempted imitation by other states can be taken as among the most sincere of all external endorsements of the Florida Scholars programs.

However, adequate local evaluation of the Florida Scholars program seems to suffer from the constraints imposed by a lock-step process designed to permit a uniform evaluation of all contract programs funded by Florida's legislature. The Ph.D. in Biomedical Sciences program is, in this context, a square peg in a round hole. Its funding by the legislature has little, if any, parallel to similar Florida education set-asides. This occasions a mis-match in evaluation between the other contract programs and this unique resource. The potential for development of this mismatch was foreseen in 1984 when this contract was conceived. In an attempted work around, this contract was formulated to receive support of a fixed number of full-time students, rather than a flexible number of students based on the credit hours they were taking. The rigor of graduate medical education provided an adequate rationale: part-time students rarely complete graduate school. Since virtually all other Florida contracts simply reimburse on the basis of student tuition hour counts, the difference in standards of accountability for this program present a dilemma for PECE in its prescribed reporting pathways. Perhaps because of this, legislative funding for this program has dwindled in current dollars, even though it has achieved vigorous PECE recommendations. In spite of demonstrable success, state funding of the Florida Scholars program has stagnated for many years. In the context of standardized reporting, Florida's legislators have not grasped the regional and national impact of this program. The paperwork provided by the state to the school anticipates data from a program of restricted emphasis, offered by a single department. Individual elements of accountability for expenditures by the Florida Scholars program are not requested in such a way that the answers provide a ready means to evaluate cost-effectiveness. In fact, the

identification of particular students as "Florida Scholars" is primarily only a bookkeeping function, as has been the case from the outset of the program. This mechanism lays authority for individual expenditures, as well as responsibility and accountability directly on the program administrators. As reviewed elsewhere in this report, this strategy has proved highly successful. The "seed monies" provided by this contract have contributed handsomely to the leverage that underpins more than \$100 million annually in federal grant support of the biomedical research enterprise at the University of Miami School of Medicine. Since the monies for the Florida Scholars program are provided as a pool of funds for all participating departments, Florida's legislators are provided little opportunity to manipulate funding in such a way as to foster the most meritorious elements of the program. This is further confounded by the fact that the information form does not ask for all pertinent information and so the information provided is incomplete. For example, item 24. of the information request seeks to assess operating expenses for the program, but anticipates provision for only Assistant and Associate Professors, while excluding that for full Professors. There is no request for information on the extramural funding of full Professors participating in the Florida Scholars program. Extramural funding of full Professors is not requested, even though it is logical that most Florida Scholars train in the laboratories of full Professors in the program. (Note that each department included such data in the appendices.) During the site visit, the evaluation team asked about such non-concordance between collected indicia of program quality, total assessment measures of program quality, and outcomes measures of the program impact on the Florida economy. Specifically, the site visit assessment team members sought concrete indicia to vividly convey to others our unbridled enthusiasm for the program. Regrettably, we could not enumerate on our own suitable, simple benchmarks. Instead, we sank toward standard accountability measures, that might, at best, measure the costs in a uniform way but fail to measure the value in any way. In response, there appeared to

arise from School administration substantial anxiety that additional accountability measures enforced on the program by PEPC might blossom into bureaucratic assessment measures that would financially consume the program, and divert its funds away from support of Florida students but into its support of private accountants. In the end, all parties seemed to recognize that the unique and valuable features of the Florida Scholars program could easily be siphoned away from the legislature's intended beneficiaries. In particular, the intangible benefits to the burgeoning biomedical, biotechnology and pharmaceutical industries in south Florida could be consumed by reporting mandates. An increase standardization of reporting format surely would impede optimal local management of the resources provided to the program.

It would seem an obvious advantage to develop improved reporting procedures on which future legislative evaluations can be based more equitably. Legislative funding more nearly commensurate with demonstrable program needs might then be seen in a more positive light by the legislature. That the status quo has resulted in underfunding of a valuable program has been noted in prior review cycles and was again evident in the present review.

