



Certified Builder Professional C260 Study Guide



Welcome to the Certified Builder Professional (CBP) exam study guide! This study guide is designed to help you prepare for your upcoming certification exam. Use this guide to make notes, highlights and concentrate your studies in the “C260 GENESIS Construction School: Vinyl Liner and Fiberglass Pools” manual. There are 100 questions on the open-book exam, and you must pass with a 75% or better to become a Certified Builder Professional. You may not bring this study guide in with you for your exam.

Good luck!

Chapter 1: Geotechnical

3 Questions

- Be familiar with engineering terms regarding soil conditions.
- Understand moisture-density relationships.
- Study the International Building Code regarding foundations.

Chapter 2: Structural Engineering

6 Questions

- Have a working knowledge of when to consult an engineer or geologist.
- Know when to consult with an engineer or geologist.
- Have a working knowledge of minimum concrete coverage (ACI code 318-19) in various situations.
- Understand the purpose of steel reinforcement and the significance of “grades” and the relation to diameters.
- Be familiar with the concrete recipe, and what the consequences are when that recipe is adjusted.

Chapter 3: Construction Documents

2 Questions

- Recognize the requirements of a good site plan.
- Comprehend the limitations and liabilities within a warranty for your work.

Chapter 4: Fluid Mechanics

25 Questions

- Study design flows, turnover rates and line velocities based on the ANSI/PHTA/ICC-15 2021 energy code.
- Familiarize yourself with Bernoulli's principle and how flow rates change with pipe size.
- Know what pipe materials are and are not acceptable per most plumbing codes in in-ground applications.
- Examine suction outlet fitting assembly (SOFA) properties, ratings and best practices for mounting.
- Demonstrate how to calculate the number of gallons in a vessel.
- Recognize the requirements and prohibitions regarding skimmers, returns and main drains contained in the ISPS (International Swimming Pool and Spa Code) and ICC Plumbing Codes.
- Be familiar with the hydraulic requirements contained in the PHTA-15A energy code.
- Relay the relationship between velocity and head loss in various pipe sizes and lengths
- Describe self-priming pump qualities.
- Define the Hartford loop
- Be familiar with the Virginia Graeme Baker Act

Chapter 5: Electrical Engineering

9 Questions

- Be familiar with NEC (680, article 110.26 (A), etc.), NFPA 70, and NEMA 3R requirements and prohibitions and the reasoning behind those standards.
- Understand how weather affects electrical panel codes.
- Know the permissions and limitations of GFCI circuits in conduit.
- Demonstrate knowledge of distance for various electrical sources and appliances from a pool.
- Review what codes around corrosive environments.
- Explain bonding, what should be bonded, when to bond and bonding requirements.
- Explain the placement of underwater lighting.

Chapter 6: General Conditions

1 Question

- Know the steps to take before you dig.

Chapter 7: Layout and Control

3 Questions

- Describe the 45-degree rule.
- Know the methods of layout prior to excavation.

Chapter 8: Concrete Science

8 Questions

- Discuss the process of curing.
- Know the constraints and condition requirements of concrete for ideal installation.
- Be familiar with the recipe of concrete and what additives are used under different conditions.

Chapter 9: Fiberglass Pools

5 Questions

- Demonstrate what bases are acceptable to use.
- Be knowledgeable in the area of tiles, tile adhesives and mortars.
- Identify proper digging procedures.
- Show knowledge in tolerance leveling for coping.
- Understand where to set the rim.

Chapter 10: Vinyl Liner Pools

9 Questions

- Be knowledgeable in what ingredients are and are not compatible with vinyl liners.
- Know when a liners can be manufactured in the process of the dig.
- Familiarize yourself on various compatibility in different climate zones.
- Demonstrate knowledge in installation skills.
- Show knowledge in troubleshooting installation errors.

Chapter 11: Mechanical Space

5 Questions

- Discuss heatloss through evaporation.
- Be knowledgeable in what types of pipe are used and why.
- Know what ANSI/PHTA/ICC-15 2021 dictates regarding pump suction connections.
- Understand NEC bonding wire compliance.
- Discuss UV system installation.

Chapter 12: Concrete Decks

5 Questions

- Understand the cause of failures in concrete or shotcrete.
- Study the relationship between drains and slope.
- Explore ACI 318 and ACI 224.4R provisions in relation to decking.
- Identify joints and the purposes of each kind.

Chapter 13: Pre-Filling and Filling Pools

11 Questions

- Discuss PH ranges for fiberglass pools
- Demonstrate a knowledge in biguanide.
- Study the LSI
- Define the term “balancing”
- Know what chemicals, and tests are recommended and why in various situations.
- Be familiar with how to protect PVC from UV rays.

Chapter 14: Pool Enclosures and Covers

4 Questions

- Demonstrate knowledge in pool enclosure barriers.
- Discuss automated cover practices.
- Know what codes are universally adopted.
- Show expertise in rules regarding construction fences.

Chapter 15: Start Up, Punch lists, and Project Closeout **1 Questions**

- Explain the benefits of commissioning of a pool

Chapter 16: Advanced Studies in Hydraulics

1 Question

- Know what is used to calculate volume of a surge capacity in a collector tank.

Chapter 17: Intentional Design

2 Question

- Relay the three keys to drawing outdoor spaces.
- Discuss important factors in intentional design.