



Student Internships: Resources for NAHB Members

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Student
Chapters

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Introduction

The U.S. housing industry suffers from a chronic shortage of directly-employed labor and subcontractors. The June 2016 NAHB Housing Market Index Special Questions on Subcontractors and Labor Availability indicates that while the shortage varies somewhat by trade, by region, and from year to year, over the long-term, demand outstrips the supply of rough and finish carpenters, framing crews, electricians, bricklayers and masons, painters and other skilled trades. In addition, there is an ongoing need for home building firms to find the next generation of talent to manage and grow their companies in the future. This guide will focus on how home builders can engage with three talent resources to meet these needs: secondary (high school) students in career and technical (CTE) education programs; community college students; and university students. NAHB has Student Chapters in all of these areas.

This guide will assist the home builder in understanding the ways in which secondary schools and institutions of higher learning may offer work-study student-learning opportunities, and deciding which type of student resource best fits the company's needs. The guide will focus specifically on one type of work-study student learning experience: the paid internship. This type of employer/employee relationship is sometimes described as a long interview, allowing both parties a chance to evaluate the suitability of the relationship in view of potential post-graduation employment.

Connecting with student resources requires "getting inside" the educational institution, and understanding where to start can be daunting. This guide will assist the home builder in identifying ways to establish contacts at local high schools or colleges; engage with students through career fairs and other approved venues; write a suitable job posting, interview, and hire candidates; and supervise, evaluate and communicate with the intern and the educational institution as part of the educational requirements of the internship.

Hiring high school youth (under age 18) means navigating what may be unfamiliar territory involving federal and state labor laws dealing with youth employment; federal and state education policies for CTE programs; and state or individual school policies for student employment. This guide helps the home builder understand the roles and responsibilities of the employer, educational institution, student and parent/guardian and legal/insurance issues involved in hiring high school and college students.

Finally, the Appendices to this guide direct prospective employers to listings of high school and college construction programs, state- and institution-specific contact information, the top online resources for posting notices for internships, examples of established home builder internship programs, example internship manual and forms for both high school and college students, and other resources.

An Overview of Career and Technical Education

High School

In a broad sense, the goal of the American secondary (high school) and post-secondary (college) system is to prepare students to be responsible citizens who can contribute to society through their knowledge and skills. There are more than 24,000 public and 7,000 private high schools educating more than 15 million high school students in the U.S. In the past decade, more than two-thirds of high school graduates (including GED recipients) immediately entered college. Nearly 70% of the 3.1 million 2016 high school graduates were enrolled in college that fall: approximately two-thirds of those enrolled in a 4-year college or university, and the remainder in a 2-year college ([NCES, 2016](#)). Of those graduates who did not continue to college, more than 72% entered the workforce ([BLS, 2016](#)).

The idea that everyone should go to college seems to be pervasive in modern American society. However, the emphasis on academic knowledge and expertise in a skilled trade has changed over time, and there may currently be a returning emphasis on preparing high school graduates for work, not just for college. An [August, 2016 poll](#) of attitudes toward public education by PDK International showed that 68% of parents polled would prefer to see an increased access to career and technical skills-based courses over college-preparatory courses.

The old terminology of “vocational training” has given way to “career and technical education,” or CTE. On the surface, enrollment in CTE courses at the high school level appears strong—the National Center for Education Statistics reports that nationwide, more than 85% of public high school graduates take some type of occupational education courses (Table 1). However, there is no longer just “shop class” focused on woodworking or welding, but courses in dozens of occupational fields. Not every high school that offers CTE courses offers construction technology as an option to students. Historically, only 6 to 7% of high school graduates take at least 1 credit of construction-related coursework, and the trend has been slightly declining (Figure 1), while communications and design, health care, public services, agriculture and consumer/culinary services have become more popular.

At the high school level, CTE courses are offered to students in several ways. Some high schools offer CTE as their primary emphasis, while students also must meet state graduation requirements in academic courses such as English, math, science and social studies. In other cases, students from “traditional” high schools are bussed to area CTE centers for a portion of the school day, taking academic courses at their “home” school for several hours each day and traveling to the CTE center for the rest. Finally, CTE courses may be offered as elective or enrichment courses as part of the curriculum at traditional high schools.

A national database of state CTE programs can assist the employer in finding local high schools or CTE centers that offer construction-related courses. A summary of available state-by-state information is given in Appendix A.

