

East Carolina University

# Comprehensive Facilities Master Plan

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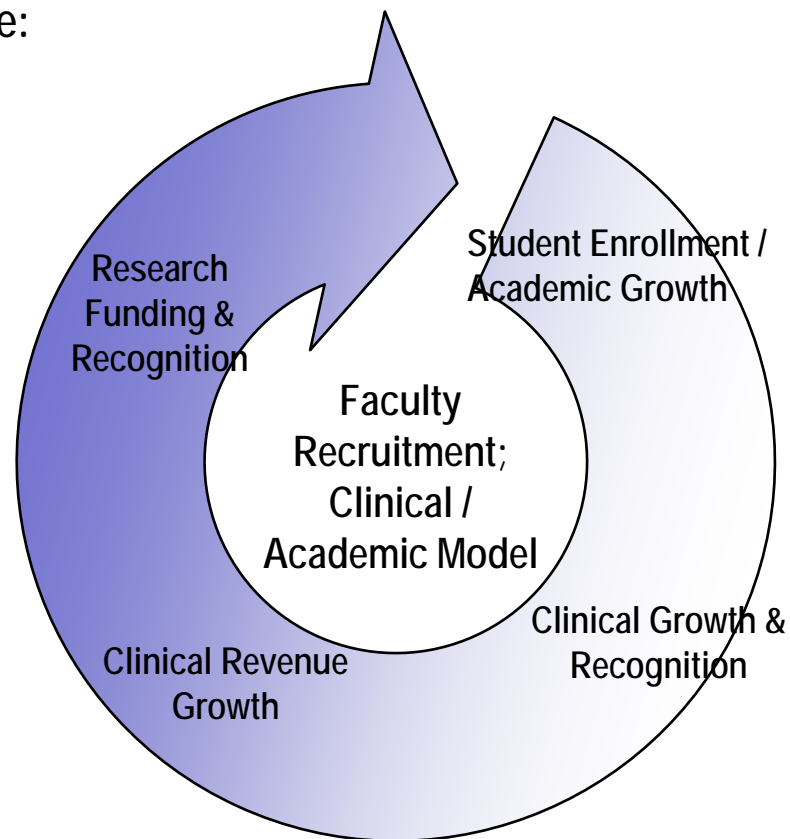
## Overarching Strategic Questions for Health Sciences Campus:

- Future Models for Health Science Education?
- Campus vs. Satellite Ambulatory Sites?
- Student Services for West Campus (i.e., activity center, food services, student health)?
- New Colleges and Programs?
- Role of UHS / PCMH in Medical and Other Professional Education?
- Regional Education Model?

## Faculty Recruitment and the Clinical/Academic Model Enable All Missions:

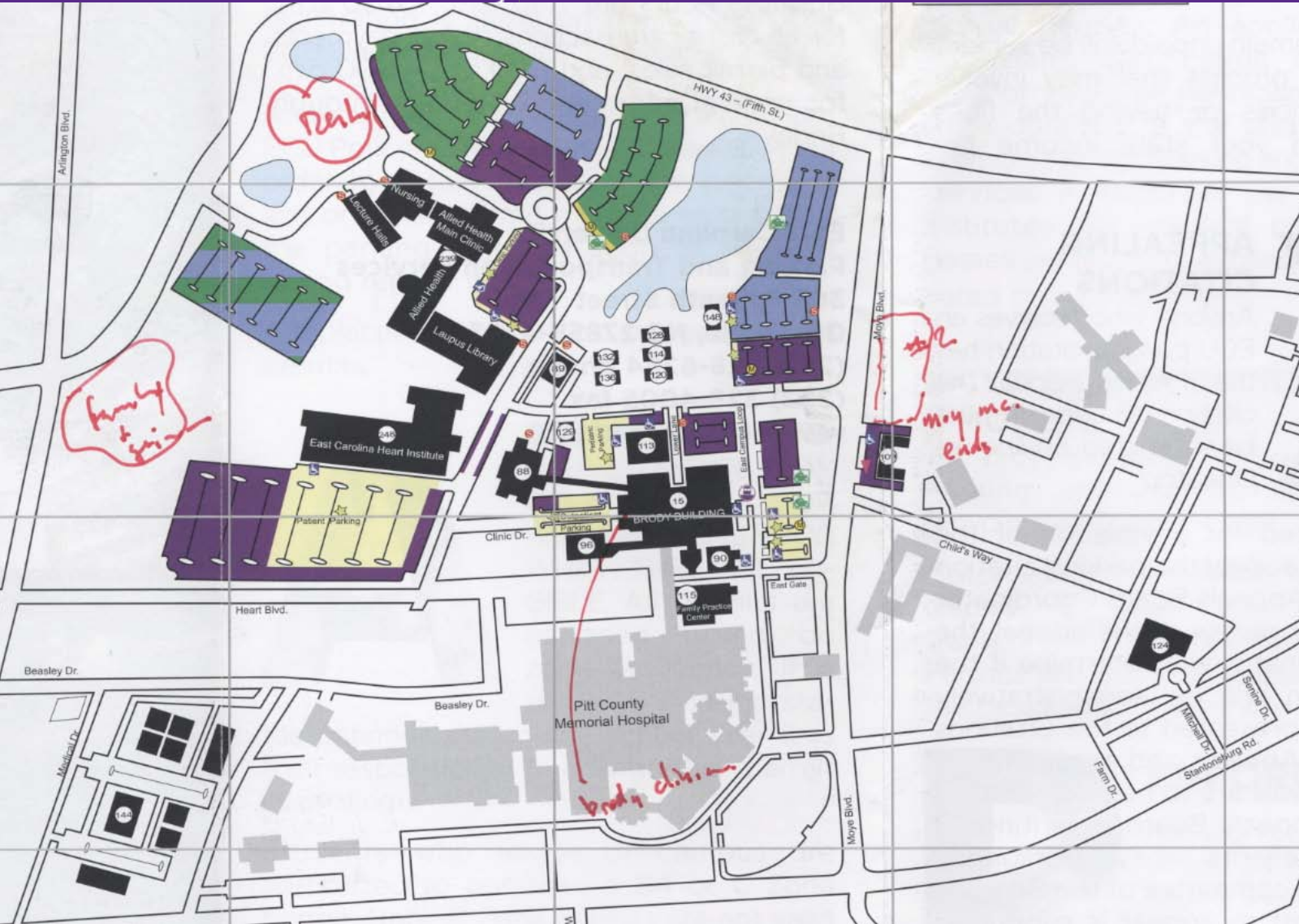
### Three-fold Mission for the Brody School of Medicine:

1. To increase the supply of primary care physicians to serve the state,
2. to improve health status of citizens in eastern North Carolina,
3. and to enhance the access of minority and disadvantaged students to a medical education.





# East Carolina University || Comprehensive Facilities Master Plan



## HSC Aspirations

- Consistent Desire to Create an Integrated **Health Science Center Campus** Respectful of Student and Faculty Support and Patient Access
- Efficient and effective
- Consistent Goal of Aligning Clinical Service, Education and Research Leadership with Health Needs of Region
- Desire to Provide an Integrated Core Curriculum in support of Interprofessional Education across the Health Science Center Schools
- Continue and Strengthen Regional Growth in Support of Current and Anticipated Program Development

## HSC Conceptual Vision

An Integrated, Humanistic-Oriented, Community-Based Care-Delivery, Education, and Research Model.

## Health Sciences

## HSC Limitations

- Various Programs are Fragmented and Non-Integrated
- Funding Resource Constraints
- Inconsistent Utilization of Existing Facilities
- Limited Physical Ability of Current Facilities to Support Future Program Development
- Revenue Sources are Inconsistent; Distribution in Support of Programs Require Constant Negotiation
- Wayfinding Challenges due to Historic Focus on a “Medical Mall” Model Rather Than an “Integrated Health” Model (A Community Health Resource Center)

## The “Maturing” Health Sciences Center

### Robust College of Nursing @ 1,100 Students (Largest in the State)

- First Health Professional School at ECU.
- Statewide Education and Placement Model to Help Regional Development of HSC
- Significant Distance Education Curriculum
- 500 Undergraduate Students, 600 Graduate Students
- Undergraduate Growth will be Limited at Class Size of 150
- Supportive of an Integrated Educational Program and Clinical Program Implementation

## The “Maturing” Health Sciences Center

### Robust College of Allied Health Sciences @ 800 Students

- Very Broad Curriculum Offering
- 60% of Students at Graduate Level
- Statewide Education and Placement Model to Help Regional Development of HSC
- Clinical Enterprise with 4 Distinct Clinics (Speech, PT, Rehab / Substance Abuse, and Sports PT)
- Anticipate 34% Growth Over Next 8 Years; Could be Limited by Lack of Clinical Sites
- Supportive of an Integrated Educational Program and Clinical Program Implementation



## The “Maturing” Health Sciences Center

### New Dental School @ 200 Students

- Innovative Statewide Clinical Offering (4<sup>th</sup> Year in a Regional Campus Setting)
- Could Provide Basis for Regional, Education, Clinical Care and Research Programs

### Department of Public Health @ 25 Graduates / Year

- Considered a Department
- Growth to 110 – 120 Students Possible; Limited by Existing Facilities and Staff Development
- ECU-HSC Comprehensive Mission Expansion Suggests a More Integrated Future Role

## The “Maturing” Health Sciences Center

### Mature Brody School of Medicine @ 320 Students with Growth to 480 Students

- Historic Clinical Training Focus with Family and Rural Health Mission
- Robust + Broad Clinical Enterprise; Centers of Excellence in Cancer, Metabolic, CardioVascular, Neurosciences
- A Multi-Specialty Care Delivery Model
- Relationship with PCMH and UHS; Seeking to Expand Clinical Relationships throughout eastern NC
- Require Regional Expansion to Serve Student Growth
- Historic Source of Extramural Funding (Research); Expectation to Grow Research
- Future Faculty Development will Likely Require Research Expansion

# East Carolina University \\\ Comprehensive Facilities Master Plan

## ECU Ambulatory Service Areas

### Service Area by Zip Code

- Primary Service Area (PSA)
- Secondary Service Area (SSA)
- Tertiary Service Area (TSA)
- Extended Service Area (ESA)

Service Area	Visits FY 07-09 Average	
	% Distribution	Cumulative %
Primary Service Area (PSA)	52%	--
Secondary Service Area (SSA)	24%	76%
Tertiary Service Area (TSA)	14%	90%
Extended Service Area (ESA)	5%	95%
Other North Carolina	4%	99%
<b>Subtotal North Carolina</b>	<b>99%</b>	<b>--</b>
Out of State	1%	100%
<b>Total</b>	<b>100%</b>	<b>--</b>



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## Health Sciences

## ECU - Service Area Population

### OBSERVATIONS

- Expected Population Growth in Primary Service Area at 50% of last 10 years.
- Minimal Expected Population Growth in Secondary and Tertiary Service Area.
- Robust Total Expected Population in the State.

