

Notes from:

Abramson, Paul and Burnap, Edward A. *Space Planning for Institutions of Higher Education*. Scottsdale, Arizona; Council of Educational Facility Planners International (CEFPI), 2006.

Facilities master planning

- Identifies needs, recommends course of action for 10-year planning cycle.
- Capital projects in priority order
- Uses space planning guidelines

Programming

- Identifies specific requirements for projects
 - List of spaces required: number of each type, capacity, square feet
 - Design criteria for project: room specifications, spatial relationships, other requirements
- Uses programming guidelines
 - Station sizes
 - Amount of space required to accommodate required number of seats

SPACE PLANNING GUIDELINES

- Used in master plan to calculate amount of space required for specific functions.
- Used to compare existing facilities with need by calculating number of seats required.

Glossary of Terms

Assignable square feet (ASF): Can be square feet within room walls, or square feet to accommodate one person, including circulation, teaching station, service.

Room Use Codes: defined by *Facilities Inventory and Classification Manual (FICM)*.

Space utilization has two components:

Room Use: number of hours in use, or percentage of hours available

Station Occupancy Rate (SOR): percentage seats occupied during schedule classes.

$SOR = [WSCH / (\text{no. seats} \times \text{no. hours available})] \times 100$

People can be counted by Fulltime Equivalent (FTE) or Weekly Student Contact Hours (WSCH).

Process for Applying Space Planning Guidelines

Each of these steps requires extensive effort from staff and consultants.

1. Conduct room inventory in ASF. (FICM procedure) List each space, ASF, room use code, function, capacity; summaries by room use code for each building and for entire institution.
2. Collect data. WSCH, FTE student, faculty, staff
3. Establish space factors. ASF per WSCH or per FTE.
4. Calculate gross need for space.
5. Identify surplus or excess. May be modified by analysis of quality of existing space or by decision to change use of an existing building.

Recommendations

General formula: $ASF = (\text{space factor}) \times (\text{fall scheduled WSCH})$

Recommendations for school with > 10,000 FTE, based on WSCH, with 45-hour week:

Classroom (110, 115)

ASF: 20. Room use: 31 hours. SOR: 67%. Space factor (ASF/WSCH): 0.96.

Class Laboratory (210, 215) without vocational component

ASF: 60. Room use: 18 hours. SOR: 70%. Space factor (ASF/WSCH): 4.8.

Class Laboratory (210, 215) with vocational component

ASF: 72. Room use: 18 hours. SOR: 70%. Space factor (ASF/WSCH): 5.7

PROGRAMMING GUIDELINES

Space planning

- Uses number of square feet.
- Space Planning Guideline space factors not appropriate in programming new facility, but calculation can be used in two instances.
 - Assess need for seats
 - Use in master plan to assign departments to buildings

Programming

- Uses number of seats.
- Determines actual space needed: number of seats required, appropriate station size
- Classroom capacities required to meet current or projected pedagogies determine number of rooms required.

Station Sizes

- Percentage of WSCHs to be taught in classrooms of varying capacities determined by analyzing the institution's teaching practices.
- Station sizes for varying classroom capacities determined by analyzing the institution's teaching practices.

Station sizes vary by type of room and furniture type. Some examples:

Large lecture halls, >150 seats:

12-18 ASF

General purpose classrooms:

15-20 ASF with moveable chairs

18-24 ASF with moveable tables and chairs

Small classrooms, < 25 seats:

22-27 ASF with moveable tables and chairs

See pages 50-53 for sample calculations.

Sample policy for proportions of room sizes (from example on p. 50-53):

15% of WSCH in rooms averaging 75 seats,

75% of WSCH in rooms averaging 30 seats,

10% of WSCH in seminar rooms averaging 15 seats.

Classroom Utilization

Calculate existing Space Occupancy Rate (SOR) to determine how much classroom space a department needs.

SOR is a percentage: number of hours seats are occupied (WSCH) relative to number of seats (capacity) and number of hours each room is scheduled.

$SOR = [(seat\text{-}hours) / (seats \times hours \text{ scheduled})] \times 100$

Room use norm: 30 hours per week.

Utilization norm: 67%. May be 90-100% when classroom space is in short supply.

Possible Causes of Lower Utilization:

- Scheduling practices
- Mismatch of class size and classroom capacity
- Mismatch between furniture needed and furniture available
- Inappropriate capacities