1. The student will communicate effectively.
   1.1. ... make effective oral presentations.
   1.2. ... write business letters and reports using professional English.

2. The student will be aware of important ethical issues in the construction industry.
   2.1. ... explain why bid shopping is unethical.
   2.2. ... identify unethical change order games.
   2.3. ... identify unethical payment games.
   2.4. ... identify unethical claims games.
   2.5. ... identify characteristics of unethical contractors.

3. The student will know basic scientific theory and analytic procedures.
   3.1. ... analyze and solve basic problems in physics.
   3.2. ... analyze and solve basic problems in chemistry (optional).
   3.3. ... analyze heat flow through wall assemblies.
   3.4. ... make recommendations to control moisture in buildings.

4. The student will have mathematical skills.
   4.1. ... solve word problems using algebra.
   4.2. ... create and use descriptive statistics.
   4.3. ... use statistical software.

5. The student will be familiar with basic business and management concepts.
   5.1. ... identify basic economic practices relevant to construction.
   5.2. ... identify basic accounting practices relevant to construction.
   5.3. ... identify basic management concepts.
   5.4. ... identify important laws related to construction and their implications.

6. The student will be familiar with design theory.
   6.1. ... analyze static forces in structures.
   6.2. ... analyze electrical forces including voltage, current, resistance, and power.
   6.3. ... identify correct sizes and types of electrical conductors.
   6.4. ... identify correct sizes and types of electrical conduit.
   6.5. ... cite the NEC for proper installations of electrical systems.
   6.6. ... identify proper electrical service entrance and distribution systems.
   6.7. ... apply soil mechanics to excavations and foundations.

7. The student will be familiar with the analysis and design of building systems.
   7.1. ... apply the height and area tables of the building code.
   7.2. ... model the structural frame of a commercial building.
   7.3. ... select and size an appropriate HVAC system.
   7.4. ... identify the components of and design a legal egress system.
   7.5. ... select appropriate fire resistive partitions and components.
   7.6. ... select and detail an appropriate cladding system.
   7.7. ... determine the LEED rating for a commercial building.
8. The student will be familiar with construction materials and methods.
8.1. ...define the composition and properties of building materials.
8.2. ...define construction terms and apply units of measurement.
8.3. ...recognize material grade stamps, identify actual and nominal sizes of materials, and define tolerance.
8.4. ...know how to use conformance references established by testing laboratories.
8.5. ...identify potential interface issues between building systems.
8.6. ...identify construction equipment and how the equipment is utilized.
8.7. ...compare costs of different systems and materials.
8.8. ...demonstrate construction techniques and know how to select appropriate tools.
8.9. ...use the IBC and IRC building code manuals and standards.
9. The student will be familiar with construction graphics.
9.1. ...use basic sketching and drawing techniques.
9.2. ...define and identify graphic symbols used in working drawings.
9.3. ...identify detail hierarchies, scale, and content.
9.4. ...create notes, callouts, and references on drawings.
9.5. ...create drawings using CAD software applications.
10. The student will have basic surveying skills.
10.1. ...demonstrate layout and alignment control using surveying equipment.
10.2. ...use surveying skills to organize and develop a site.
11. The student will be familiar with estimating procedures.
11.1. ...define different types of estimates and how they are used.
11.2. ...create quantity takeoffs for residential and commercial projects.
11.3. ...identify and apply labor and equipment productivity factors.
11.4. ...create pricing databases.
11.5. ...identify and estimate direct and indirect job costs.
11.6. ...prepare and submit construction bids.
11.7. ...use estimating software applications.
12. The student will be familiar with planning and scheduling.
12.1. ...identify the parameters affecting project planning.
12.2. ...create a bar chart schedule.
12.3. ...create a CPM schedule.
12.4. ...identify strategies for allocating and managing resources.
12.5. ...describe how changes affect cost and schedule.
12.6. ...use scheduling software applications.
13. The student will be familiar with construction accounting and finance.
   13.1. ...define cost accounting and identify industry formats.
   13.2. ...distinguish between fixed and variable costs.
   13.3. ...identify bidding and procurement practices.
   13.4. ...identify record and report practices.
   13.5. ...explain capital equipment depreciation and how this is used by construction companies.
   13.6. ...estimate project cash flow.
   13.7. ...identify payment processes and how they affect the time value of money.

14. The student will know some of the basics of construction law.
   14.1. ...explain various project delivery systems and explain how they affect the roles and responsibilities of parties.
   14.2. ...identify the basic types of rules that apply to construction and how they are used.
   14.3. ...explain professional licensure and identify who must be licensed.
   14.4. ...explain how lien laws may be used to protect contractor’s rights.
   14.5. ...identify important labor laws and their implications for construction.
   14.6. ...identify various administrative procedures that may be used to avoid disputes.

15. The student will be familiar with basic safety requirements.
   15.1. ...identify unsafe practices and recommend safe practices.
   15.2. ...identify mandatory safety procedures, training, and record maintenance.
   15.3. ...identify safety compliance, inspection procedures, and possible penalties.

16. The student will be familiar with the basic procedures of project management.
   16.1. ...describe the roles and responsibilities of construction management personnel.
   16.2. ...describe procedures for maintaining good labor relations.
   16.3. ...identify and describe administrative systems and procedures.
   16.4. ...identify and interpret documentation at job site and office.
   16.5. ...summarize quality control philosophies and identify common practices.
   16.6. ...use project management software applications.