Service Area	2000			2000 - 2009		2009 - 2014	
	2000	2009	2014	Change	% Change	Change	% Change
<b>Primary Service Area (PSA)</b>	151,469	173,533	185,981	22,064	14.57%	12,448	7.17%
<b>Secondary Service Area (SSA)</b>	409,084	418,505	422,077	9,421	2.30%	3,572	0.85%
<b>Tertiary Service Area (TSA)</b>	374,456	394,144	401,550	19,688	5.26%	7,406	1.88%
<b>Extended Service Area (ESA)</b>	207,430	226,972	236,034	19,542	9.42%	9,062	3.99%
<b>Sub-Total</b>	<b>1,142,439</b>	<b>1,213,154</b>	<b>1,245,642</b>	<b>70,715</b>	<b>6.19%</b>	<b>32,488</b>	<b>2.68%</b>
<b>TOTAL - North Carolina</b>	<b>8,049,313</b>	<b>9,370,242</b>	<b>10,132,240</b>	<b>1,320,929</b>	<b>16.41%</b>	<b>761,998</b>	<b>8.13%</b>

Source: ESRI Business Solutions Data



# East Carolina University \ Comprehensive Facilities Master Plan

## OBSERVATIONS

- 52% of Patient Volume from 13 Zip Codes
- 34% of Patient Volume from 8 Zip Codes.

### Primary Service Area (PSA)

Zip Code	Total Clinic Visits / Arrivals				Based on Average	
	FY 07	FY 08	FY 09	Average	% Dist.	Cumm. %
27834	78,122	77,265	78,940	78,109	22.86%	22.86%
27858	36,694	38,172	39,627	38,164	11.17%	34.03%
28590	21,154	21,947	21,184	21,428	6.27%	40.31%
27889	14,467	13,197	12,549	13,404	3.92%	44.23%
28513	12,102	12,077	11,507	11,895	3.48%	47.71%
27828	7,809	7,981	8,228	8,006	2.34%	50.06%
28530	6,295	6,331	6,695	6,440	1.89%	51.94%
<b>Sub-Total</b>	<b>176,643</b>	<b>176,970</b>	<b>178,730</b>	<b>177,446</b>	<b>51.94%</b>	<b>51.94%</b>

27834 Includes PO Zip Codes: 27834, 27835, 27833, 27811, and 27827

27858 Includes PO Zip Codes: 27858, 27879, and 27836

## Health Sciences

# East Carolina University \ Comprehensive Facilities Master Plan

## OBSERVATIONS

- Additional 24% of Patient Volume from 24 Zip Codes

### Secondary Service Area (SSA)

28501 Includes PO Zip Codes: 28501 and 28502  
 28504 Includes PO Zip Codes: 28504 and 28503  
 27871 Includes PO Zip Codes: 27871 and 27861  
 27801 Includes PO Zip Codes: 27801 and 27802

Zip Code	Total Clinic Visits / Arrivals				Based on Average	
	FY 07	FY 08	FY 09	Average	% Dist.	Cumm. %
28501	6,209	6,093	6,681	6,328	1.85%	53.79%
27812	6,402	6,010	6,224	6,212	1.82%	55.61%
27837	6,549	5,823	5,856	6,076	1.78%	57.39%
27892	5,957	5,963	6,259	6,060	1.77%	59.16%
27886	5,702	5,427	6,291	5,807	1.70%	60.86%
27893	6,036	5,071	5,563	5,557	1.63%	62.49%
28580	4,495	4,591	5,121	4,736	1.39%	63.88%
28504	4,566	4,275	4,612	4,484	1.31%	65.19%
27871	4,293	4,179	4,583	4,352	1.27%	66.46%
27530	4,376	4,209	4,303	4,296	1.26%	67.72%
27817	4,095	3,741	3,909	3,915	1.15%	68.86%
27534	3,589	3,496	3,873	3,653	1.07%	69.93%
28560	2,798	2,628	3,001	2,809	0.82%	70.76%
27983	2,889	2,437	3,099	2,808	0.82%	71.58%
28562	2,526	2,765	2,919	2,737	0.80%	72.38%
27801	2,659	2,493	2,928	2,693	0.79%	73.17%
28551	2,600	2,285	2,312	2,399	0.70%	73.87%
28540	2,302	2,278	2,455	2,345	0.69%	74.56%
28586	2,322	2,294	2,340	2,319	0.68%	75.23%
27932	2,443	2,239	2,173	2,285	0.67%	75.90%
<b>Sub-Total</b>	<b>82,808</b>	<b>78,297</b>	<b>84,502</b>	<b>81,871</b>	<b>23.97%</b>	<b>75.90%</b>

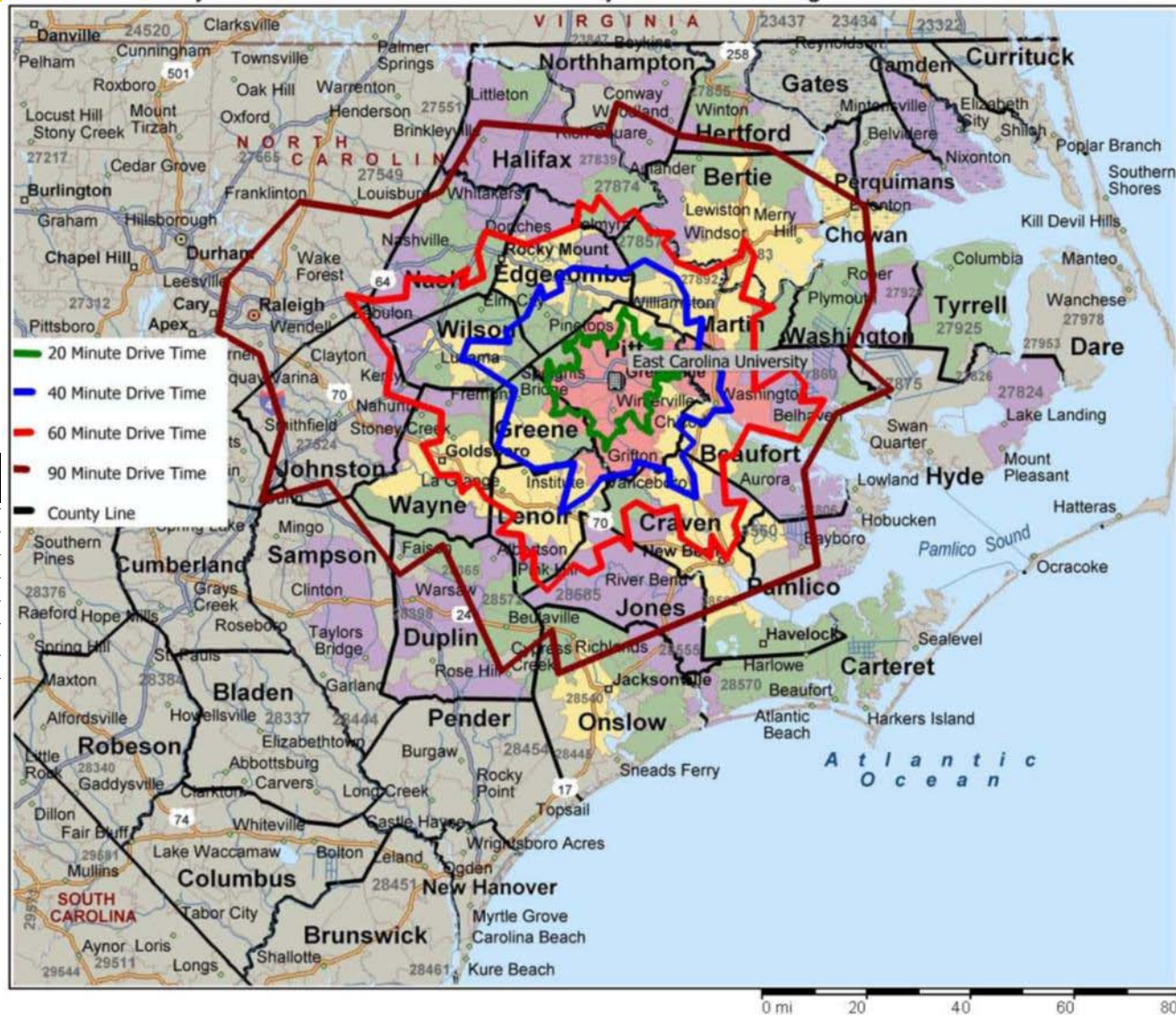
**Health Sciences**

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## ECU Ambulatory Service Areas - Drive Times

