IMPROVING SPACE UTILIZATION

Administrative Leadership Meeting

May 10, 2011

Warwick Arden
Provost and Executive Vice Chancellor

Charles Leffler
Vice Chancellor of Finance and Business

Terri Lomax
Vice Chancellor for Research and Innovation
View of Campus

Centennial Campus

www.google.com/maps

Administrative Leadership Meeting
Building Space Data
# Building Space Data

<table>
<thead>
<tr>
<th>Floor</th>
<th>3&lt;sup&gt;rd&lt;/sup&gt; Floor</th>
<th>2&lt;sup&gt;nd&lt;/sup&gt; Floor</th>
<th>1&lt;sup&gt;st&lt;/sup&gt; Floor</th>
<th>Basement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof</td>
<td></td>
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Drivers to Improve Space Utilization

• Constrained Resources

• Enrollment Growth / Graduate Program Growth

• Research Growth (Including Interdisciplinary Activities)

• Increased Accountability

• Sustainability Initiatives
Space Planning Process

• University Space Committee
  – Guiding Principles
  – Space Request
  – Local Space Committees

• Space Analysis Updated
  – Every 3 to 4 Years
  – Collaborative Effort
  – Interactive Process
  – Space Standards
Capital Project Plan

- Rolling 6-year Capital Plan
- Capital Projects List informed by College Space Analysis
- Current space deficits, future growth, space condition and university initiatives considered
- Facility Condition Assessment Program
- Appropriated vs Auxiliary Space
Space Standards

- UNC System Standards
  - NC State Specific
- Classifying Space
  - Occupant
  - Higher Ed Coding
- Data as a Tool

“Facilities are built and maintained to create a unified community that is comfortable and aesthetically pleasing and nurtures a fertile exchange of ideas across academic and administrative disciplines.”

A Campus of Neighborhoods and Paths: NC State University Physical Master Plan
Myth:
It’s MY space and I must protect it

• Cultural attitude toward space
• Colleges/Units are stewards of university space
• The most sustainable building is the one not built
Myth: Occupancy = Fully Utilized Space

Often Office and Research space is underutilized due to condition or remote location.
Myth: Utilized = Fully Occupied Space

Space may be occupied and still underutilized.
Myth:
Space is FREE

The cost of space is not just construction. It also includes ongoing operations and maintenance.

## Annual Cost of Space is Significant

### OFFICE & CLASSROOM MAINTENANCE & OPERATING COST

<table>
<thead>
<tr>
<th></th>
<th>Cost (ASF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Office Annual</td>
<td>$2,100</td>
</tr>
<tr>
<td>Mid-Size Classroom</td>
<td>$9,750</td>
</tr>
</tbody>
</table>

### RESEARCH SPACE MAINTENANCE & OPERATING COST

<table>
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<tr>
<th></th>
<th>Cost (ASF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mid-Size Research Lab</td>
<td>$16,200</td>
</tr>
</tbody>
</table>

(Includes utilities and maintenance cost; Excludes deferred maintenance cost)
Myth:
There are not enough classrooms

- Not meeting the UNC-System standard of 35 hours per week

- Factors:
  - Scheduling
  - Classroom Size
  - Technology
110 Classroom Utilization

Average Weekly Room Hours of Instruction in Classrooms

Photograph: L. Moore
210 Teaching Lab Utilization

Average Weekly Room Hours of Instruction in Class Laboratories

Photograph: L. Moore

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Classroom and Teaching Lab Details

TEACHING SPACE:
2000 = 15 ASF per student
2010 = 18 ASF per student

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Student Study Space

Standard:
Study seats per student headcount = 20%

- In 2010 = 6.9%
- With Opening of Hunt Library = 11.8%
- With Modification in DH Hill = 13.3%

Sources: NC State UPA Fall 2010 census enrollment and 2012 projected enrollment; Hill Library Space Backfill Plan, September 21, 2009
Space by Type

General, Support & Health Care
19%

Instruction & Study
18%

Special Use

Office & Research
63%

Office
Research

Housing not shown

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Office Space

- SF of Office Space
  2000 = 168 ASF per Employee
  2010 = 201 ASF per Employee
- Office Space Need is Met
  Currently at 23% above standard
Research Space

- 10% Growth in Research Faculty & Support Staff
- 23% Growth in Research Space
- 132,625 ASF of Research Space used for Service Centers
- Service Center Space impacts F&A Funding
Change in Space by Type

- Classroom: 27%
- Teaching Labs: 52%
- Open Labs: -30%
- Study/Library: 7%
- Office: 39%
- Research: 23%
- Special Use: 26%
- General Use: 34%
- Support: 21%
- Health Care: 110%

Housing not shown

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Enrollment Change by College

Student Enrollment Change:
- Agriculture & Life Science: 29%
- Design: 5%
- Education: 11%
- Engineering: 22%
- Natural Resources: 49%
- Humanities & Social Sciences: 61%
- Physical & Math Sciences: 18%
- Textiles: 22%
- Vet Medicine: 31%
- Management: 31%

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Change in Employees by College

![Bar chart showing the change in employees by college at NC State University from 2000 to 2010. The chart compares the headcount of non-faculty and faculty members across various colleges.](image)
Change in Assignable Space by College

Agricultural & Life Sciences: 9%
Design: 15%
Education: 16%
Engineering: 44%
Natural Resources: 29%
Humanities & Social Sciences: 35%
Physical & Math Sciences: 42%
Textiles: 0%
Vet Medicine: 67%
Management: 5%

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Factors to Improve Space Utilization

- Actionable Data
- Enforceable Space Standards
- Redeploying Space
- Incentives

Types of Incentives

• Award new space to units that are below standard
• Improve space to encourage sharing or shedding
• Penalize units for not meeting utilization targets
• Account for actual space costs at program level

Future Efforts

- Initiate College Space Analysis
- Re-alignment & Strategic Plans influence Space Allocations
- Re-evaluate Research Space Standard
- Connect Grant & Start-Up Packages with Space
- Decrease Lease Space
- Review Rental Rate Structure
- Repurpose Space