DoD Space Planning Criteria

Chapter 230: Education and Training
August 7, 2015

Originating Component: Defense Health Agency Facilities Division

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Purpose: This issuance: To provide space planning criteria guidance in support of planning, programming and budgeting for DoD Military Health System (MHS) facilities.

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SECTION 1: PURPOSE AND SCOPE

1.1. PURPOSE AND SCOPE This chapter outlines space planning criteria for services and programs provided in Education and Training within the Military Health System (MHS). Specialty (Cadaveric, Trauma, etc.) Simulation Centers which require special study and authorization for certification (American College of Surgeons) are not covered in this document.

The space planning criteria in this chapter apply to all Military Treatment Facilities (MTFs) and are based on current DoD policies and directives, established and/or anticipated best practices, industry guidelines and standards, and input from DoD Subject Matter Experts (SME) and Defense Health Agency (DHA) Service contacts. As directed by the DHA, these space criteria are primarily workload driven; additional drivers are staffing and mission. Room Codes (RCs) in this document are based on the latest version of DoD's UFC 4-510-01, Appendix B.

SECTION 2: OPERATING RATIONALE AND BASIS OF CRITERIA

2.1. OPERATING RATIONALE AND BASIS OF CRITERIA.

A. Workload projections and planned services / modalities for a specific MHS facility project shall be sought by the planner in order to develop a project based on these Criteria. Healthcare and clinical planners working on military hospitals, medical centers and clinics shall utilize and apply the workload based criteria set forth herein for identified services and modalities to determine space requirements for the project.

B. Space planning criteria have been developed on the basis of an understanding of the activities involved in the functional areas required for Education and Training and its relationship with other services of a medical facility. These criteria are predicated on established and/or anticipated best practice standards, as adapted to provide environments supporting the highest quality health care for Service Members and their dependents.

C. These criteria are subject to modification relative to equipment, Education and Training practice, vendor requirements, and subsequent planning and design.

D. Calculation of the number and in some cases the area (NSF) of rooms is performed in one of the following methods:

1. Directly workload-driven

2. Indirectly workload-driven

3. Mission or Staffing-driven

E. The directly workload-driven rooms are based on workload projections entered in response to the Workload Input Data Statements (IDSs) included in Section 3. The directly workload driven rooms in this chapter is the size of Classrooms and Simulation Labs. There are no indirectly workload-driven rooms in this chapter.

F. The mission / staffing-driven rooms are created based on Boolean ‘yes/no’ or numeric responses to the Mission and Staffing Input Data Statements (IDSs).

G. The Net Square Feet (NSF) and Room Code (RC) for each room in Section 5: Space Planning Criteria of this chapter was provided by or approved by the Defense Health Agency (DHA) Template Board.

SECTION 3: PROGRAM DATA REQUIRED

3.1. INPUT DATA STATEMENTS. Input Data Statements are based on questions about Workload (W), Mission (M), Staffing (S) and Miscellaneous (Misc) information.

1. Is the facility an Ambulatory Surgery? (M)
2. Is the facility a Hospital? (M)
3. Is the facility a Medical Center? (M)
4. What is the total NSF for the MTF? (W)
5. Is a Department Head / Chief Education and Training FTE position authorized? (Misc)
6. Is Sub-Waiting for Education and Training authorized? (Misc)
7. How many Education and Training FTE positions are authorized to have a private office? (Misc)
8. How many Education and Training FTE positions are authorized to have a shared office? (Misc)
9. How many Education and Training FTE positions are authorized to have a cubicle? (Misc)
10. How many Education and Training FTEs will work on peak shift? (Misc)
11. Is a Practical Training Classroom authorized? (Misc)
12. Are Classrooms with writing arm chairs authorized? (Misc)
13. How many Multifunctional Simulation Lab Classrooms are authorized? (Misc)
14. Is a Patient Mock-Up Classroom authorized? (Misc)

SECTION 4: SPACE PLANNING CRITERIA

For calculation of the number of Vending Machine areas, Public Toilets, Communication Closets, and Janitor Closets for this Chapter, please refer to DoD Space Planning Criteria Chapter 610: Common Areas.

4.1. FA1: STAFF AND ADMINISTRATION.

1. **Office, Department Head / Chief Education and Training (OFA04)120 NSF**
   Provide one if a Department Head / Chief Education and Training FTE position is authorized.

2. **Office, NCOIC / LCPO / LPO (OFA04) 120 NSF**
   Provide one for Education and Training.

3. **Sub-waiting (WRC03) 60 NSF**
   Provide one if Sub-Waiting for Education and Training is authorized.