Table 1 Percentage of public high school graduates who earned credits, by curricular area: 1990 - 2009

Curricular area	1990	2000	2005	2009
All curricular areas, total	100.0	100.0	100.0	100.0
Career/technical education (CTE), any	98.0	96.6	96.6	94.1
Non-occupational CTE, any	86.3	80.0	79.8	70.3
Family and consumer sciences education	45.5	36.5	41.1	33.8
General labor market preparation, any	78.7	71.6	69.1	59.4
Occupational education, any	88.2	89.0	87.0	84.9
Agriculture and natural resources	9.1	11.8	11.6	10.7
Business	51.7	48.1	39.8	32.5
Communications and design	18.4	25.5	30.2	29.6
Computer and information sciences	25.1	24.3	19.5	21.2
Construction and architecture	7.4	6.9	6.7	6.7
Consumer and culinary services	13.8	19.3	20.0	18.0
Engineering technologies	13.7	14.2	11.8	11.1
Health sciences	3.2	10.6	9.6	10.3
Manufacturing	22.4	16.5	16.4	12.9
Marketing	8.5	7.8	9.5	8.5
Public services	3.8	7.8	6.9	9.6
Repair and transportation	10.1	9.3	8.8	8.0

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), 1990, 2000, 2005, and 2009.

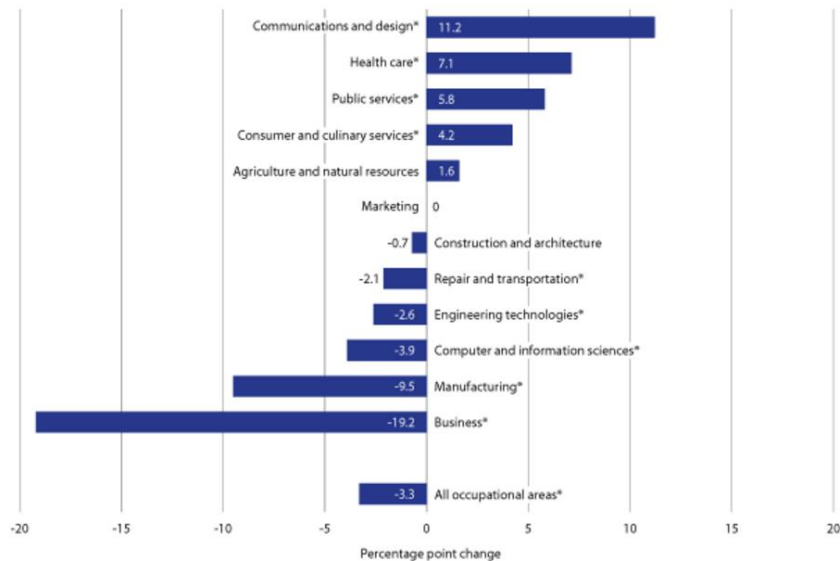


Figure 1 Percentage change in public high school graduates earning credits in occupational areas, 1990-2009

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, High School Transcript Study (HSTS), 1990, 2000, 2005, and 2009.

Community College

The U.S. community college system consists of more than 1,100 public and private institutions serving more than 7 million full-and part-time students, and another 5 million adults taking non-credit courses. Community college may be a stepping-stone to a four-year degree, may provide skills or credentials that allow students to go directly to work, or may retrain adult learners who are changing careers. About 61% of the 1.2 million credentials awarded in 2014 were associate degrees. The other 39% were occupationally-focused certificates that required from less than one to more than two years of study ([AACC, 2016](#)).

At the associate degree level, programs of interest to home builders may be titled construction technology, building construction technology, construction management technology, or similar. These programs typically require a minimum of 60 credit hours of courses that include basic mathematics, science and communication, and construction-related courses as print reading, estimating, planning and scheduling, safety, and building systems.

One means of finding community college programs that offer a construction emphasis is to search for accredited construction programs. Accrediting organizations such as the Association of Technology, Management and Applied Engineering (ATMAE), Accreditation Board for Engineering and Technology (ABET), or American Council for Construction Education (ACCE) are independent, non-governmental bodies that produce and enforce quality standards for their member programs. Additional unaccredited programs may be identified through the National Center for Education Statistics (NCES) database. Nationwide, there are at least 77 ATMAE, ABET or ACCE-accredited community college programs that offer some type of building construction-related associate degree (Appendix B).

Four-Year College or University

There are more than 3,000 four-year colleges in the U.S., of which about 130 offer an accredited construction-related degree. At the bachelor's degree level, programs may be titled construction management, construction engineering, construction science, building science, building construction technology, or similar names. Graduates must demonstrate proficiency in such topics as plan reading, estimating, scheduling, construction contracts, construction finance, and construction safety. There may be an opportunity for students to specialize in residential, commercial, heavy-highway, industrial or other construction sectors.