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Visits FY 07-09 Average

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<b>Total</b>	<b>100%</b>	<b>--</b>

Health Sciences

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# East Carolina University \\\ Comprehensive Facilities Master Plan

UNIVERSITY HEALTH SYSTEMS	Complex Beds	Discharges	Location
Pitt County Memorial Hospital	745	34,923	Greenville, NC 27835
Heritage Hospital	117	4,002	Tarboro, NC 27886
Roanoke-Chowan Hospital	112	3,922	Ahoskie, NC 27910
Duplin General Hospital	89	2,788	Kenansville, NC 28349
Chowan Hospital	25	1,902	Edenton, NC 27932
The Outer Banks Hospital	18	1,533	Nags Head, NC 27959
Bertie Memorial Hospital	15	444	Windsor, NC 27983
Albemarle Health	142	7,246	Elizabeth City, NC 27909
<b>SUB-TOTAL</b>	<b>1,263</b>	<b>56,760</b>	

ECU TARGET AFFILIATIONS	Complex Beds	Discharges	Location
Lenoir Memorial Hospital	188	9,348	Kinston, NC 28501
Wilson Medical Center	277	8,786	Wilson, NC 27893
Nash General Hospital	353	14,421	Rocky Mount, NC 27910
Wayne Memorial Hospital	276	14,014	Goldsboro, NC 27534
Halifax Regional MC	144	7,061	Roanoke Rapids, NC 27870
Craven Regional MC	303	15,166	New Bern, NC 28561
Sampson Regional MC	105	3,965	Clinton, NC 28328
Onslow Memorial Hospital	162	8,042	Jacksonville, NC 28541
New Hanover Regional MC	665	30,149	Wilmington, NC 28401
<b>SUB-TOTAL</b>	<b>2,473</b>	<b>110,952</b>	
<b>TOTAL</b>	<b>3,736</b>	<b>167,712</b>	

source: American Hospital Directory accessed 7-28-2009, updated 8-13-2009



## Health Sciences



# East Carolina University \\ Comprehensive Facilities Master Plan

## Target Affiliations (Primary + Secondary Market)

<i>UNIVERSITY HEALTH SYSTEMS</i>	Complex Beds	Discharges	Surgeries	Births	ED Visits	OP Visits	# Employees	Location
<b>Pitt County Memorial Hospital</b>	745	34,923	28,000	5,200	60,400	72,000	5,298	Greenville
<b>Heritage Hospital</b>	117	4,002	1,500	1,000	12,300	14,100	389	Tarboro
<b>Roanoke-Chowan Hospital</b>	112	3,922	3,900	400	12,800	21,700	490	Ahoskie
<b>Duplin General Hospital</b>	89	2,788	900	600	10,600	11,600	305	Kenansville
<b>Chowan Hospital</b>	25	1,902	400	300	1,400	-	391	Edenton
<b>The Outer Banks Hospital</b>	18	1,533	300	300	300	-	204	Nags Head
<b>Bertie Memorial Hospital</b>	15	444	100	-	300	-	102	Windsor
<b>Albemarle Health</b>	142	7,246	8,500	800	12,700	29,200	911	Elizabeth City
<b>SUB-TOTAL</b>	<b>1,263</b>	<b>56,760</b>	<b>43,600</b>	<b>8,600</b>	<b>110,800</b>	<b>148,600</b>	<b>8,090</b>	
<i>ECU TARGET AFFILIATIONS</i>								
<b>Lenoir Memorial Hospital</b>	188	9,348	3,500	700	22,900	24,600	918	Kinston
<b>Wilson Medical Center</b>	277	8,786	6,500	1,000	23,500	38,000	994	Wilson
<b>Nash General Hospital</b>	353	14,421	8,800	1,100	39,600	40,100	1,577	Rocky Mount
<b>Wayne Memorial Hospital</b>	276	14,014	3,200	1,500	30,500	31,800	1,441	Goldsboro
<b>Halifax Regional MC</b>	144	7,061	3,000	600	20,100	20,200	721	Roanoke Rapids
<b>Craven Regional MC</b>	303	15,166	14,500	1,100	30,000	45,600	1,460	New Bern
<b>Sampson Regional MC</b>	105	3,965	3,500	600	20,000	22,100	482	Cinton
<b>Onslow Memorial Hospital</b>	162	8,042	2,600	2,500	23,100	24,300	865	Jacksonville
<b>New Hanover Regional MC</b>	665	30,149	37,000	3,500	64,200	106,000	3,901	Wilmington
<b>SUB-TOTAL</b>	<b>2,473</b>	<b>110,952</b>	<b>82,600</b>	<b>12,600</b>	<b>273,900</b>	<b>352,700</b>	<b>12,359</b>	
<b>TOTAL</b>	<b>3,736</b>	<b>167,712</b>	<b>126,200</b>	<b>21,200</b>	<b>384,700</b>	<b>501,300</b>	<b>20,449</b>	

source: American Hospital Directory accessed 7-28-2009, updated 8-13-2009

## Brody School of Medicine Self-Identified Peer Schools

- Development of Regional Campus's as a Function of Student Body Size and Geographical Location.

### Peer School

	# of Students	Use Regional Campuses?	# of Regional Campuses
Texas Tech Univ SOM	567	Yes	4
Michigan State Univ COM	494	Yes	6
Northeastern Ohio Univ COM	456	No	
Eastern Virginia SOM	440	No	
Florida State Univ COM	416	Yes	6
Wright State Univ SOM	413	No	
Texas A&M Univ COM	348	Yes	4
Univ of South Carolina COM	315	No	
<b>East Carolina - Brody</b>	<b>293</b>	<b>No</b>	
Southern Illinois Univ SOM	291	Yes	2
Univ of Hawaii SOM	254	No	
Marshall Univ SOM	246	No	
Univ of North Dakota SOM	245	No	
Mercer Univ SOM	243	No	
East Tennessee State COM	242	No	
Univ of Nevada SOM	224	No	
Morehouse SOM	216	No	
Univ of South Dakota SOM	210	Yes	4

## Health Sciences

## ECU HEALTH RESEARCH SCIENCE TRENDS

- University goal to increase extramural funding for research, including biomedical programs
- BSOM, Nursing, and Allied Health founded with mission of care provider training; have emphasized clinical skills over research
- Current strengths may advance clinical research, particularly in areas of patient safety and quality of care
- BSOM adding biomedical research-oriented junior faculty
- GME requirement for "scholarly activity," interpreted as involvement in research programs
- Existing facilities are nearly 30 years old, resulting in constraints on flexibility and adaptability
- Where they exist, Core Facilities are distributed throughout faculty labs; partner with UNC and Duke for access to equipment and technicians
- Limited connectivity to collaborators in Biology and Chemistry



## Total Medical Student to Total Staff Ratio

Source: AAMC Accessed 8-13-2009

- Relatively High Faculty Ratio is a Function of the Mentoring Mission within the Curriculum Model of the School.

	TOTAL STUDENTS		
	Total Medical Students	Total Full time Faculty incl Instructors	Ratio of Faculty to Students
Texas A&M	348	914	2.63
South Dakota	210	276	1.31
<b>East Carolina - Brody</b>	<b>293</b>	<b>358</b>	<b>1.22</b>
Michigan State	494	586	1.19
Southern Illinois	291	333	1.14
Hawaii - Burns	254	258	1.02
Texas Tech	567	541	0.95
Morehouse	216	204	0.94
Nevada	224	208	0.93
Marshall - Edwards	246	221	0.90
Mercer	243	216	0.89
South Carolina	315	266	0.84
Wright State - Boonshoft	413	343	0.83
East Tennessee - Quillen	242	195	0.81
Eastern Virginia	440	349	0.79
Northeastern Ohio	456	310	0.68
North Dakota	245	138	0.56
Florida State	416	112	0.27



## M1 + M2 Student to Basic Sciences Staff Ratio

Source: AAMC Accessed 8-13-2009

- 50% Growth in Students = +/- 25 New Basic Sciences Faculty
- Faculty Growth Will be On-Campus

## Health Sciences

STUDENTS - M1 + M2			
M1 + M2 Students	Total Basic Science Faculty	Ratio of Faculty to M1 + M2 Students	
Hawaii - Burns	127	90	0.71
Nevada	112	64	0.57
Southern Illinois	146	81	0.56
Michigan State	247	137	0.55
North Dakota	123	66	0.54
Morehouse	108	51	0.47
<b>East Carolina - Brody</b>	<b>147</b>	<b>69</b>	<b>0.47</b>
East Tennessee - Quillen	121	50	0.41
Texas A&M	174	71	0.41
Marshall - Edwards	123	45	0.37
South Dakota	105	37	0.35
South Carolina	158	54	0.34
Mercer	122	37	0.30
Texas Tech	284	84	0.30
Eastern Virginia	220	50	0.23
Wright State - Boonshoft	207	43	0.21
Florida State	208	41	0.20
Northeastern Ohio	228	41	0.18

## M3 + M4 Student to Clinical Sciences Staff Ratio

Source: AAMC Accessed 8-13-2009

- 50% Growth in Students = +/- 100 New Clinical Sciences Faculty
- Faculty Growth Could be Partially Regional