4. **Storage, Training Records (FILE1) 60 NSF**
   Provide one for Education and Training.

5. **Office, Private (OFA04) 120 NSF**
   Provide one per each Education and Training FTE position authorized to have a Private Office.

6. **Office, Shared (OFA05) 120 NSF**
   Provide one for every increment of two Education and Training FTE positions authorized to have a Shared Office.

7. **Cubicle (OFA03) 60 NSF**
   Provide one per each Education and Training FTE position authorized to have a Cubicle.

   These cubicles may be collocated in a shared space as required.

8. **Copy / Office Supply (RPR01) 120 NSF**
   Provide one for Education and Training.

9. **Lounge, Staff (SL001) 120 NSF**
   Minimum NSF if the number of Education and Training FTEs working on peak shift is ten; provide an additional 60 NSF for every increment of five Education and Training FTEs working on peak shift greater than ten; maximum 360 NSF.

10. **Toilet, Staff (TLTU1) 60 NSF**
    Minimum one; provide an additional one for every increment of fifteen Education and Training FTEs working on peak shift greater than fifteen.

4.2. FA2: EDUCATION AND TRAINING (PROVIDERS AND STAFF.

1. **Classroom, Practical Training (CLR08)** **400 NSF**
   Provide one if Practical Training Classrooms is authorized and if the facility is an Ambulatory Surgery or a Hospital or a Medical Center; provide an additional one for every increment of 500,000 NSF in the MTF greater than 500,000.

   This space is provided for general training including ACLS and BLS. Classrooms can be outfitted as Interactive Teaching Media Centers (ITMCs).

2. **Classroom, Writing Arm Chairs (CLR02)** **400 NSF**
   Provide one if classrooms with writing arm chairs is authorized and if the facility is an Ambulatory Surgery or a Hospital; provide an additional one for every increment of 500,000 NSF in the MTF greater than 500,000 NSF.

3. **Classroom, Table with Chairs (CLR01)** **600 NSF**
   Provide one if classrooms with table with chairs is authorized and if the facility is a Medical Center; provide an additional one for every increment of 500,000 NSF in the MTF greater than 500,000 NSF.

4. **Cubicle, Computer Station (CLSC2)** **30 NSF**
   Provide two for Education and Training.

5. **Medical Reference (LIBV1)** **120 NSF**
   Provide one for Education and Training.

6. **Classroom, Patient Mock-up (CLR04)** **360 NSF**
   Minimum one if a Patient Mock-up Classroom is authorized; provide an additional one if the total NSF of the MTF is greater than 500,000 NSF and if the facility is a Medical Center or a Hospital.

   Minimum NSF accommodates two patient beds for use in staff training.

7. **Simulation Control Room (CLR06)** **120 NSF**
   Provide one per each Multifunctional Simulation Lab Classroom authorized if the facility is a Hospital or a Medical Center.

   This room is used for controlling the simulation occurring in the Simulation Lab Classroom and to provide an area for observation of the simulation.

8. **Classroom, Multi-functional Simulation Lab (CLR07)** **400 NSF**
   Provide one per each Multifunctional Simulation Lab Classroom authorized if the facility is a Hospital or a Medical Center.

9. **Simulation Debriefing Room (OFDC2)** **120 NSF**
   Provide one per each Multifunctional Simulation Lab Classroom authorized if the facility is a Hospital or a Medical Center.

10. **Storage, Simulation Equipment (SRE01)** **120 NSF**
    Minimum NSF if a Multifunctional Simulation Lab Classroom is authorized; provide an additional 120 NSF per each Multifunctional Simulation Lab Classroom authorized greater than one.

11. **Storage, General (SRSE1)** **270 NSF**
    Minimum NSF; provide an additional 90 NSF per each Classroom, of all types, greater than three.

12. **Toilet, Male (TLTM1)** **60 NSF**
    Provide one per each classroom, of any type, authorized.

    Toilets can be planned in single occupancy or multi-stall configurations. If the multi-stall is utilized, ensure a proportion of fixtures are urinals.

13. **Toilet, Female (TLTF1)** **60 NSF**
    Provide one per each classroom, of any type, authorized.

    Toilets can be planned in single occupancy or multi-stall configurations

14. **Lockers, Personal Property (LR001)** **30 NSF**
    Minimum NSF if a classroom, of any type, is authorized; provide an additional 30 NSF for every increment of three Classrooms, of all types, greater than three.

