

1.0 Purpose

- A. These guidelines define the NC State space standards, which are the basis of all programming documents. The NC State space standards assist in developing the space needs by space type. NC State adopted revised space standards as part of the Physical Master Plan process in 2023.
- B. The program compares the space planning standards with existing inventoried space data and proposed space data. From this comparison, a surplus/deficit can be determined for the selected space categories. All space is evaluated using Assignable Square Footage (ASF).

2.0 Space Standards

A. Classroom Space Standard (110)

- 1. A "110" classroom is defined as a room used for scheduled instruction that requires no special equipment or configuration. It includes general-purpose classrooms, lecture halls, seminar rooms, and other rooms used primarily for scheduled, non-laboratory instruction. Utilization is analyzed at a university level.

- 2. **Space Factor Calculation:** $25 / (35 \times 75\%) = .95$

$$\text{Space Factor} = \frac{\text{Avg Student Station Size [ASF]}}{(\text{Avg Weekly Room Hrs}) \times (\text{Student Occupancy Ratio})}$$

- a) *Average Student Station Size:* Assignable Square Feet (ASF) per student station. Standard is an average across campus of 25 ASF.
- b) *Average Weekly Room Hours:* Total hours of instruction in classrooms divided by the total number of classrooms. Minimum standard of 35 hours.
- c) *Student Occupancy Ratio:* Average percentage of student stations in room being occupied during assigned classes. Minimum standard of 75% filled.

B. Class Laboratory Space Standard (210/215)

1. This standard applies "210" Class Lab and "215" Class Lab Service spaces used primarily for formally scheduled classes that require discipline-specific equipment or room configuration, for student participation, experimentation, observation or practices in an academic discipline. Utilization is analyzed on a college or academic unit level. The below calculation does not apply to College of Design Studio Space.

2. **Space Factor Calculation:**

$$\text{Space Factor} = \frac{\text{Avg Student Station Size [ASF]}}{(\text{Avg Weekly Room Hrs}) \times (\text{Student Occupancy Ratio})}$$

- a) *Average Student Station Size:* Assignable Square Feet (ASF) per student station = varies (see below)
- b) *Average Weekly Room Hours:* Total hours of instruction in classrooms divided by the total number of classrooms. Minimum standard of 24 hours.
- c) *Student Occupancy Ratio:* Average percent of student stations in room being occupied during assigned classes = Minimum standard of 80%.
- d) *Space Factor* = varies (see below)

Category	Examples	ASF/ Station	Space Factor
High Intensity	CALS: BAE, BIT, Biochemistry COE: BME, BTEC, CCEE, CBE, ISE, MAE, MSE, NE COS: Chemistry Wilson College of Textiles Dramatic Arts	80	4.2
Moderate Intensity	CALS: Plant, Animal, and Food Sciences College of Education CNR: all Natural Resources except GIS CHASS: Sociology & Anthropology COS: Biological Sciences, Physics, MEAS College of Veterinary Medicine	60	3.1
Low Intensity	CALS: Social Sciences COE: CSE, ECE, Clean Tech, IES, EOL CNR: GIS CHASS: all except Sociology & Anthropology COS: Mathematics & Statistics Poole College of Management Music	35	1.8

C. Class Lab (210/215) College of Design Studio Standard

1. This standard applies to “210” Class Labs and “215” Class Labs Service space assigned to the College of Design. They are defined as class laboratories/studios and are used primarily for individual or group instruction that is formally scheduled, unscheduled, or open.

2. Design Studio/Class Lab Space Factor Calculation:

$$\text{Total Studio ASF} = \frac{\text{ASF}}{\text{Station}} \times \text{Average Number of Enrolled Students: Studios}$$

- a) $\text{ASF/station} = 100$
- b) $\text{Average Number of Students Enrolled: Studios} = 90\% \times \text{Total College of Design Enrollment.}$
- c) *Example:* Total Studio/Class Lab 13,500 ASF = $100 \times .9(150)$.

3. Design Critique (215 Class Lab Support) Space Factor Calculation:

$$\text{Total Critique/ Class Lab Service ASF} = \frac{\text{ASF}}{\text{Station}} \times \text{Average Number of Enrolled Students: Studios}$$

- a) $\text{ASF per station} = 10$
- b) $\text{Average Number of Students Enrolled: Studio} = 90\% \times \text{Total College of Design Enrollment.}$
- c) *Example:* Total Critique/Class Lab Service 1,350 ASF = $10 \times .9(150)$.
- d) Space will be used as 110 Classroom space when not in use for critiques (typically mornings).

4. Total College of Design Enrollment = Undergraduate Students + Masters Students (excludes PHD Students).

D. Open Lab Standard (220)

1. This standard applies to “220” Open Labs used for discipline-specific activities or self-directed student work; not primarily scheduled instruction. This includes makerspace, student project space, computer labs, and student research wet labs.