Summary and Conclusion

Continuation of funding of the Florida Scholars program, even at an increased funding level is fully merited by the data provided. Doctoral training in the Biomedical Sciences at the University of Miami School of Medicine is of the highest quality. Furthermore, all evidence available to the review team suggests that the program serves the manpower needs in the south Florida area. As National Academy of Sciences President Bruce Alberts commented in opening a recent Washington, D. C. conference on graduate medical education, "The nation needs more scientifically trained people, not less." This is as true for Florida as it is for all the less competitive states and regions in

the United States. Florida's economy prospers in no small measure by leveraging of the resources that the state provides its educational institutions. Nowhere in the State of Florida is this more evident than in the highly competitive Miami area. Florida's modest investment in the Doctor of Philosophy in Biomedical Sciences program at the University of Miami School of Medicine has been returned many times over. Bright, enthusiastic, highly-trained Floridians are emerging from the program to enrich and invigorate the state's workforce base. The key element of this program, when all is said and done, is that it provides incentives to Florida's residents to remain in the state. In essence, it counters brain-drain pressures that, left unchecked, would deplete Florida of one of its most valuable resources -- its brightest young people.

APPENDIX D

Consultant Report: Master of Science in Nursing

University of Miami

POST SECONDARY EDUCATION PLANNING COMMISSION
Florida Tuition Reduction Grant
Five Year Program Review

UNIVERSITY OF MIAMI
Master of Science in Nursing
June 30, 1996

Sheila A. Ryan, Ph.D., RN, FAAN
Dean, School of Nursing
Director, Medical Center Nursing
University of Rochester School of Nursing
Rochester, New York

The tuition differential grants to private colleges and universities affords students in specialized programs to be able to attend private universities at the student credit hour rate as paid in state universities where workforce needs of the state exceed the capability of state universities to offer such a program. The purpose of this review was to assure that the program meets the quality standards set for all nursing programs and that the need for continuation of this program can be supported by marketplace needs.

This review was conducted by:

- 1) Dr. Sheila A. Ryan, lead reviewer, University of Rochester;
- 2) Dr. Jon Rogers, Florida Postsecondary Planning Commission;
- 3) Mr. Taylor Cullar, education policy analyst for the Florida Department of Education.

Interviews were conducted with Dr. Diane Horner, Dean, and Drs. Theresa Gesse and Marydelle Polk, lead faculty. Additional faculty interviewed included Dr. Doris Ugarriza, Dr. Donna Pfeifer, Dr. Lynda DeSantis and Mrs. Sara Klinger. Phone conferences were held with four employers of these graduates: Amy Mosley of the Veterans Administration Medical Center; Charlotte Dison, Vice President of

Nursing, Baptist Hospital; Betty Taylor, Director of Nursing Education, Mount Sinai Medical Center and Dr. Cathy Mason, State of Florida Department of Health. Luncheon meetings were held with four current students and two alumni of the program.

MISSION & GOALS

"The mission of the School of Nursing is to advance nursing knowledge and improve health care through the education of students and the cultivation of faculty committed to excellence in the art and science of nursing, teaching, and scholarship reflective of the unique multicultural nature of the University, School, and community." This School of Nursing philosophy of community-based nursing and transcultural health care addresses the increasingly multicultural needs of the south Florida region. The University of Miami School of Nursing was the first program in the state to prepare nurse practitioners and nurse midwives (the only program preparing nurse midwives south of Jacksonville), and their twenty-five years of experience of preparing quality graduates provides confirmation of the distinction of excellence.

In the past five years, the University of Miami MSN program graduated 35 nurse midwives, 59 nurse practitioners and 76 clinical nurse specialists. The majority of graduates (95%) remain in Florida as contributing professionals and citizens. The reputation of this school is recognized as leader in the state and known especially for its preparation of culturally competent caregivers and advanced nurse practitioners. Being one of the oldest, most established universities and associated with a medical school, its practice specialty programs have been used as models for other programs in the area offering advanced practice degrees.