Four-year construction programs may be accredited by ATMAE, ABET, or ACCE. There are currently more than 130 accredited construction-related degree programs in the U.S. (Appendix C).

Work-Based Student Learning

At both the secondary and post-secondary levels, schools often encourage students to explore a variety of career opportunities and gain work experience while they are students. This work experience may be extra-curricular, or may be during school time and earn credits that meet graduation requirements.

At the high school level, students may be led through a progression of experiences that help them identify their career interests and abilities. These experiences may include career exploration, career

mentoring, service learning, and internship or co-operative experience. Home builders, as potential employers, may interact with students in each of these experiences. For the protection of minors, it is not uncommon for high schools to require a background check on potential employers or volunteers working with students under age 18.

Career Exploration

Early exposure to a variety of career opportunities may help high school students (typically 14-15 years old) find an area of interest to pursue further. Career exploration activities include field trips to job sites, guest speakers for a student club, class, or general student assembly, or short-term (unpaid) job shadowing. Other opportunities for home builders include participating in competitions or demonstrations of construction skills, including national events such as [SkillsUSA](#), [NAHB Student Competitions](#), and local events such as the [iBuild Showcase](#) in Kansas City.

Mentoring

Home builders may interact with secondary or post-secondary students by acting as career mentors. Assistance on becoming a good mentor is available through organizations such as [ACE Mentors](#), but a home builder may also work through the local HBA, NAHB Student Chapters, [Big Brothers Big Sisters of America](#), or as an individual. Mentoring relationships may involve

- holding regular face-to-face or virtual meetings between the mentor and protégé
- allowing student job shadowing
- introducing the student to industry professionals
- recommending or sponsoring the student's membership in industry associations
- helping students understand the work ethic, academic knowledge, physical and technical skills, professional ethics and other requirements for success, and the rewards of a career in the home building industry.

Service Learning

Home builders may provide opportunities for high school or college students to complete construction-related community service projects that meet individual course requirements, or that are extra-curricular projects for student organizations or clubs. Being part of a "real-world" public service project such as building park benches, a picnic shelter, handicap ramp or community garden shed may enhance a student's understanding of and interest in a construction career. Home builders may volunteer to sponsor or work with a student learning project by contacting the high school guidance counselor's office, or the construction department faculty.

Co-Operative Experience

A "co-op" is a joint school and (paid) work experience for students that provides a transition from school to work. In high school settings, the co-op student takes related courses at school, works off-campus for up to 15 hours per week, and is evaluated on both academic and work performance for graduation requirements. Employers typically interact with the school as part of an advisory board, and provide feedback to the school on individual student performance at work.

In college settings, co-op students often alternate working full time one term (quarter, trimester, or semester), and going to school full time the next term. This typically adds one year or more to the time required to graduate. Co-operative education students typically start early in their college career when they have had limited classroom instruction, receive a limited amount of credit toward graduation for their work experience, and “earn while they learn.”

Internship

A construction internship is similar to a co-op, but is generally considered a “capstone” experience that takes place near the end of formal education when the student has amassed considerable technical skills and/or academic knowledge in the construction field. As such, it may be more structured to provide practical application of academic knowledge, may require more detailed written feedback from the employer, and oversight (including jobsite visits) by a school-based internship coordinator.

At the high school level, the internship experience involves four parties: the student, the internship supervisor (employer), the internship coordinator (school), and the minor student’s parents/guardians, who must agree to the work conditions, agree to provide insurance, and help provide the means of transportation to work. For college students aged 18 or older, the parties to an internship are the same except for the parents/guardians.

Student interns are typically required to meet certain standards set by the school, such as completing the OSHA 10-hour safety training course, establishing a training plan with the employer, adhering to standards of dress and decorum, submitting regular reports to the school regarding work activities performed, and writing a final summary report. Employers must typically agree to such things as creating a training plan that covers a variety of work activities, providing adequate supervision of the student, and providing timely feedback on student performance as required by the school.

The internship may be for a specified time period (e.g., fall semester, senior year of high school), or a specified number of hours (e.g., 320 clock hours). College internships are often done during the summer between junior and senior year. Rates of pay are typically set by the employer. Unpaid internships, if permitted by the school, are uncommon in the construction industry.

Internships benefit all the parties involved. Students receive practical experience and organizational and time management skills that cannot be taught in the classroom, and are able to determine whether the “dream job” of their childhood will be the right fit for them as adults. Employers get a long look at an individual, learn what is happening inside the local educational institutions, and get to provide feedback to shape and improve student learning. Schools benefit from the input from industry practitioners and the expansion of learning opportunities for their students beyond the campus facilities. Communities benefit from more mature, experienced workers who may be more likely to remain in the area after graduation and work for local companies.