## Health Sciences

Texas A&M  
 South Dakota  
**East Carolina - Brody**  
 Michigan State  
 Southern Illinois  
 Texas Tech  
 Mercer  
 Wright State - Boonshoft  
 Marshall - Edwards  
 Morehouse  
 Eastern Virginia  
 South Carolina  
 Hawaii - Burns  
 Nevada  
 East Tennessee - Quillen  
 Northeastern Ohio  
 North Dakota  
 Florida State

STUDENTS - M3 +M4		
M3 + M4 Students	Total Clinical Science Faculty	Ratio of Faculty to M3 + M4 Students
174	843	4.84
105	239	2.28
<b>147</b>	<b>289</b>	<b>1.97</b>
247	449	1.82
146	252	1.73
284	457	1.61
122	179	1.47
207	300	1.45
123	176	1.43
108	153	1.42
220	299	1.36
158	212	1.35
127	168	1.32
112	144	1.29
121	145	1.20
228	269	1.18
123	72	0.59
208	71	0.34

# East Carolina University \\\ Comprehensive Facilities Master Plan

## All Visits by Staff Type

	CARDIOVASCULAR SCIENCES	FAMILY MEDICINE	LEO JENKINS CANCER CENTER	MEDICINE	OB/GYN	PEDIATRICS	PHYSICAL THERAPY	PSYCHIATRY	REHABILITATION MEDICINE	SURGERY	Sub-Total	
<b>July 2006 - June 2007</b>												
Physicians	12,290	58,072	14,765	35,932	12,875	21,880		10,214	4,874	18,396	<b>189,298</b>	54.7%
Physicians Extenders	2,737	26,124	2,981	12,049	3,997	1,920		2,798	1,320	370	<b>54,296</b>	15.7%
Clinical Support	7,591	1,363	21,160	10,829	26,884	30,321	1,796	6		2,468	<b>102,418</b>	29.6%
<b>Sub-Total</b>	<b>22,618</b>	<b>85,559</b>	<b>38,906</b>	<b>58,810</b>	<b>43,756</b>	<b>54,121</b>	<b>1,796</b>	<b>13,018</b>	<b>6,194</b>	<b>21,234</b>	<b>346,012</b>	<b>100.0%</b>
<b>July 2007 - June 2008</b>												
Physicians	11,367	48,504	14,894	30,974	12,643	21,432		10,041	4,588	17,191	<b>171,634</b>	51.2%
Physician Extenders	4,117	30,770	3,966	12,061	5,740	1,905		2,247	1,562	261	<b>62,629</b>	18.7%
Clinical Support	6,162	2,082	19,993	9,190	27,229	31,227	1,928	724		2,230	<b>100,765</b>	30.1%
<b>Sub-Total</b>	<b>21,646</b>	<b>81,356</b>	<b>38,853</b>	<b>52,225</b>	<b>45,612</b>	<b>54,564</b>	<b>1,928</b>	<b>13,012</b>	<b>6,150</b>	<b>19,682</b>	<b>335,028</b>	<b>100.0%</b>
<b>July 2008 - March 2009</b>												
Physicians	13,003	47,523	18,315	33,127	12,444	33,041	4	10,745	4,348	22,949	<b>195,499</b>	56.9%
Physicians Extenders	6,948	28,469	1,816	9,336	6,307	3,848		2,968	1,205	527	<b>61,424</b>	17.9%
Clinical Support	7,688	1,243	19,243	9,344	22,947	21,511	2,379	521		2,083	<b>86,957</b>	25.3%
<b>Sub-Total</b>	<b>27,639</b>	<b>77,235</b>	<b>39,373</b>	<b>51,807</b>	<b>41,697</b>	<b>58,400</b>	<b>2,383</b>	<b>14,235</b>	<b>5,553</b>	<b>25,559</b>	<b>343,880</b>	<b>100.0%</b>
<b>July 2008 - March 2009</b>												
Physicians	47.0%	61.5%	46.5%	63.9%	29.8%	56.6%	0.2%	75.5%	78.3%	89.8%	<b>195,499</b>	56.9%
Physicians Extenders	25.1%	36.9%	4.6%	18.0%	15.1%	6.6%	0.0%	20.9%	21.7%	2.1%	<b>61,424</b>	17.9%
Clinical Support	27.8%	1.6%	48.9%	18.0%	55.0%	36.8%	99.8%	3.7%	0.0%	8.1%	<b>86,957</b>	25.3%
<b>Sub-Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>343,880</b>	<b>100.0%</b>

Health Sciences

## Research Grants per Total Faculty

Brody School of Medicine Identified Peers

Source: AAMC Accessed 8-13-2009

Health Sciences

	Total Medical Students	Total Basic Science Faculty (excl. Instructors)	Total Clinical Science Faculty (excl. Instructors)	Research Grants per Total Faculty (excl. Instructors)
Hawaii - Burns	254	75	149	\$ 99,343
Morehouse	216	43	130	\$ 94,448
Nevada	224	58	134	\$ 70,536
North Dakota	245	66	60	\$ 63,851
Eastern Virginia	440	46	268	\$ 45,854
South Dakota	210	34	234	\$ 40,191
Michigan State	494	99	407	\$ 27,894
Wright State - Boonshoft	413	43	288	\$ 26,799
Marshall - Edwards	246	45	164	\$ 24,536
South Carolina	315	45	208	\$ 21,598
East Tennessee - Quillen	242	50	144	\$ 18,047
Florida State	416	30	68	\$ 15,636
Southern Illinois	291	67	236	\$ 11,878
Texas A&M	348	71	810	\$ 10,480
<b>East Carolina - Brody</b>	<b>293</b>	<b>68</b>	<b>272</b>	<b>\$ 9,988</b>
Texas Tech	567	65	399	\$ 7,619
Northeastern Ohio	456	41	252	\$ 5,509
Mercer	243	31	167	\$ 2,747



# East Carolina University \\ Comprehensive Facilities Master Plan

## Arrived Visits by Facility Location

July 2008 - June 2009 (Projected)

	CARDIOVASCULAR SCIENCES	FAMILY MEDICINE	LEO JENKINS CANCER CENTER	MEDICINE	OB/GYN	PEDIATRICS	PHYSICAL THERAPY	PSYCHIATRY	REHABILITATION MEDICINE	SURGERY	Grand Total	
ADULT & PEDIATRIC HEALTH CARE (DP2)						9,268					9,268	2.70%
BERTIE MEMORIAL HOSPITAL										873	873	0.25%
BETHEL FAMILY MEDICINE CENTER		7,003									7,003	2.04%
BRODY OUTPATIENT CENTER				18,060	23,369	489				8,727	50,645	14.73%
DOCTORS PARK 6				5,180							5,180	1.51%
EAST CAROLINA HEART INSTITUTE	25,071					4,123					29,193	8.49%
ECU NEUROSURGICAL & SPINE CTR										4,813	4,813	1.40%
ECU PHYSICIANS NEPHROLOGY				5,024							5,024	1.46%
ECU PLASTIC SURGERY										2,057	2,057	0.60%
ECU PSYCHIATRIC SERVICES								13,896			13,896	4.04%
ECU WOMEN'S PHYSICIANS				417	18,059						18,476	5.37%
FAMILY MEDICINE CENTER		42,327			72						42,399	12.33%
FIRE TOWER OFFICE		22,869					2,379				25,248	7.34%
HEALTH SCIENCES BUILDING							4				4	0.00%
LEO JENKINS CANCER CENTER			39,373	241	197					1,019	40,831	11.87%
MOYE MEDICAL CENTER				22,860						5,177	28,037	8.15%
OUTREACH SERVICES	1,603					273		339		2,836	5,051	1.47%
PAIN MANAGEMENT CENTER									2,027		2,027	0.59%
PCMH OUTPT REHAB CENTER									63		63	0.02%
PCMH REHABILITATION CENTER									197		197	0.06%
PEDIATRIC OUTPATIENT CENTER						36,323					36,323	10.56%
PEDIATRIC SPECIALTY CARE						7,924					7,924	2.30%
PHYSICIANS' QUADRANGLE		4,895									4,895	1.42%
PITT COUNTY MEMORIAL HOSPITAL	965	1								56	1,023	0.30%
REHAB PHYSICIANS CLINIC		140		24					3,267		3,431	1.00%
<b>Grand Total</b>	<b>27,639</b>	<b>77,235</b>	<b>39,373</b>	<b>51,807</b>	<b>41,697</b>	<b>58,400</b>	<b>2,383</b>	<b>14,235</b>	<b>5,553</b>	<b>25,559</b>	<b>343,880</b>	<b>100.00%</b>