MARKETPLACE NEEDS & OPPORTUNITIES

Although the managed care environment has begun to bring some downsizing of hospital beds, the market for advanced practice nurses continues to grow as evidenced by increasing demand, growing acceptance by other disciplines and changes in the regulatory and reimbursement climate for nurse practitioners. The

faculty reported postings of 25-30 job openings at any given time; 40% of 374 Florida obstetricians were planning to hire nurse midwives (Midwifery Resource Council, 1994). Nurse-midwives in Florida have been credited with the reduction of infant mortality and morbidity through their model of care that promotes preventative care practices.

The RN vacancy tends to be higher for Florida than elsewhere (6% as compared to 4% nationally). However, the vacancy rate for ARNP's is highest at 22.2% (Florida Nurse 1995 Fact Sheet) Vacancies for critical care nurses, emergency room nurses and medical-surgical units are higher than for overall staff nursing. Nationally, the workforce employment in hospitals was reported to be 55%, nursing homes at 10%, MD offices at 7% and community home health at 5%.

USDHHS predicts a continued downward trend through the year 2020. Considering the demand for nursing services due to factors such as aging of the population, technological advances, and new roles for nurses, the reported shortage is more likely a chronic condition. In addition, calls for expanding nurse practitioner programs that prepare nurse practitioners and nurse midwives and other non-physician providers, would result in an increase in the primary care workforce much more rapidly and at a lesser cost. (Larson, Osterweis, & Rubin, 1994) Lastly, Kindig reports that enhancements should be undertaken to increase career orientation toward service in community health centers in minority and other underserved population areas. Special attention should be given to regions of the Southeast that tend to have higher concentrations of black counties and lower physician supply. The University of Miami School of Nursing has high minority enrollment, community-based centers and nurse practitioner and nurse midwife programs.

The Veterans Administration Hospital system reported using nurse practitioners in its long-term care units for physician back-up using practice protocols and guidelines. Institutional salary ranges for new hires were from \$44,000 to \$58,000; physician practice hirings in the community at large were reported higher, in the \$60,000 to \$70,000 range. The Baptist Health System

reported a high demand for hiring practitioners and of 1400 nurse employees, six had advanced practice roles, twelve were certified nurse midwives, four APN's served in educational roles and additionally, certified nurse anesthetists were commonly used. Mt. Sinai Medical Center reported 10-15 advanced nurse practitioners within a total nurse employee population of 1000. The State Health Department reported a 5% growth rate with priority for those with graduate preparation. Further, state legislation for advanced practice requiring graduate preparation has passed for implementation by 1998.

In conclusion, the market demand for both primary and acute care practitioners is high for ambulatory, rural health, low risk pregnant women's health, long term care and home health.

CURRICULUM, PROGRAM & CLINICAL PRACTICUMS

The curriculum leading to the MSN prepares students for advanced nursing practice with a primary care or acute care focus. Total program requirements are 39 credits for those not choosing an additional 6 credit thesis option. All students complete eight core courses, one elective and three specialty-focused clinical courses. Students selecting primary care focus may select the family nurse practitioner or nurse midwife program. Students who select the acute care focus may choose a clinical emphasis in adult health, critical care, mental health or oncology nursing. All graduates of the program are eligible to apply for licensure as Advanced Registered Nurse Practitioner (ARNP) in the State of Florida and meet the requirements to write national certification examinations as are available.

In a 1993 survey of its graduates using Educational Testing Service Graduate Program Self-Assessment Service, the alumni rated the teaching and learning environment high. The faculty were genuinely interested in their welfare and development, were well-prepared, used appropriate teaching methods, were fair in their evaluations and were aware of new developments in the field. The focus on clinical experiences in future practice roles was highly regarded and best noted by two employers who stated "the graduates

were well-educated and good practitioners" and "I will readily take a University of Miami graduate anytime."

