General Construction Technology | One Year Program: Scope & Sequence

Year 1, Semester 1
GC103 Construction Technologies I (19 Weeks)

District Pre-Assessment

Unit 1 (5 Weeks)

NCCER Core Curriculum:
- Construction Safety, Power Tools, Construction Math, Rigging, Communication & Employability skills
- Certification: OSHA 10, NCCER Core
- CTSO Integration (Leadership Skills): SkillsUSA Officer Training, Officer Elections, Chapter Meeting
- Work-Based Learning: Guest Speaker, job application (resume)
- Technical Standard: 1.1-1.11, 2.1-2.3, 3.1-3.3, 4.1-4.8

Unit 2 (5 Weeks)

Masonry:
- Theory, Tools & Block Laying
- CTSO Integration (Leadership Skills): AZ Masonry Expo, AZ Construction Expo, Chapter Meeting
- Work-Based Learning: Integrated project with industry partner, guest speaker, virtual exchange with partner, simulated lab experience
- Technical Standard: 6.1-6.6

Unit 3 (3 Weeks)

Site Layout:
- Theory, Equipment & Lab Application
- CTSO Integration (Leadership Skills): SkillsUSA Fall Leadership Conference, Chapter Meeting
- Work-Based Learning: Integrated project with professionals, workplace visit
- Technical Standard: 5.1-5.3

Unit 4 (2 Weeks)

Concrete:
- Theory, Tools & Forms
- CTSO Integration (Leadership Skills): Chapter Meeting
- Work-Based Learning: Integrated project with professionals, workplace visit
- Technical Standard: 16.1-16.4

Unit 5 (2 Weeks)

Floor Systems:
- Components, Materials/Spans & Framing
- CTSO Integration (Leadership Skills): SkillsUSA Competition Preparation, Chapter Meeting
- Work-Based Learning: Career Fair
- Technical Standard: 7.1, 7.4-7.6

Unit 6 (2 Weeks)

Wall Systems:
- Components, Materials/Spacing & Framing
- CTSO Integration (Leadership Skills): Chapter Meeting
- Work-Based Learning: Field trip
- Technical Standard: 7.3, 8.1-8.4

Unit 7 (1 Week)

Projects:
- Real world application of knowledge, skills & standards
- CTSO Integration (Leadership Skills): SkillsUSA Competition Preparation, Chapter Meeting
- Work-Based Learning: School Based Enterprise
- Technical Standard 1.1 thru 8.4, 16.1 thru 16.4

Semester Exam
Year 1, Semester 2
GC104 - Construction Technologies II
(17 Weeks)

Unit 8 (5 Weeks)

Joist/Roof Applications:
- Components
- Materials/Spacing
- Installation
- CTSO Integration (Leadership Skills): Chapter Meeting
- Work-Based Learning: mock interview, job app resume, job shadow, guest speaker

Unit 9 (2 Weeks)

Doors/Windows:
- Components
- Materials
- Installation
- CTSO Integration (Leadership Skills): SkillsUSA Week, Chapter Meeting
- Work-Based Learning: informational interview/virtual exchange with industry partner
- Technical Standard: 10.5

Unit 10 (3 Weeks)

Exterior/Interior Finish:
- Components
- Materials
- Installation
- CTSO Integration (Leadership Skills): SkillsUSA Region 5 Conference, Chapter Meeting
- Work-Based Learning: guest speaker
- Technical Standard: 10.1, 10.6, 11.1-11.4, 12.3, 15.1-15.6

Unit 11 (2 Weeks)

Stairs:
- Materials and Layout
- CTSO Integration (Leadership Skills): Chapter Meeting
- Work-Based Learning: Field Trip
- Technical Standard: 12.1 – 12.2

Unit 12 (1 Week)

Electrical/HVAC:
- Components, Theory & Installation
- Certification: NC3 Multimeter
- CTSO Integration (Leadership Skills): SkillsUSA Arizona Conference, Chapter Meeting
- Work-Based Learning: Guest Speaker
- Technical Standard: 10.2-10.4, 14.1-14.7

ADE Technical Assessment

Unit 13 (1 Week)

Plumbing:
- Materials, Theory & Installation
- CTSO Integration (Leadership Skills): SkillsUSA End of Program Celebration, Chapter Meeting
- Work-Based Learning: mock interviews, job application, job shadowing

District Post-Assessment

Unit 14 (3 Weeks)

Projects:
- Real world application of knowledge, skills & standards
- Certification: NCCER Construction Technologies
- CTSO Integration (Leadership Skills): SkillsUSA National Skills & Leadership Conference, Community Service Project, Chapter Meeting
- Work-Based Learning: Student Based Enterprise
- Technical Standards: 1.1 thru 16.4