Health Sciences

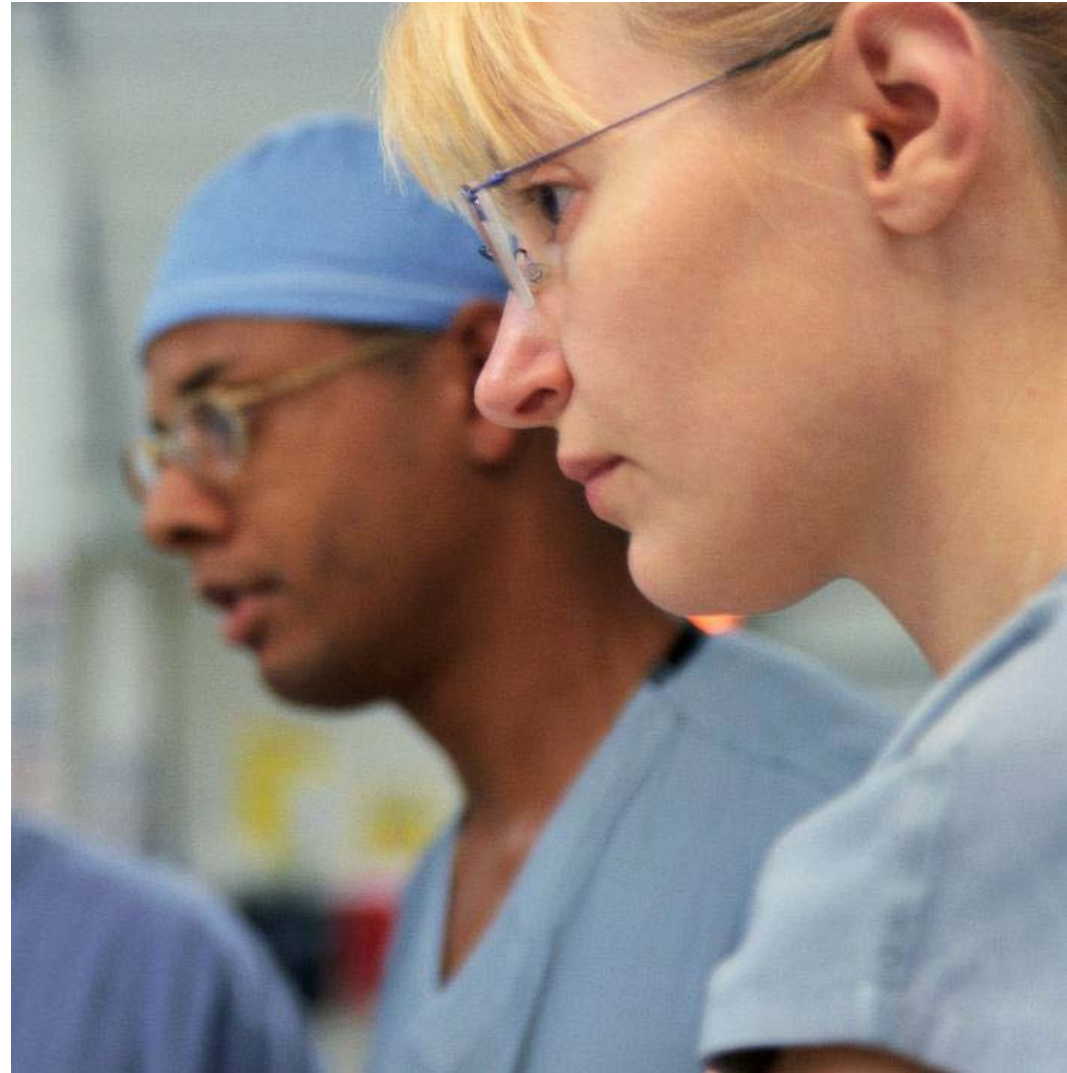
## GENERAL TRENDS

- Genomics, proteomics, and imaging are changing the nature of bio-medical research
- More interdisciplinary inquiry and collaboration required to garner extramural funding
- Thematic alignment of programs and facilities
- Integrate basic science labs, student & faculty space, and clinical activity
- Hybrid building types may accommodate specific Translational themes



## RESEARCH SHOULD ALIGN WITH THE CLINICAL AND PUBLIC HEALTH NEEDS OF THE REGION

- The population of Eastern North Carolina presents a distinct set of health care needs; these needs should guide investment in Basic Science, Clinical, and Public Health research
- Health Science research could be organized thematically around systems or disease states, and be “translational” or integrated with patient care
- Areas of inquiry that might serve the region and attract funding include:
  - Vascular
  - Metabolic
  - Cancer
  - Neuroscience





## EXTRAMURALLY-FUNDED RESEARCH PROGRAMS DEPEND ON HIGH-CALIBER GRADUATE STUDENTS

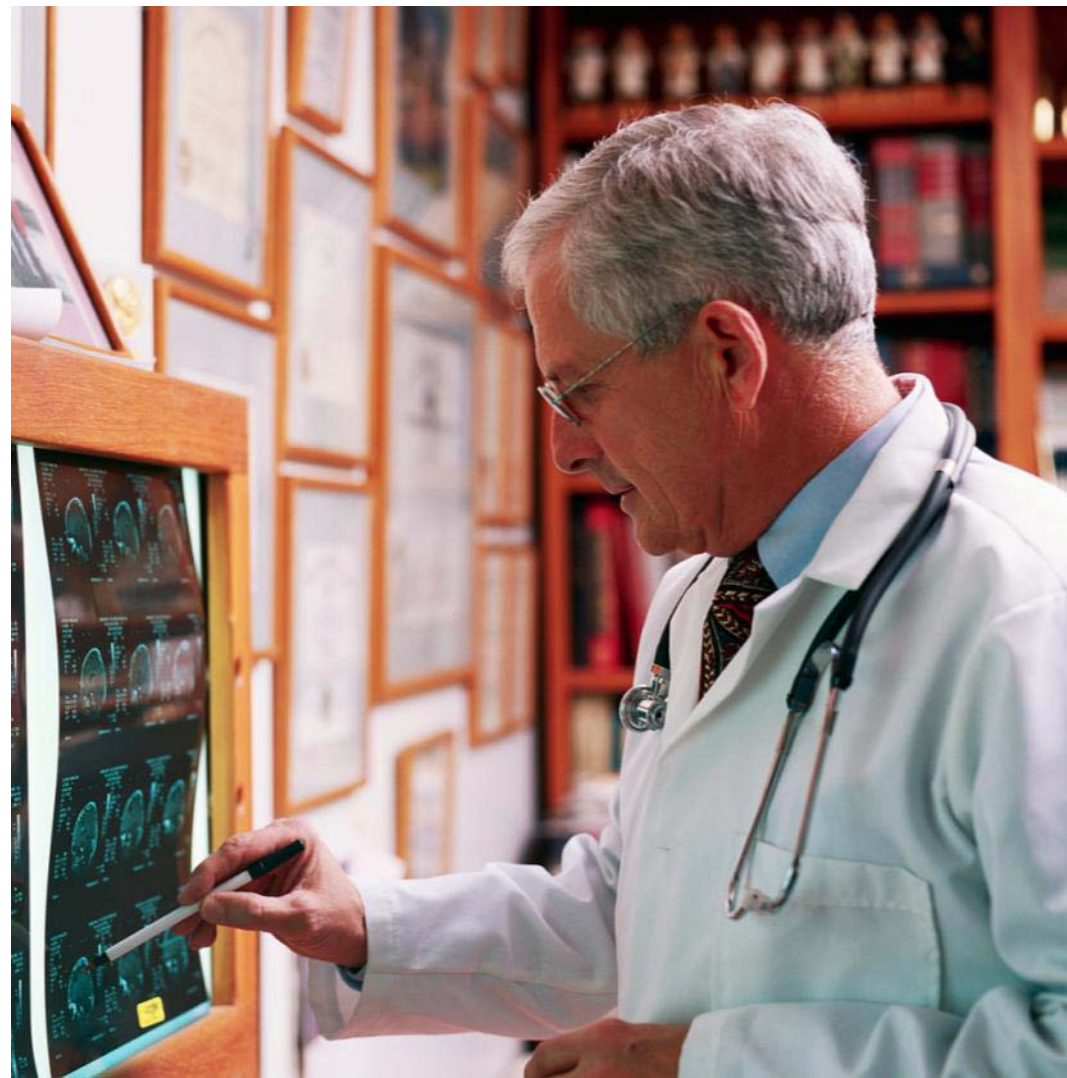
- Health Science PhD students are both the research labor force and a potential source of funding
- Fixed quantity of out-of-state tuition remissions makes out-of-state recruiting difficult and international recruiting nearly impossible
- Current graduate student population is approximately 70% in-state; public research universities typically target 50% in-state enrollment
- Until recently, PhD's were funded through the BSOM; departments now fund students with BSOM funding one additional student for every two receiving departmental support
- Is a single, interdisciplinary Basic Science department possible? Beneficial?
- PhD's in Biology and Chemistry are awarded through BSOM; is this the intersection of East & West Campus?





## PATIENT CARE COMMITMENTS MAY LIMIT CLINICAL FACULTY RESEARCH

- ECU's history of clinician training could provide the context for similarly respected clinical and population research programs
- College of Nursing and BSOM could expand clinical research through strategic recruiting
- ECU Physicians needs to balance patient care and research time commitments to expand the research enterprise
- The electronic medical record is a tool for clinical research, and should be structured to facilitate inquiry
- PCHM and University Health System are key components; the development of clinical observation units may necessary to certain programs



## THE FUTURE IS FLEXIBLE, ADAPTABLE, INTERDISCIPLINARY, & TRANSLATIONAL

- State-of-the-art Biomedical research facilities often play a role in the development of research programs and the recruitment of faculty and graduate students
- The ability to co-locate faculty and graduate students from different departments is essential to interdisciplinary collaboration
- A “tenant” model may be employed in flexible, adaptable environments, where researchers occupy space only for the duration of funding, and the university provides core labs