STUDENTS

The total number of grant-funded students ranges from 81 to 86 over the last three years; the full-time funded student increased from 11 to 20 over this same time period and the part-time grant-funded students decreased from a high of 80 to 61. Full-time students finish the program and enter the workforce approximately 2 semesters or one year sooner than part-time funded students. Approximately 80% of all graduate students are funded by the state grant program. Of the 1995 graduates, all 24 are employed within the first year and twenty-two were employed within the state of Florida.

The eligibility criteria for applicants is standard and of high quality, i.e., GPA of 3.0 or above and GRE scores of 1000. The admission and progression criteria conform to those of the Graduate Studies Bulletin. The attrition rate is low, (5%); and the majority of attrition is due to personal reasons.

The minority enrollment is remarkably high, averaging 37%. This represents an increase from a previously reported 19% in the last PEPC report (1991). This is three times higher than the national average of 11.6% for MSN programs and 60% higher than the State of Florida average of 22%. Male enrollment also is representatively higher than both national and state averages. The School of Nursing continues an aggressive recruitment and retention program for minorities and this success is reflective of the increased cultural sensitivity within the entire curriculum and environment.

Total applications and admissions have remained essentially stable. Approximately 40% of all applicants are admitted and admissions to enrollment yield was high between 85% (1992) and 97% (1993). The average yield rate resumed to the University norm in the last two years, 1994, (62%) and 1995, (75%).

FACULTY

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APPENDIX E

Consultant Report: Doctor of Pharmacy

Nova Southeastern University

**NOVA SOUTHEASTERN
COLLEGE OF PHARMACY**

**Florida Tuition Reduction Grant
Five Year Program Review**

**Ronald W. Maddox, Pharm.D.
Professor and Dean
Campbell University
School of Pharmacy
Buies Creek, North Carolina**

June 5, 1996

**Prepared
for the
Postsecondary Education Planning Commission**

INTRODUCTION

Nova Southeastern University, NSU, participates in the State of Florida's program to offer pharmacy education to Florida residents at reduced tuition rates. The State partially funds the program to make up the difference between the College's tuition level and the amount paid by Florida students. Every five years, the State is required to review such academic program contracts to establish the need for continuation of these agreements and to assure that the program quality matches the quality of similar programs in state universities.

ON-SITE REVIEW, JUNE 5, 1996

Dr. Ronald W. Maddox, Dean, Campbell University School of Pharmacy, and Dr. Cynthia Balogh, Educational Policy Director, Florida State Board of Education, conducted an on-site visit review, with the primary purpose of ascertaining program quality and state workforce needs for the program. Meetings were held with Dr. Arnold Melnick, Vice Chancellor of the Health Professions Division, NSU, and the following College of Pharmacy officials: Dr. William Hardigan, Dean, Mr. Andrew Robeson, Pharmacy Admission's Officer, Ms. Elizabeth Connolly, Director of Financial Aid, Dr. Lisa Deziel-Evans, Chair College Curriculum Committee, Dr. Dean Arneson, Dean for Student Academic Affairs, Dr. Andres Malave, Assistant Dean and Department Head Pharmaceutical Sciences, Dr. Christopher Rodowskas, Assistant Dean and Department Head Pharmacy Administration, Dr. Scott Swigart, Assistant Dean and Department Head Pharmacy Practice, and approximately fifteen student leaders. Preparation for this review on the part of the College of Pharmacy included a report that provided information on the College.

FINDINGS AND COMMENTS

CAMPUS

The College of Pharmacy was in the process of moving from the North Miami Beach campus to its new site on the Davie campus, which is located approximately 30 minutes north of the previous location. A five story building will house all offices for the Health Professions Division, with the College of Pharmacy located on the third floor. Lecture/classrooms will be a part of a community of Divisional physical resources, and will include a 250 and a 500 seat auditorium, and eight 125 seat auditoria. These classrooms will be equipped with state of the art audio visual technology. All offices and laboratories will be linked through a network that provides for computer communication and telephone. Furthermore, unique

laboratories and specialized resources, such as the drug information center and industrial pharmacy laboratories, are incorporated into the College of Pharmacy's space. It appears that this campus will provide an excellent environment for teaching and learning.