SECTION 5: PLANNING AND DESIGN CONSIDERATIONS

The following design considerations are intended to provide planners and designers with guidance on world-class and evidence-based design strategies for new healthcare facilities and renovation of existing ones. Please refer to the World Class Checklist (https://facilities.health.mil/home/).

A. The net-to-department gross factor (NTDG) for Education and Training is 1.35. This number when multiplied by the programmed net square foot (NSF) area determines the departmental gross square feet. This factor accounts for the space occupied by internal department circulation and interior partitions and other construction elements not defined by the net square foot area. Refer to UFC 4-510-01, Section 2-3.4.2.2 and DoD Space Planning Criteria Chapter 130: Net to Gross Conversion Factors.

B. The DoD provides various types of education and training including training for Clinical and Non-clinical staff. Clinical staff include patient care providers and non-providers. Non-clinical staff includes staff from the support functions of the MTF. Training includes continuing education, training for new hires, and training for certification maintenance.

C. Collaborative Learning / Training may be used as a method for education and training. This method uses technology to allow both facilitators and learners to become active participants in the educational process. Knowledge is developed by the group, not transferred from teacher to student. The hierarchy between facilitators and learners is eliminated creating a sense of a learning community.

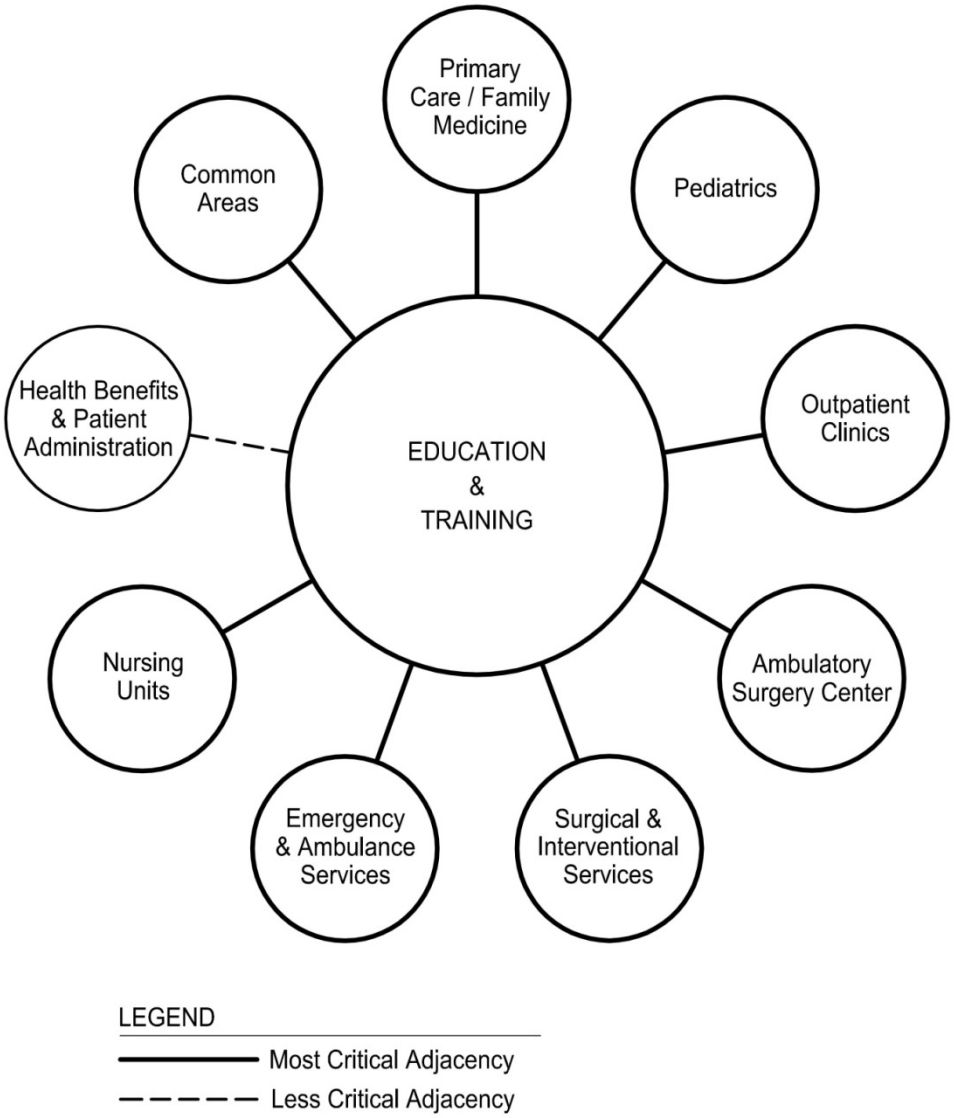
D. Classrooms can be designed to accommodate an Interactive Teaching Media Center allowing instructor-students interaction in real time. It shall have the appropriate connectivity, technology, software, cameras, audio, etc. to allow real-time interaction. Two-way connectivity shall be incorporated, i.e. cameras & microphones in both the classroom and the source room (OR, DTR, Procedure Room, etc.).