2. Space Factor Calculation:

$$\text{Open Lab ASF} = \text{Space Factor} \times \text{Undergraduate Student FTE}$$

- a) $\text{Space Factor for High Intensity} = 5.0$ (CALS, COE, CNR, COS, WCOT, CVM)
- b) $\text{Space Factor for Low Intensity} = 2.5$ (COD, CED, CHASS, PCOM, DASA)

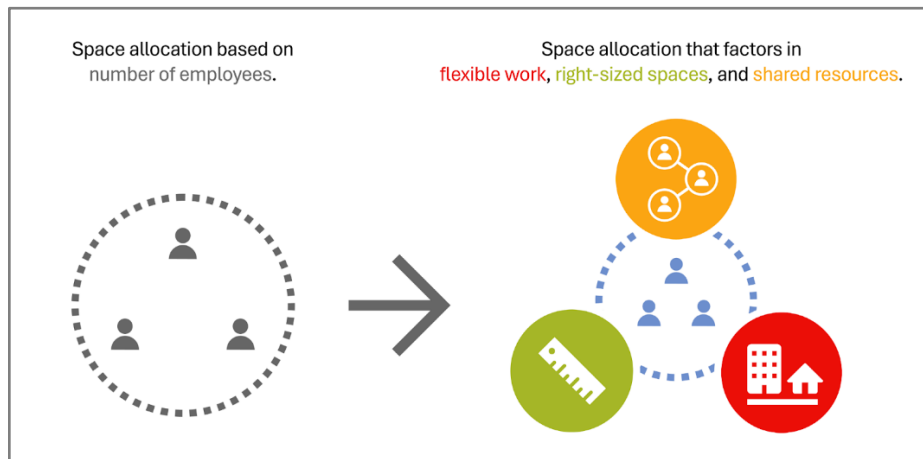
E. NC State Research Laboratory Standard (250/255)

1. The “250” Research Lab and “255” Research Lab Service spaces are defined as rooms primarily used for laboratory experimentation, research or training in research methods; or professional research and observation; or structured creative activity within a specific program.
2. **Research Faculty Calculation:**
 - a) *Research Faculty:* Unduplicated named, tenured, or tenure-track faculty headcount (JCAT 2A or 2B) whose salary includes research funding (110 or 122). Review is based on a historical three-year average.
 - b) Average Assignable Square Feet (ASF) per Research PI (Includes Research Lab, Shared Lab and Equipment/Support Spaces used by faculty, staff, post docs, and students)
 - c) Core Facility of additional 5% research space for colleges with shared research facilities (CALS, COE, CNR, COS, WCOT).

Categories	Per Research PI Team	College
NWI, TPACC, BTEC	Reviewed Separately	WCOT: <i>Nonwovens Institute, Textiles Protection & Comfort Center</i> COE: <i>Biomanufacturing Training & Education Center</i>
Physical Sciences/ Textiles/ Engineering	Avg of 1400 ASF	CALS: <i>Biochemistry</i> COE: <i>CBE, MSE</i> COS: <i>Chemistry, Physics, MEAS</i> WCOT: <i>All Textiles except NWI, TPACC</i>
Life Sciences / Engineering	Avg of 1200 ASF	CALS: <i>Plant, Animal, and Food Sciences</i> COS: <i>Biological Sciences</i> COE: <i>BME, MAE, CCEE, ISE, NE, ECE (split below)</i> College of Natural Resources College of Veterinary Medicine
Psychology / Computer Science	Avg of 400 ASF	CHASS: <i>Psychology</i> COE: <i>Computer Science, ECE (split with Life Science)</i>
Design	Avg of 200 ASF	College of Design
Education	Avg of 80 ASF	College of Education
Computational / Humanities	Avg of 40 ASF	CALS: <i>Social Sciences</i> CHASS: <i>All CHASS except Psychology</i> COS: <i>Mathematics & Statistics</i> Poole College of Management

F. Office Facilities Standards (300s)

1. This category includes spaces that are used for office and office support. This standard applies to all spaces coded as follows: "310" Office; "315" Office Service; "350" Conference Room and "355" Conference Room Service. Other space types (such as specialized storage/support or campus service centers) are not included in this space standard.
2. This standard reflects a shift from allocating space solely based on the number of employees to an allocation that factors in flexible work, right-sized spaces, and shared campus resources. The intent is to create a methodology that is clear, objective and easy to understand, while also acknowledging the diversity of work occurring across campus and the flexibility necessary to plan for each unit's unique needs.



3. Office Space Budget

An Office Space Budget shall be calculated for each unit, based on the following formula:

$$\text{Adjusted Headcount} \times 130 \text{ ASF (Assignable Square Footage)}$$

where Adjusted Headcount is determined by the predominant flexible work arrangements of employees within the unit, as outlined in the chart below.

Flexible Work Arrangement	Adjusted Headcount
4+ days or 32+ hours/week on-site	85 - 100% of total headcount
3 days or 24 hours/week on-site	75% of total headcount
2 days or 16 hours/week or less on-site	50 - 65% of total headcount

- Total headcount includes full-time, part-time, and temporary employees who are on-site the equivalent of at least 8 hours per week and shall also take into account vacant positions that are currently funded.
- Employees with permanent off-site work locations are not included in total headcount. Student workers and interns will be considered on a case-by-case basis.