The Internship Experience

Preparing for an Internship Program

Student interns from high school, community college or four-year college or university can contribute to the home builder's organization as future employees, but employers must take a longer view when determining whether to start an internship program. Student interns can be the source for future front- or back-office personnel, construction labor, skilled trades, first-line supervisors, or general superintendents, but the internship period itself is a training period.

Evaluate Needs

Before establishing an internship program for students of any age, the home builder must consider the needs of the organization, determine how an intern will be utilized, and what resources will be required. Who will supervise the intern? What meaningful work can the intern perform with supervision? Are the work activities, the supervisor and co-workers flexible enough to accommodate the intern's available (and perhaps erratic) work hours? Is the need for help greatest during the school year, or over the summer months? Will an intern be welcomed and supported by current employees? After thoroughly evaluating the company's needs, draft a concise job posting to use in advertising an internship position.

Research the Legalities

The legal aspects of hiring students must be examined early in the process. Does the employee handbook need to be revised to address student interns? What are the requirements for pay and benefits? What are the insurance issues? What safety guidelines or other protections are needed for student interns, especially minors? Under what conditions can an intern be terminated?

Schools that place students as interns will have developed a set of guidelines and policies for the protection of students, and can help employers navigate the legal requirements of hiring students. Internship manuals or guidelines developed by the school will establish the roles and responsibilities of all parties to the internship, and contain forms and documents to assist the employer in fulfilling the supervisory role. Youth under the age of 18 are prohibited by federal law from participating in "any occupation the Secretary of Labor has determined to be hazardous," including roofing, using power tools including circular saws, nailers and sanders, or operating heavy equipment including skid steers, backhoes or man-lifts ([DOL Fact Sheet #43](#)). There is limited exemption to the youth employment restrictions when the student is at least 16 and enrolled in an approved program, or when the student turns 18. The home builder's legal counsel should be consulted to review the internship manuals and forms provided by the school and the relevant DOL youth employment regulations to make sure all relevant issues are addressed.

Samples of both high school and college level internship guidelines are provided in Appendix D and E. Links to DOL Fact Sheets regarding youth employment are provided in Appendix F.

Develop a Training Plan

Internships are learning experiences for students, and the employer must have a plan for how students will be introduced and integrated into the daily work activities of the company. The plan should provide for the student to be exposed to a variety of experiences, including field and office functions, in keeping

with the age, level of schooling and legal limitations on activities of the student. CTE high school programs must prepare students to meet state-mandated performance standards, and training plan objectives should be developed to complement those performance standards. The school can provide the employer with these standards.

Example training plan activities for both high school students might include:

- Use math to perform quantity take-off of items, lengths, areas and volumes.
- Read construction drawings and identify wood and metal framing components and perform quantity take-off.
- Participate in building layout, including location of lines and corners, squaring the building corners, identifying benchmarks and elevations, and identifying tools, equipment and safety procedures.
- Participate in building formwork for concrete flatwork, including an understanding of necessary materials, tools and equipment, including personal protective equipment.
- Read construction drawings to identify location and construction details of braced walls partition walls, plumbing walls, stairwells, and other features.
- Participate in wall framing, erection, plumbing and bracing.
- Observe installation of building systems including electrical, water, sanitary sewer, drainage pipes, HVAC, and plumbing.
- Participate in ordering, taking delivery and installing windows and doors.
- Read construction drawings and specifications to identify type, size and details of interior wall and floor finishes, cabinets, appliances and other items.
- Observe and take notes on subcontractor planning and coordination meetings.
- Observe vendor/supplier deliveries and documentation.
- Perform jobsite housekeeping and safety activities.

College or university programs may allow student interns and employers flexibility to craft a training plan, or may provide a template with a list of the types of activities, skills or experiences the student should have during the internship. Example training plan activities for college interns might include:

- Perform quality control tasks to verify work performed is in accordance with plans and specs.
- Monitor work in place and compare against budget labor production for tracking purposes.
- Attend and document planning and coordination meetings.
- Establish and/or maintain a field submittal filing system.
- Post/draft as-built conditions on record drawings.
- Perform quantity take-offs for material ordering purposes.
- Assist with preparation of purchase orders for material and equipment.
- Prepare, log, and distribute requests for information (RFI's). Procure RFI answers from designer and distribute to related parties.
- Assist with preparation of billing/pay applications process.

- Review submittals ensuring compliance with contract documents.
- Log submittals from subcontractors in accordance with anticipate submittal log.
- Log change requests in document tracking system, procure subcontract pricing, and assist with preparation of contractor change order requests.
- Analyze subcontractor scopes; prepare bid tabulation for comparison purposes.
- Participation in sales and marketing activities.
- Shadow management during owner contract negotiations.