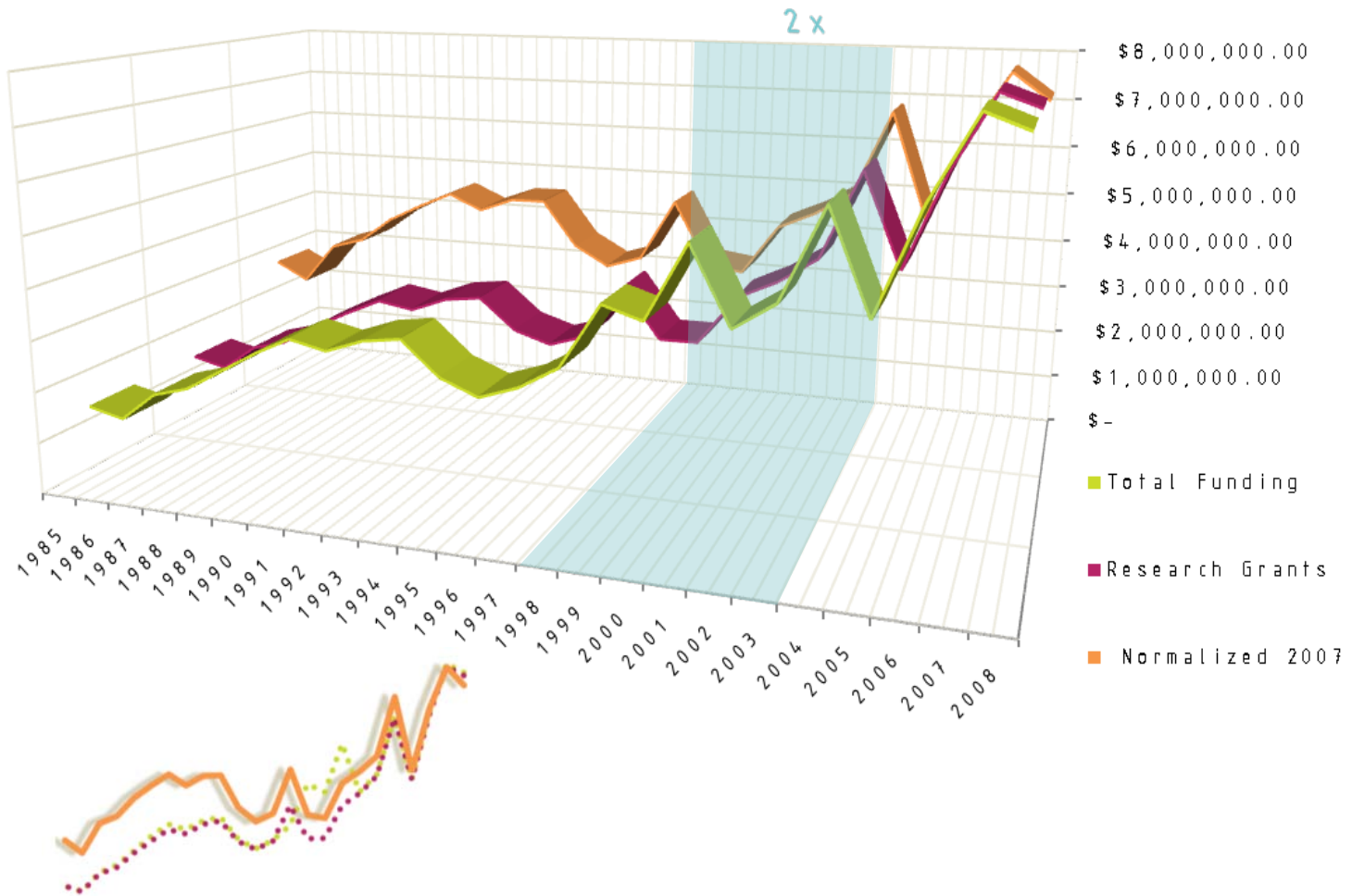


# East Carolina University || Comprehensive Facilities Master Plan

## NIH Research Funding, 1985 - 2008

### OBSERVATIONS

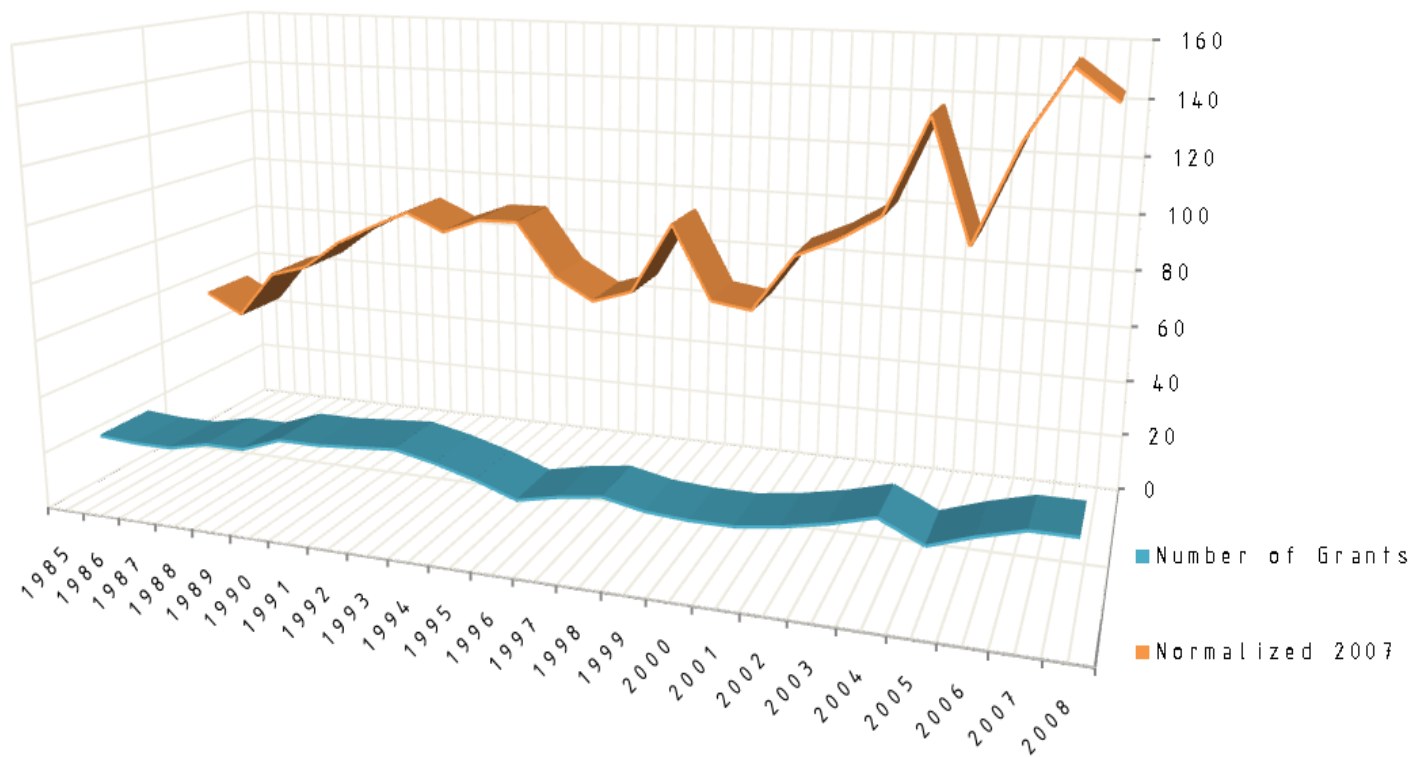
- Since 1985 NIH funding to ECU has been primarily in the form of Research Grants; other sources of funding are fellowships and R&D
- ECU appears to have benefitted from the historic doubling of NIH funding, 1998 – 2003
- The 2004 – 2005 discontinuity results from a change in accounting practices



## Number of NIH Grants, 1985 - 2008

### OBSERVATIONS

- Since 1985, The total number of research grants has ranged between 20 and 30
- The average value of individual grants has increased over time, resulting in opportunities for more research investment and graduate student involvement in faculty projects

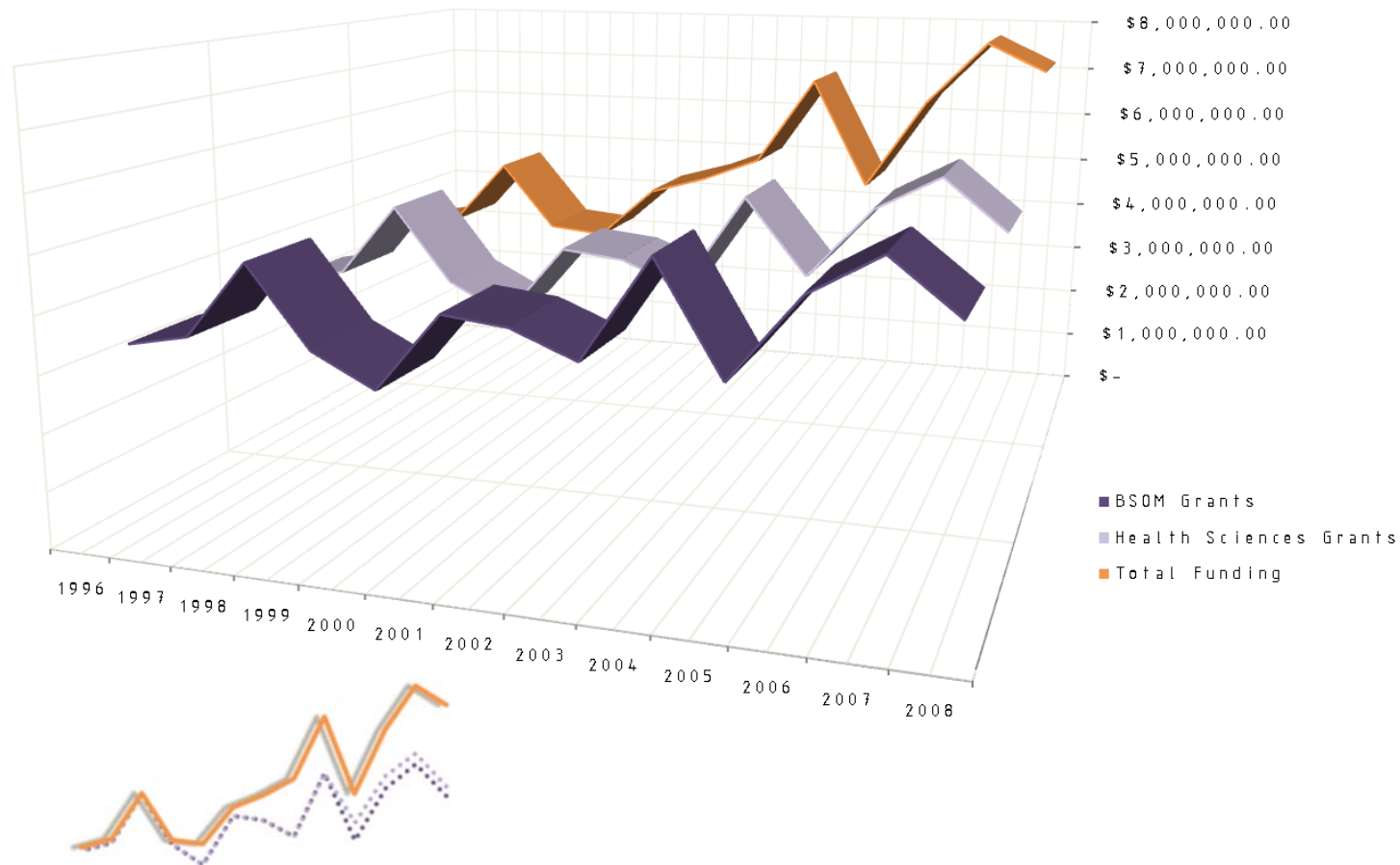




## Health Sciences Grants, 1996 - 2008

### OBSERVATIONS

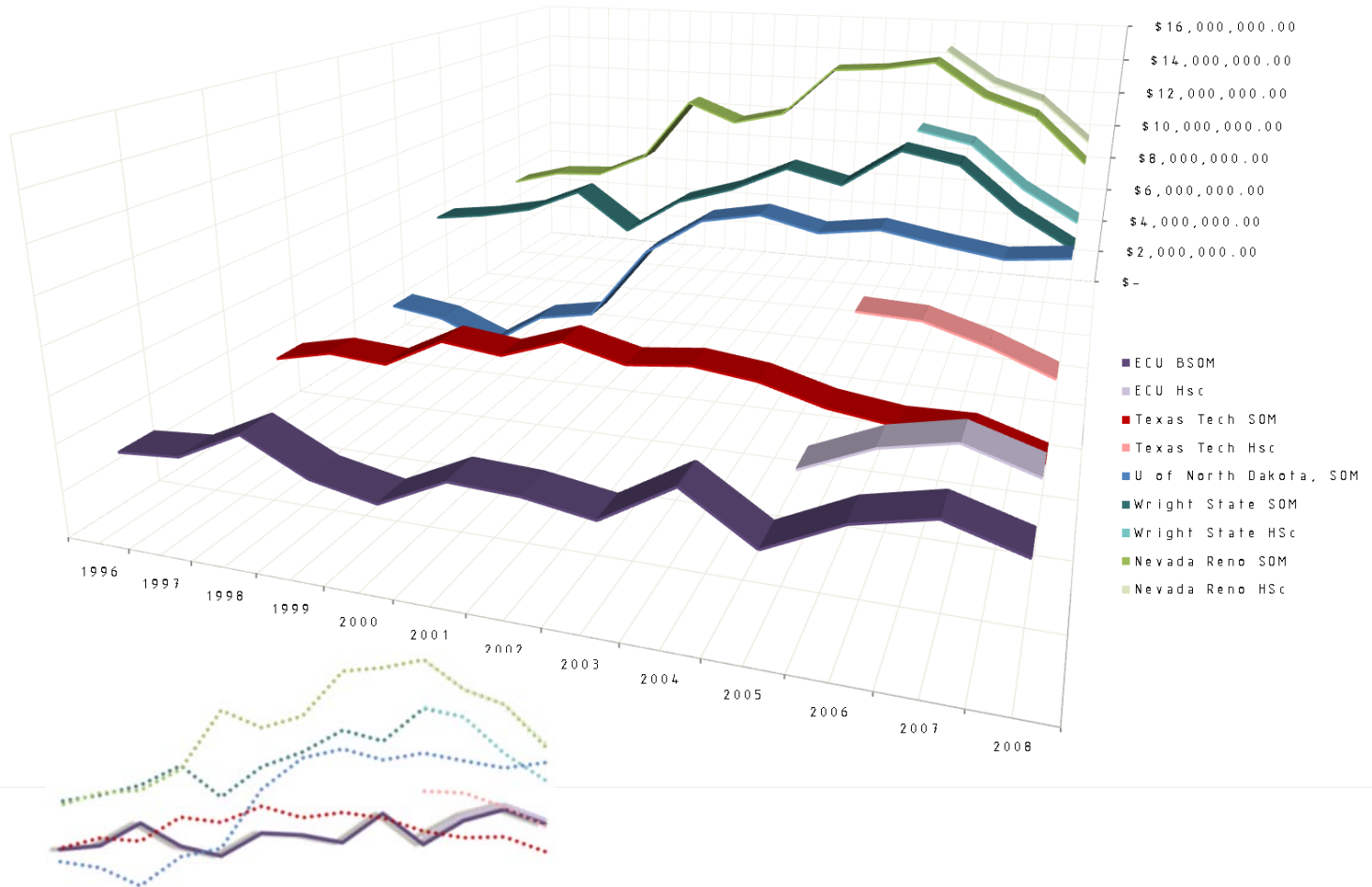
- "Health Sciences " includes Brody School of Medicine, College of Allied Health Professions, and College of Nursing
- Data are not complete for College of Allied Health or Nursing grant funding prior to 2005
- Grants to Health Sciences represent a smaller percentage of total funding over time; approximately 70% in 2008
- From 2005 - 2009 BSOM rec'd \$2m - \$3m of research funding from sources other than NIH



## OBSERVATIONS

- “Health Sciences “ may include:
  - Medicine
  - Allied Health
  - Dentistry
  - Nursing
  - Optometry
  - Pharmacy
  - Public Health
- Peer institutions with similar missions, enrollment and geographic constraints demonstrate a broad range of funding, from \$3m to \$10m
- Most peers show diminished funding with a downward trajectory beginning 2004