COLLEGE OF PHARMACY

The Dean of the College of Pharmacy continues to report directly to the Executive Vice Chancellor and Provost as well as the Vice Chancellor for Academic Affairs. The Dean has the authority and responsibility for pharmacy education. The Dean is assisted by the Associate Dean, Assistant Dean for Student Affairs, and the Assistant Dean for Professional Affairs. The three department chairs, Pharmaceutical Sciences, Pharmacy Administration, and Pharmacy Practice also serve as assistant deans.

The Dean, administrative officials, and students of the College of Pharmacy were optimistic, enthusiastic and very receptive to the move to the Davie campus. The College offered the doctor of pharmacy curriculum as its only professional program with the class that entered in the fall of 1995. This programmatic improvement permitted the college to focus its resources and energies on one professional program, and to relate more effectively with the other professional doctoral programs of the Division. The distance learning resources and expertise of the University have been helpful with the College's non-traditional doctor of pharmacy program as well as its continuing pharmaceutical education programming.

The faculty, which consists of 35.5 full time equivalents, has been strengthened in quantity and quality in the recent year, see attachment A. The inclusion of the University retirement benefits (TIAA/CREF) to the College also supports faculty recruitment and retention efforts.

The faculty is capable and hard-working, and demonstrates their dedication to teaching as well as to the professional development of their students. The challenge of the future will be to maintain and sustain the momentum, energy-level, and competence of the faculty. Thus, a comprehensive faculty development will be critical.

STUDENTS

The students report that the faculty is approachable and caring. The administrative officers and the faculty are committed to the academic, professional, and personal development of the students. Their efforts, to date, have succeeded, as evidenced by the high level of professionalization. The students appear to be

exceptionally well-motivated and are sensed to be very committed to improvement in the quality of pharmaceutical care. The students are active in professional societies, national and state, and are dedicated to the College of Pharmacy.

CURRICULUM

The curriculum has served the College and its students well; however, to implement the entry-level doctor of pharmacy curriculum is currently undergoing revision. This process will continue over the next year. The concept of pharmaceutical care has been interwoven into this new core curriculum. Emphasis has also been placed on expansion of clerkships and integration of quality control and standardization of experience.

Curricular review should continue to be guided by the principles of pharmaceutical care, and study should be given to new teaching strategies. Emphasis should also be placed on the refinement of the clerkships and externships, upon quality assurance, standardization of experiences and consistency of student evaluation.

ACCREDITATION

In June 1993, the American Council on Pharmaceutical Education granted accreditation to the College of Pharmacy's doctor of pharmacy and baccalaureate in pharmacy programs. Also, the regional accrediting agency (SACS) has continued institutional accreditation following a review of the merger between Nova University and Southeastern University of Health Sciences.

EXPERIMENTATION

To meet the educational needs of the baccalaureate pharmacists in Florida, the College is utilizing compressed interactive video technology. The experiment of presenting two courses to pharmacists in Tampa through transmission from the Davie campus exceeded expectations. As a result, sites were identified in Sarasota, Orlando, and West Palm Beach. The instructor is located in a studio/classroom on the Davie campus and through interactive technology maintains visual and audio contact with all sites.

ADMISSIONS

Applications from Florida residents to the College of Pharmacy remain strong. During the past five years, approximately 95% of all students admitted to NSU College of Pharmacy are citizens of the State of Florida. Students are admitted on the basis of grade point average, PCAT scores, and personal interview. As a result of the admissions process, the typical entering class profile includes a wide cultural diversity, resulting in approximately 41% minority enrollment. The approximately 21% Hispanic enrollment is dominantly Caribbean in origin. The College has the largest Hispanic enrollment in pharmacy in the continental United States. Students from Dade, Broward, and Palm Beach counties accounted for 54% of the class admitted in the fall of 1995. It is also noteworthy that the number of applicants has steadily increased during the previous four years from 286 in 1992 to 460 in 1995. Furthermore, over 525 applications have been received for the fall of 1996 class, which represents 5.25 applicants for each position available. A significant number of these applicants are Florida residents, see attachment B.