Finding and Hiring Interns

The distribution of CTE programs in the U.S. is geographically uneven—some states have a greater emphasis on career and technical education at the high school level, and construction programs at the two-year or four-year college level are limited in number. The home builder looking for a student intern to work part time during the school year may be limited to students from local schools or colleges, while summer interns, usually college students, may be drawn from a wider geographic area. The decision on which avenue is best may be based on the company’s proximity to a pool of likely interns. Some research may be required to become familiar with local schools that offer a construction-related program. Available information on high school CTE programs (not necessarily all of which offer construction technology), and accredited two-year and four-year construction-related degree programs is listed by state in Appendices A-C. If your local HBA has a Student Chapter, this is a good place to start your search.

Career and technical high schools are employment-focused, and will typically have a placement office to act as the bridge between potential employers and students. The high school guidance office may also be an appropriate point of contact for employers. At the college and university level, employers may contact the placement (or career) office. At both the high school and college level, it is typical in construction for employers to directly contact the faculty or administrator in the construction program to find interns, arrange interviews, or participate in career fairs. Construction faculty typically have construction experience themselves, and are proactive in interacting with companies interested in employing their students. Employers can also meet prospective student interns by working with student organizations in construction programs, providing speakers for student chapter meetings, hosting field trips to job sites, or sponsoring student teams in construction competitions. The construction faculty is also instrumental in facilitating these types of interactions.

While most construction companies directly contact schools with construction programs to hire students, websites geared toward intern recruitment and placement may also be helpful in locating college student interns. A list of helpful websites for this purpose is provided in Appendix F.

At both the high school and college/university level, potential employers may become involved with the construction department by joining the industry advisory board, or IAB. An IAB informs the academic institution and specific academic program on industry trends and needs of construction employers. The IAB members often provide support for construction students, faculty and academic programs by donating such things as time, expertise, building materials, equipment, travel money or scholarship funding.

Companies interested in hiring students may also participate in career fairs sponsored by the school. The trend for colleges has been moving career fairs to fall for companies hiring spring semester graduates. Some schools host career fairs in both the fall and the spring, and employers are advised to start early to have access to the best students. Career fairs are often coordinated through a career/placement office, but the construction faculty is a good contact for getting information on upcoming career events.

Managing Interns

Because the internship is viewed as a capstone experience for students who have nearly completed their academic education, the employer of interns has a responsibility to provide meaningful work activities that allow the student intern to learn. At both the high school and college level, internships are considered capstone experiences that apply the student's academic learning in a workplace setting, and help students transition from school to work in a structured and supervised manner. As such, the student is overseen by two entities—the *internship supervisor* in the workplace, and the *internship coordinator* at the school.

At the workplace, the internship supervisor is responsible for developing and adhering to the training plan, providing regular feedback to the student and the internship coordinator, and ensuring a safe and supportive workplace for the student.

At the school, the internship coordinator is responsible for ensuring that the internship experience for each student is meeting expectations and academic requirements. The coordinator maintains contact with the student through weekly logs or reports, emails or phone calls, and a visit to the workplace to meet with the student and the internship supervisor. This site visit is typically conducted approximately mid-way through the internship period to verify that the appropriate safeguards and structure are in place for the protection and education of the student, to assure that the student is meeting the expectations of the employer, and to foster a positive outcome for all parties by addressing problems early.

All Good Things Must Come to an End

Internship experiences vary from a few weeks to a few months, typically near the end of the student's academic career at the high school or college level. High school students may enter college rather than the workplace in the fall after graduation (but may continue to work through a college co-op experience or return to work during summers and breaks), while college students typically enter the work force immediately after completing their education.

Terminating Unsuccessful Interns

The internship experience should be a positive experience for students, employers and schools. If an intern (or an employer) is not living up to the agreement set forth in the internship guidelines, and an intervention by the internship coordinator has been unsuccessful in mitigating the situation, an intern may be terminated. The internship guidelines should address this outcome.

Retaining Good Prospects as Employees

Because the internship experience gives both the intern and the employer a long look at each other, it is not uncommon for successful interns to be hired as permanent employees upon graduation.

High school students who plan to continue to college may choose to enroll in a co-op experience and work for the home builder full-time during alternate semesters and summers. High school graduates who plan to enter the skilled trades may enter an apprenticeship program, earn certificates at a local community college, or continue learning through the home builder's in-house training programs.

Four-year college interns typically complete their internship during the summer between their junior and senior years. