

NFPA 99-2012

AN UPDATE

DISCLAIMER: This is intended to acquaint biomedical technicians with key elements of the newest version of Health Care Facility Code.

You should have your own copy of the current code to gain full perspective and to read the language it contains. You can order a copy at www.nfpa.org for \$59, less if you're a member.

The older versions of NFPA 99 were occupancy based – the new version is risk based and is organized accordingly. New chapters, new definitions and new procedures are noted throughout and biomedical technicians should be familiar with and be able to implement these changes.

The 2012 version is now being called a “code” vs. a “standard” and that marks a major difference. The second paragraph on P. 99-4 explains the new chapters and their applications.

Major chapters of interest are: 3, 6, 7 and 10. Four annexes (A – D) offer explanatory material, sample ordinances plus informational references.

Note: An asterisk next to a numbered entry shows that additional information is available in an Annex (usually Annex A).

Chapter 3 contains definitions and some have changed and some are new!

Appliance – Direct Electrical Pathway to the Heart –
Double Insulated Appliances – Electrical Life Support Equipment –
Electrode **(3 types)** – Exposed Conductive Surfaces – Fault Current – General
Care Area - Hazard Current – Incident Command System – Intrinsically Safe –
Laboratory - Multiple Treatment Facility – Patient Bed Location – Patient
Care Related Electrical Equipment – Patient Care Room **(4 categories)** -
Patient Care Facility – Patient Lead – Plug – Receptacle – Selected
Receptacles – Touch Current – and finally Wet Procedure Locations.

These are listed alphabetically without referencing their specific numbers to keep things simple. Even though you may be quite Familiar with most of these definitions, some contain changes or are all new!

Chapter 4, although brief, explains building system categories, risk assessment and applications.

Chapter 6 is loaded with information on electrical systems and quite a bit of it is pertinent to biomedical technicians.

On page 99-73 there is a listing under 6.1.2 that covers 14 key sections that are changed or reworded from previous NFPA-99 publications – you should review them all!

Key elements covered in chapter 6 include Personnel Protection, Receptacles Special Grounding, Wet Procedure Locations, Essential Electrical Systems, Ground Fault Protection, Isolated Power Systems, Performance Testing and Criteria, Voltage Measurements, Test Equipment, Isolated Power system tests, Maintenance and Testing of Power Systems and Record Keeping.

The remainder of Chapter 6 deals with Essential Electrical System Requirements which is probably of most interest to plant facilities personnel.

Chapter 10 goes into detail regarding Electrical Equipment and there are MANY changes here. The major emphasis is on Performance Criteria and Testing for Patient Care Related Electrical Appliances and Equipment..

Construction and use of attachment plugs contains information about screw terminals, crimped terminals, strain reliefs, grounding.

Adapters and extension cords along with testing requirements are found here.

Resistance and leakage current testing is covered in detail in section 10.3.2. and 10.3.3. One major change is the change of terminology regarding leakage current, now called “touch current”. The procedure for testing is simplified and a notation that the neutral open tests, often done in the past, are no more!

Lead leakage current testing is greatly simplified and lead to lead leakage is no longer required.

Testing Intervals incorporates notable changes – read it in section 10.5.2.1.

Section 10.5.2.5 is new and deals with interconnected equipment.

Section 10.5.3. deals with Servicing and Maintenance of Equipment and delineates 13 key factors to be considered when servicing equipment.

Annex A contains explanatory information that is NOT required, but rather intended to improve safety. **One change of note is section A.6.3.2.2.8.2(2) Which defines GFCI trip current as 4 to 6 m.A.**

Chapter 7 deals exclusively with Information Technology and Communications Systems for Health Care Facilities and is newly added to the code.

Category 1

Systems include Entrance Facilities, Telecommunication Equipment Rooms and Telecommunication Rooms. (Servers vs. cabling basically.)

Premises distribution systems, both copper and fiber are covered here plus location and power requirements.

Category 2

Systems dealing with data, telecommunications, cable TV, Nurse Call, Patient Call, Emergency Call and Staff Emergency Assistance Calls belong here.

Category 3

Systems related to IT and General Communications are covered here.

Most of this chapter is still "reserved" for future applications