E. Consider the locations of columns and other building components when designing classrooms and other group spaces to provide optimal sight lines.

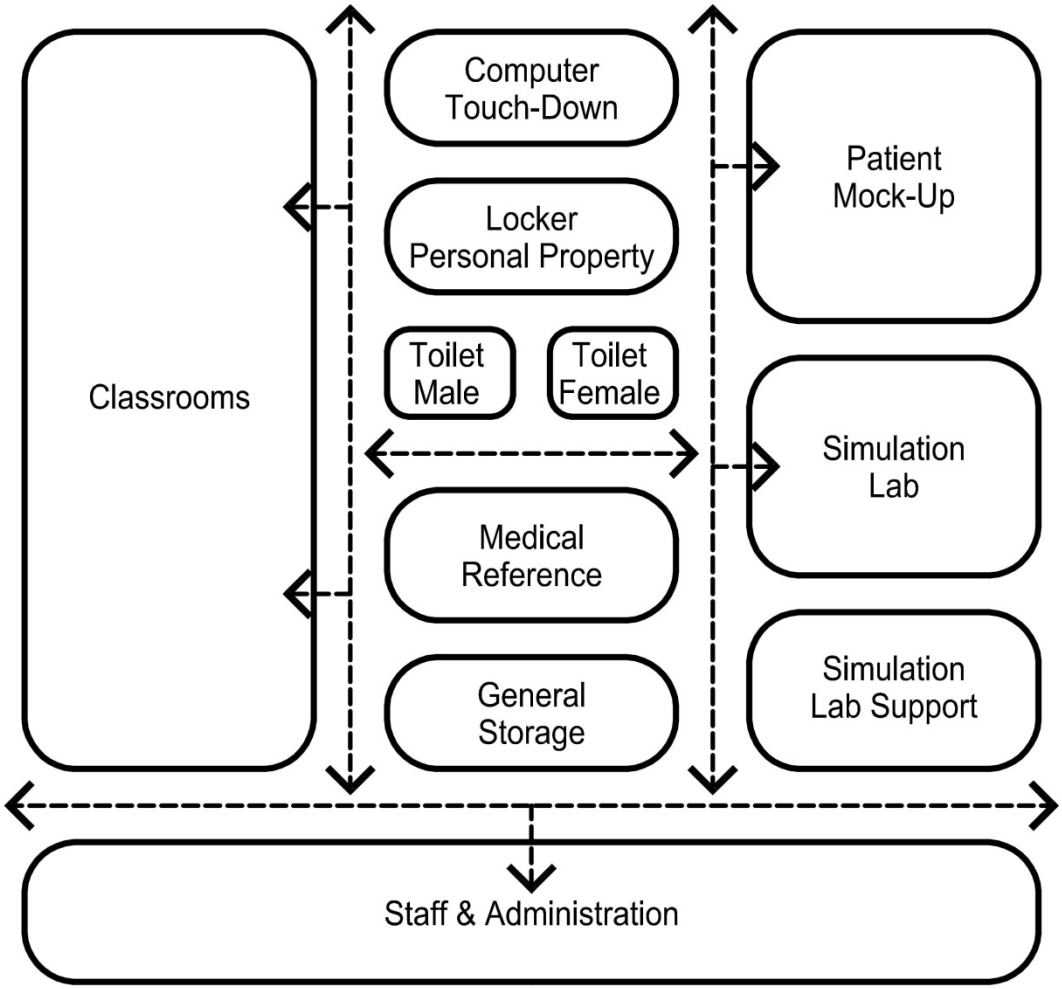
F. Consider combining single use toilets for classrooms to minimize space allocations and utilization.

SECTION 6: FUNCTIONAL RELATIONSHIPS (INTERDEPARTMENTAL)

6.1. FUNCTIONAL RELATIONSHIPS.



SECTION 8: FUNCTIONAL DIAGRAM (INTRADEPARTMENTAL)



LEGEND

Patient Circulation
Staff Circulation

NOTE: Size and shapes of spaces do not reflect actual configuration or square foot area of departments.

GLOSSARY

G.1. DEFINITIONS.

