

FTCP



General Technical Base (GTB) Curriculum

National Training Center

Current GTB Consists of 28 Modules

DOE STD 1146 2007 (GTB)

1. Basic nuclear theory
2. Fission process
3. Radiological controls/theory (particles, shielding, dose)
4. Contamination control/theory
5. Radiation detection
6. Radiological controls (limits, access control, signs)
7. Radioactive/hazardous waste
8. Environmental protection, restoration, waste management
9. 29CFR 1910.120 Hazardous waste operations and emergency response
10. Personal/organization liability (environmental laws)
11. ISM
12. Worker Safety and Health
13. OSHA
14. Fire safety
15. Electrical safety
16. Industrial hygiene
17. Conduct of Ops
18. Occurrence Reporting
19. QA
20. Emergency management
21. USQ
22. DSA / TSRs
23. Facility Safety
24. Oversight (226.1)
25. Corporate Operating Experience Program
26. Accident Investigations
27. Central Technical Authority (nuclear safety requirements)
28. Safeguards and Security

Current GTB issues

- Current GTB built with old programs not compatible with NTC development software. Unable to do maintenance.
- No clear link to overall picture of DOE and modules do not flow in a logical sequence throughout the curriculum.
- Non-TQP participants must complete all modules for credit even though they may only need specific modules.
- Modules are in need of Maintenance based on Administrative Changes made to the FAQ in 2015.
- Safeguards and Security GTB is a completely separate course of mostly the same material. Creates maintenance problems for two courses.



Proposed Revision for the GTB & Crosswalk to Current Modules

Revised GTB

- Divide up the 28 current modules into 9 major categories.
- Align and fix flow issues between modules and allow modules to be taken stand-alone or as a complete FAQ.
- Link existing eLearning fundamentals courses for appropriate topics.
- Add a DOE Orientation module to tie modules together and provide broader context to the learner.
- DOE Orientation module will also provide instructions for students in TQP and those who are not in the TQP that may only be taking select modules.



1) DOE Orientation
(New) History of DOE
(New) DOE Divisions, Departments, Locations / DOE Oversight & Contractor Relation
(New) Policy, Orders, Guides, etc.
(New) GTB Requirements / Map

2) Nuclear Fundamentals
1. Basic Nuclear Theory
2. Fission Process
3. Radiological Controls/Theory (Particles, Shielding, Dose)
4. Contamination Control/Theory
5. Radiation Detection
6. Radiological Controls (Limits, Access Control, Signs)



3) Safety Management

11. ISM

12. Worker Safety and Health

13. OSHA

14. Fire Safety

15. Electrical Safety

16. Industrial Hygiene

20. Emergency Management

4) Safety Basis **(SBA-100DE)**

22. DSA

22. TSRs

21. USQs

23. Facility Safety



5) Safeguards & Security
28. DOE O. 470.4A
28. Infosec
28. Physical Protection
28. MC&A
28. Program Planning and Management
6) Formality of Operations
17. Conduct of Ops (FOO-100DE)
19. Quality Assurance
18. Occurrence Reporting



7) Accident Investigation

26. DOE O. 225.1 Accident Investigations **(SAF-230DE)**

8) Environmental Management

7. Radioactive/hazardous waste

8. Environmental protection, restoration, waste management

9. 29CFR 1910.120 Hazardous waste operations and emergency response

10. Personal/organization liability (environmental laws)

9) Oversight **(DOE-110DE)**

24. Oversight (226.1)

25. Corporate Operating Experience Program

27. Central Technical Authority (Nuclear Safety Requirements)