On the national level, enrollment in first professional pharmacy degree programs has increased approximately 1.3 percent per year since 1984; the percentage of females now approaches 65 percent; underrepresented minorities account for approximately 11 percent; the overall grade point average is around 3.0/4.0; and the average number of applicants for position available reminds at approximately 4.0.

EMPLOYMENT OPPORTUNITIES

Like many other health related disciplines, the profession of pharmacy will experience considerable change in the future. In fact, the use of new information, communication, and robotics technologies have already made of the traditional functions performed by pharmacists obsolete. Included among these are the inventory and dispensing of pharmaceuticals and quality control. This trend will produce a reduction in the future in opportunities for pharmacists in traditional dispensing roles such as retail and hospital pharmacy.

New frontiers for pharmacy services are evolving. An emerging area of practice where pharmacists will play a key role is in the provision of comprehensive drug therapy management. Comprehensive drug therapy management is the collaborative process of selecting appropriate drug therapies, educating patients, monitoring patients, and continually assessing outcomes of therapy. With the ongoing dramatic changes in the health care delivery system, comprehensive drug therapy management can play a significant role in helping to reduce cost, improve outcome, and engage practitioners and patients in improving the quality of care.

Geriatric consulting practice will be a tremendous opportunity for future pharmacy practice. The Social Security Administration has projected that for the years 2000 to 2040 the population in excess of 65 years old will increase from 13 percent to 17 percent of the total population. Considering that this group of patients per capita medical care expenditure is about three times greater than that of patients under 65, this will have a significant impact on pharmacy practice. Also, numerous studies have documented the benefits of pharmacist conducted drug regimen review for elderly patients. Improved patient outcomes result from reducing drug interactions, adverse drug reactions, and unnecessary drug use.

As evidenced by The Florida Department of Labor and Employment Security, Bureau of Labor Market Information, employment opportunities continue to be exceptional. The Bureau projects that between 1992 and 2005, the average number of openings for pharmacists in Florida will increase by about 317 opening per year. The growth of the Florida population, together with its aging, increases the demand for pharmacists.

ALUMNI

Graduates of NSU are employed in numerous practice sites: traditional pharmacy positions, i.e., hospital and community pharmacy, health care organizations, pharmacy benefits companies, home health care companies, and consulting groups.

Graduates of the College of Pharmacy have consistently passed the National Association of Board of Pharmacy Licensing Examination (NABPLEX) at a higher rate than the state and national average.

	June 95	June 94
National Passage Rate	89.99%	87.09%
Florida Passage Rate	87.03%	87.00%
NSU Passage Rate	93.00%	97.07%

SUMMARY

Nova Southeastern College of Pharmacy has progressed very well through its developmental stages. It appears that the merger with and movement to the Nova University's Davie campus has facilitated this process. Strengths of the program include; the new facility, the dedication and commitment of the students to the College, and the tremendous clinical training potential in south Florida.

To enhance the quality of the program, I believe that the following issues should be addressed. First, the curriculum committee should move with some degree of haste with the entry-level doctor of pharmacy curriculum. Due to the fact that the first entry-level class entered in the fall of 1995. Secondly, faculty numbers will need further strengthening to successfully implement the new curriculum. Thirdly, a comprehensive faculty development program should be developed.

Based on the admissions and employment data presented in this report, I firmly believe that there is a critical shortage of pharmacists in the State of Florida. With the College of Pharmacy's movement to the Davie campus it has taken its rightful place as an established institution of pharmaceutical education in the United States. Hence, I strongly endorse continuation of the state's support of pharmaceutical education through its contract with Nova Southeastern University.