In the following cases, a unit's Office Space Budget may be increased by up to 25% to account for inefficiencies:

- Small unit sizes (less than ten people).
- Locations in existing buildings with minimal renovation work.

Working in collaboration with Campus Planning and Strategic Investment, units may allocate their Office Space Budget as they see fit to support their work. The following resources provide additional guidance:

- [Office Space Kit-of-Parts](#) – guidelines for spaces that can be utilized within a unit's Office Space Budget (workpoints, collaborative spaces, focus spaces, and office support spaces).
- [Space Planning Tool](#) – calculator to explore possible combinations of the Office Space Kit-of-Parts within an allocated Office Space Budget.

3. **Flex / Growth Space**

Flex / Growth Space shall be calculated per the formula above, based on a unit's projected 5-year increase in headcount. Flex / Growth Spaces are to be centrally located to allow for sharing by multiple units. These spaces will initially serve as overflow space for busy days and can be assigned to specific units when growth occurs.

4. **Neighborhood Shared Spaces**

In addition to the space allocated in their Office Space Budget, units shall have access to Neighborhood Shared Spaces. Neighborhoods are composed of adjacent buildings within easy walking distance of each other.

Wellness rooms, flexible interior gathering spaces, medium conference rooms, large conference rooms, and training rooms shall be planned for and shared at the neighborhood level, using guidelines outlined in the chart below. Planning factors are based on Adjusted Headcount.

Space Type	Size SF	Planning Factor	Architectural Guidelines	Technology/ Management Guidelines
Wellness Room	60	1 per 250 employees, with a minimum of 1 per building	Locate on common corridor, near restrooms Ensure room construction provides acoustic privacy (minimum STC 45) Provide lock with occupancy indicator Provide signage indicating that a reservation is required Provide sink, receptacles for charging devices, dimmable lights, and temperature control Furnish with comfortable seating, work surface, mirror, and wall hooks	Uses include: lactation, prayer, and personal wellness needs Schedule through Google calendar, with room data provided for reference Limit booking duration to a two-hour maximum block of time Provide priority scheduling for employees using the space for lactation Communicate that the room is to only be used for wellness purposes
Flexible Gathering Space <i>(Interior Hearth)</i>	120 minimum	25 ASF per employee for 20% of the adjusted headcount, with a minimum of 1 per building	Locate on common corridor, near meeting spaces and/or main building entries; locate adjacent to individual units' kitchenette spaces when possible to allow for shared use Provide receptacles for charging devices Furnish with comfortable seating and laptop tables and/or tables and chairs Locate vending in or adjacent to this space	Uses include: seating during lunch / breaks, informal meeting space, touchdown work zone, and waiting area before meetings

Space Type	Size SF	Planning Factor	Architectural Guidelines	Technology / Management Guidelines
Medium Conference Room <i>(7-12 people)</i>	250-350	1 per 60 employees	Locate on common corridor (not embedded in a suite)	Schedule through Google calendar, with room data provided for reference
Large Conference Room <i>(13-20 people)</i>	350-500	1 per 100 employees	Provide receptacles at conference table(s) for charging devices Provide window coverings at interior and exterior glazing	Provide digital schedule outside the room to display current and upcoming meetings
Training Room <i>(21+ people)</i>	500-1,000	1 per 200 employees	Furnish with table(s) and chairs that are easy to reconfigure	Coordinate with OIT ClassTech to equip the room with plug-and-play technology that supports video conferencing

G. Study Facilities (400s) – University Libraries Only

1. This standard applies to those rooms assigned to the University Libraries only and have a Program Code 41: Library Services. It includes room use codes: “410” Study rooms, “420” Stack rooms, “430” Open–Stack Study rooms, “440” Processing rooms and “455” Study Services rooms.

2. **Study Space Factor Calculation**

- a) *Space Factor* = “410” Study Rooms + 50% of “430” Open Stack Room space
- b) Study Space ASF Standard is 25 ASF per station for (10% of FTE Undergraduate Students + 10% of FTE Graduate Students).

3. **Stack Space Factor Calculation**

- a) *Space Factor* = “420” Stack Space + 50% of “430” Open Stack Study Room space.
- b) Stack Space ASF Standard is .08 ASF per (# of Volumes by category) / (Adjustment Factor)

of Volumes =

Category	Adjustment Factor *
Books	1
Microforms	80
AV Material	5
CartoMaterials	8
Govt Materials	8
Graphic Materials	8
Mach Read	8
Other Materials	8
Serial Sub.	8

** Category is divided by Adjustment Factor*

4. **Service Space**

- a) This category includes “440” Processing Room and “455” Study Service Space.
- b) Service Space ASF Standard is 15% of (Study Space ASF + Stack Space ASF).