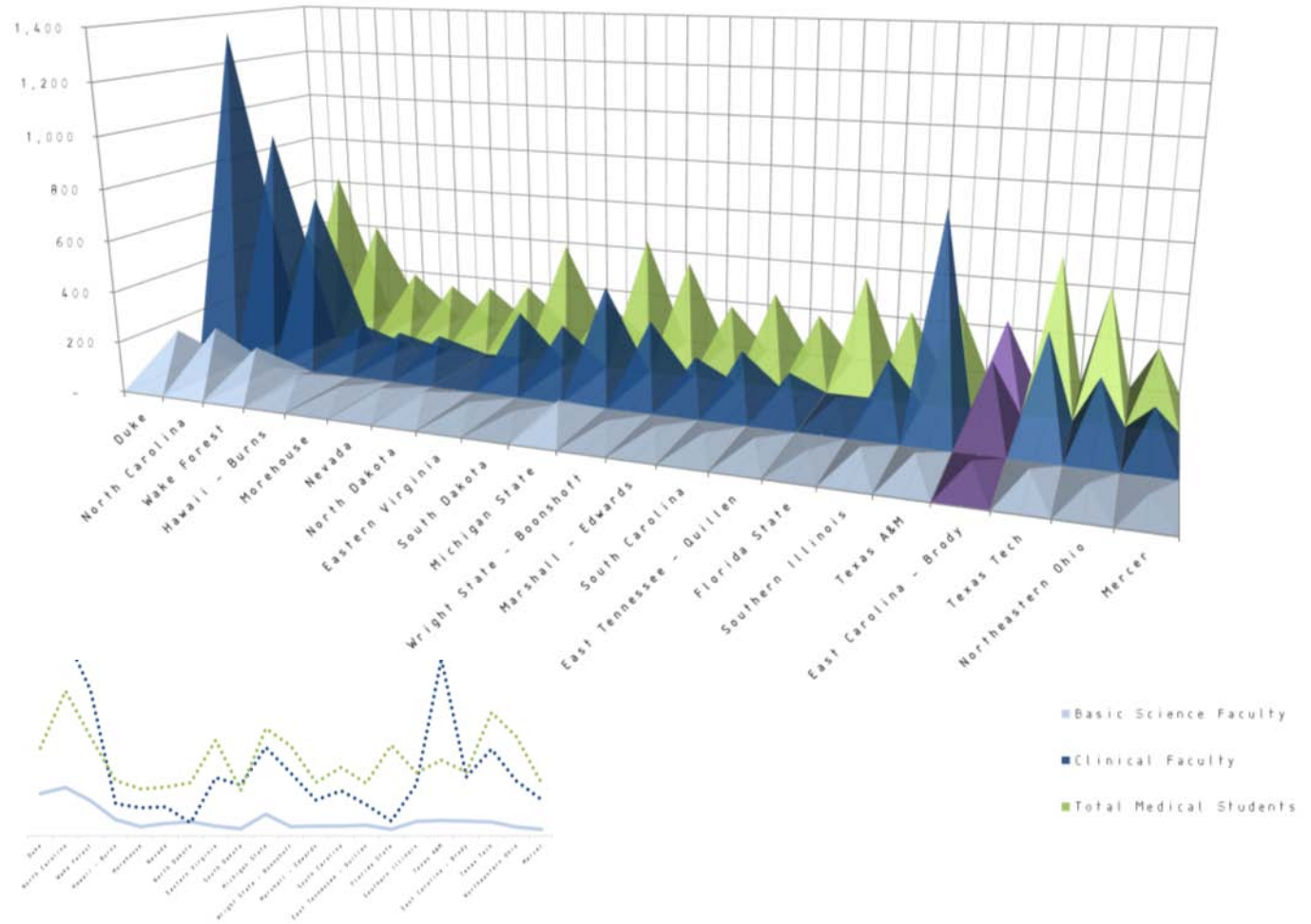
### Peer NIH Grants, 1996 - 2008



## Basic Science & Clinical Faculty

### OBSERVATIONS

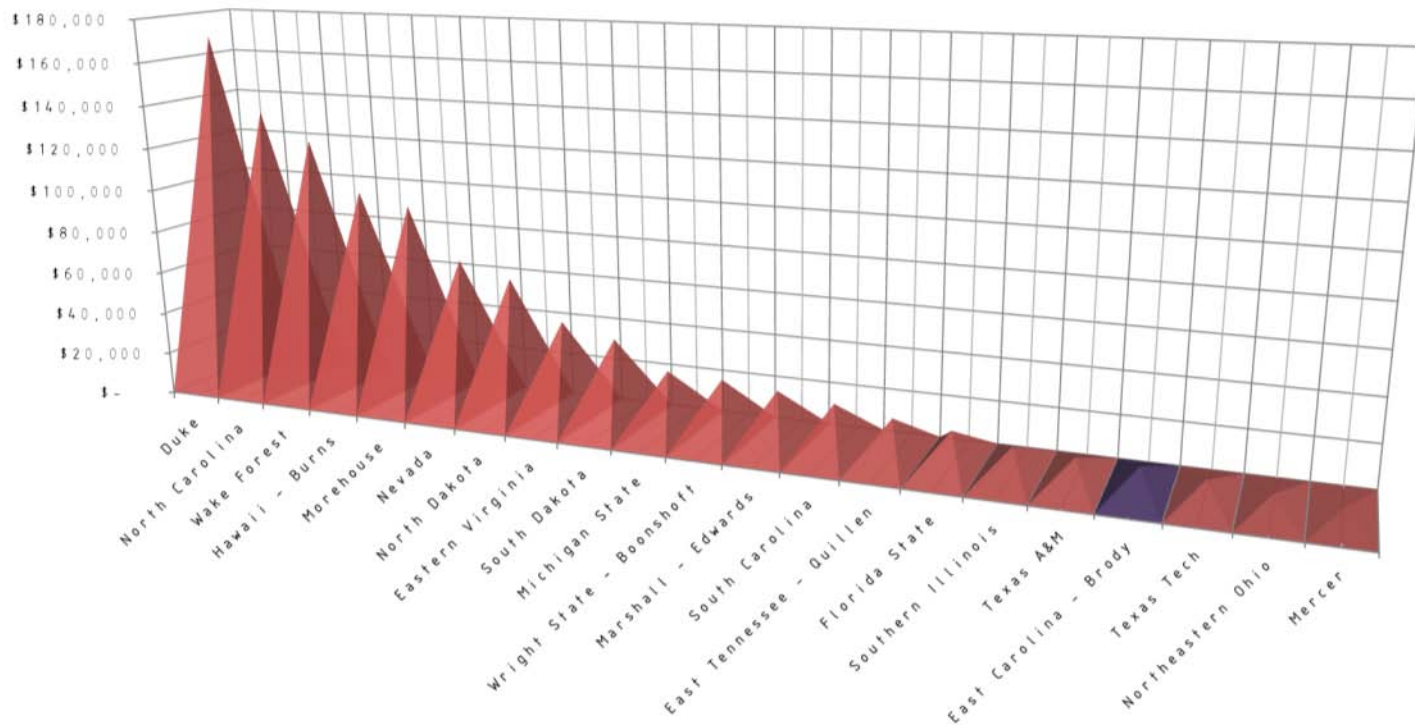
- Size of Basic Science Faculty shows much less variation than Clinical Faculty; number of basic science faculty ranges from 30 to 100



## OBSERVATIONS

- Research productivity in line with other institutions with teaching and training mission; opportunity to mature into a research enterprise

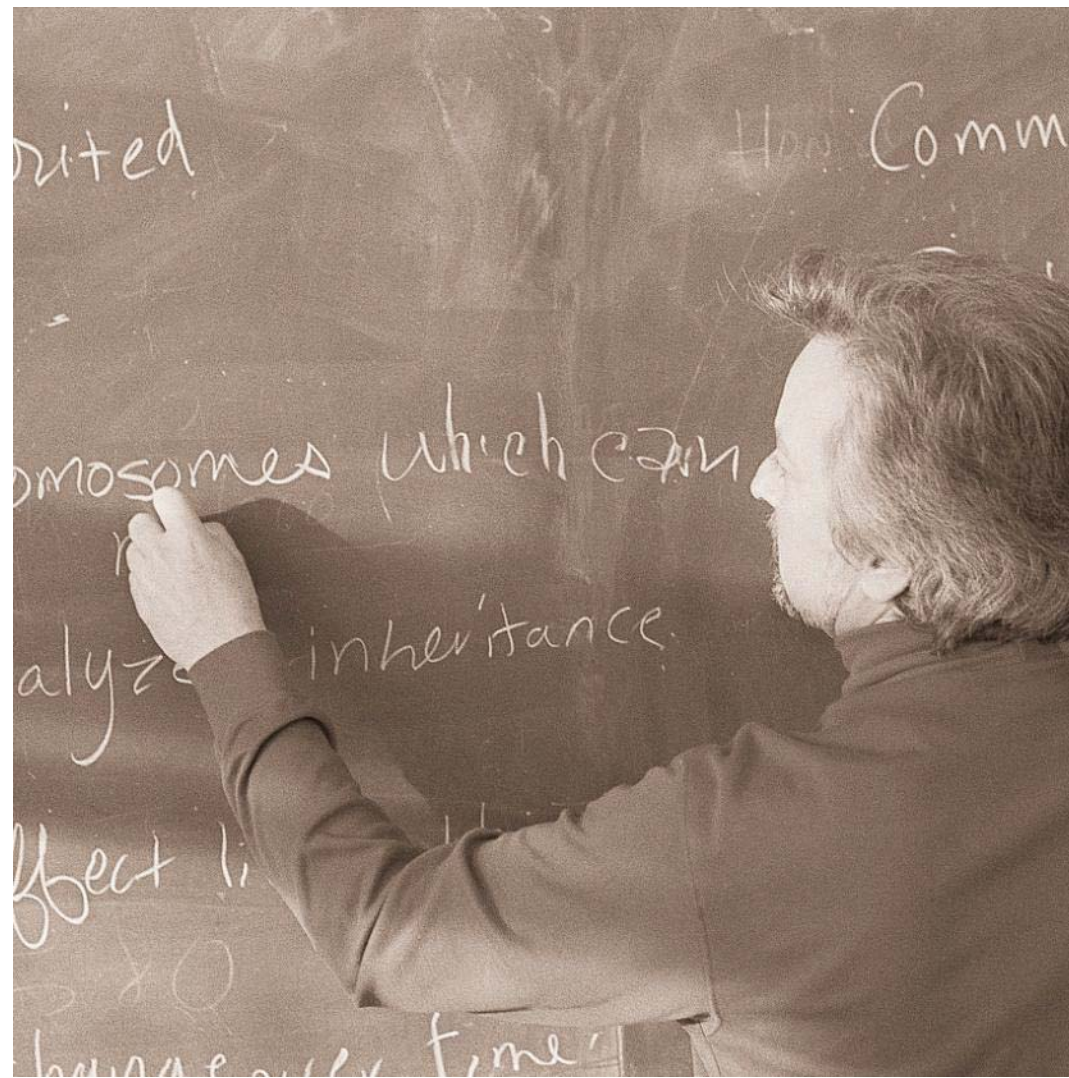
### Research Grants per Faculty Member





## HEALTH SCIENCE EDUCATION TRENDS

- Role-Model-Based instruction:
  - Clinical presentations are the foundation of the curriculum
  - Focus on clinical reasoning pathways
  - Integrated approach to basic and clinical sciences:
    - Graduated
    - Linked to clinical subjects
- Scheduled instruction is spent in small groups and includes case-based learning
- Larger numbers of students in a broader variety of settings:
  - Seminar and larger classrooms
  - Simulation centers
  - Broad array of clinical settings found within the hospital



## CAMPUS ENVIRONMENT

- Consistent desire for student-faculty amenities including:
- Dining
- Bookstore
- Recreation/Wellness
- Financial Aid
- Counseling



## The Following Departments have been Interviewed:

Department of Obstetrics and Gynecology

Department of Pediatrics

Department of Psychiatric Medicine

Department of Physical Medicine & Rehabilitation

Department of Family Medicine

Department of Radiation Oncology

Department of Internal Medicine

Department of Emergency Medicine (TBD)

Department of Cardiovascular Sciences (TBD)

Department of Pathology & Laboratory Medicine

Department of Pharmacology & Toxicology

Department of Physiology

Department of Anatomy & Cell Biology

Department of Biochemistry & Molecular Biology

Department of Microbiology & Immunology

Department of Public Health

Medical Humanities

Planning & Partnerships

Laupus Library

## The Following Colleges / Schools have been Interviewed:

College of Nursing

College of Allied Health Sciences

Brody School of Medicine

School of Dentistry

Health Sciences Center

**Health Sciences**

**SG/JJR**



# Q&A Open Discussion