CUTTING EDGE CAREERS IN VIRTUAL DESIGN AND CONSTRUCTION

In the next five years, engineering firms and contractors anticipate hiring several hundred virtual design coordinators. Among many responsibilities, these workers will create models to demonstrate virtual engineering approaches for new projects as well as models for estimating and construction. Success in this occupation begins with a career- and college-ready diploma. Students will benefit from high school coursework emphasizing English and STEM studies. A bachelor’s degree in construction management or software training plus a certificate or work experience is required. Interested students are encouraged to participate in internships and class projects that combine course study and software.

THE BASICS:
- Industry: Construction
- Starting Salary: $68,000 to $70,000/yr.
- Hiring Need (5 years): Several hundred
- Companies Hiring: Engineering firms, general contractors

THE ROLE:
- Create basic models to demonstrate approaches for new projects
- Create detailed models for estimating and construction
- Coordinate trade models with designers/subs and log design issues
- Run clash detection and documenting resolution to verify completion
- Update models to match resolution of design issues
- Work with field for timely work packages and review meetings

EDUCATION REQUIREMENTS:
- Bachelor’s degree in construction management (CM); or
- Software training plus either CM certificate or construction trade work experience; or
- Two-year trade school

WORK EXPERIENCE:
- Past use of modeling/clash software for A/E/C field
- Background in construction, estimating, procurement or scheduling

SKILLS REQUIREMENTS:
- Software: Revit, Navisworks, Bluebeam, A360, Smartsheet, Microsoft Office Suite
- Blueprint reading
- Construction knowledge in preconstruction and estimating through closeout

PATHWAYS

K-12
- Coursework emphasizing:
  - English
  - Math
  - Computer programming
  - Art and graphics
  - Spatial awareness
- Career- and college-ready high school diploma
- Volunteering:
  - Construction projects (e.g., Habitat for Humanity)
- STEM summer camps

POSTSECONDARY
- Construction management coursework emphasizing:
  - Blueprint reading
  - Estimating
  - Scheduling
- Software:
  - Autodesk products
- Class projects combining course study and software
- Internships in the field and office learning to build, estimate, procure and work on teams

CAREER
- Read blogs and use social media to follow thought leaders in construction, design and technology
- Become proficient with the software from 101 – 201 – 301
- Focus on software interoperability