Administrative Personnel: Administrative Personnel are those who do not provide clinical services to patients and include military, contract and civilian personnel. Volunteers are not considered Administrative Personnel.

Authorized: This document uses the term "authorized" to indicate that, during a project's space plan development, a planner shall seek approval from the appropriate official in the chain of command to activate certain spaces or certain groups of spaces. Typical components that may require authorization are certain programs or services that activate Functional Areas (e.g., GME); office spaces (e.g., FTE position); specialized rooms (e.g., Hybrid OR) or other spaces (e.g., On-Call Room). Typically, Mission, Staffing and Miscellaneous Input Data Statements require authorization, while directly and indirectly workload driven rooms / spaces do not.

Cubicle: A cubicle is a partially enclosed workspace, separated from neighboring workspaces by partitions. Managers and other staff with no supervisory responsibilities as well as part-time, seasonal, and job-sharing staff may qualify for a cubicle.

Full-Time Equivalent (FTE): A staffing parameter equal to the amount of time assigned to one full time employee. It may be composed of several part-time employees whose total time commitment equals that of a full-time employee. One FTE equals a 40-hour per week workload. The FTE measure may also be used for specific workload staffing parameters such as a clinical FTE; the amount of time assigned to an employee providing clinical care. For example, a 0.5 clinical FTE for a healthcare worker would indicate that the healthcare worker provides clinical care half of the time during a 40-hour work week.

Functional Area (FA): This area is a grouping of rooms and spaces based on their function within a clinical service. Typical Functional Areas are Reception Area, Patient Area, Support Area, Staff and Administrative Area, and Education Area.

Input Data Statement: A set of questions designed to elicit information about the healthcare project in order to create a Program for Design (PFD) (see definition below); based on the space criteria parameters (refer to Section 4) set forth in this document. Input Data Statements are defined as Mission, Workload, Staffing or Miscellaneous.

Interactive Teaching Media Center (ITMC): A space that incorporates technology to provide a real-time interaction between the teacher and student. An example of the use of ITMC is the Surgical Service. In the past, surgery students observed surgical procedures in a gallery located within the operation room. As an alternative, using ITMC technology, students can be located in a remote facility and have access to direct communication with surgeons who are operating on a patient, in real-time. Expanding on this idea is the possibility for students to observe procedures being performed in other locations outside of the MTF.

Net-to-Department Gross Factor (NTDG): A parameter used to calculate the Department Gross Square Foot (DGSF) area based on the programmed Net Square Foot (NSF) area. Refer to DoD Chapter 130 for the NTDG factors for all Space Planning Criteria chapters.

Office, Private: A single occupancy office provided for confidential communication.

Office, Shared: An office that accommodates two workstations.

Patient Mock-up Room: The Patient Mock-up Room is used to train healthcare providers and other support personnel at a facility in the methods and operations to deliver the desired standard of patient care. This space may be an exact replica of a Patient Room located at the facility and typically includes the associated private bathroom. Utilities, such as plumbing, electrical, and medical gasses are fully functional to provide the staff being trained a realistic training experience.

Program for Design (PFD): A listing of all of the rooms / spaces generated based on answers to the Input Data Statements (see Section 3) and the space planning criteria outlined in this document (Section 4) in SEPS. The list is organized by Functional Area and includes the Room Quantity, Room Code, Room Name, generated Net Square Feet (NSF), Construction Phase and Construction Type.

Project Room Contents (PRC): A listing of the assigned contents (medical equipment, FF&E, etc.) for each room in a PFD generated by SEPS.

Simulation Lab: The Simulation Lab / Classroom is a type of training space that employs technology to create a safe environment where medical professionals can practice patient care prior to treating actual human patients. This is also useful in the training of anatomy and physiology. Some examples of simulation labs may include replicas of an emergency room, ICU bedroom, a labor and delivery room, and/or an exam room. These labs may also accommodate a surgical robot, a trauma room bay, or other medical technologies. Assure adequate storage is provided within proximity to these labs for housing support equipment and supplies.

Space and Equipment Planning System (SEPS): A digital tool developed by the Department of Defense (DoD) and the Department of Veterans Affairs to generate a Program for Design (PFD) and a Project Room Contents list (PRC) for a DoD healthcare project based on approved Space Planning Criteria, the chapter and specific project-related Mission, Workload and Staffing information entered in response to the Program Data Required - Input Data Statements (IDSs).

Workload: Space Planning Criteria per DHA Policy shall be workload driven. Workload projections divided by the throughput determined in this document for each workload driven room determines the quantity of rooms needed to satisfy the projected workload demand.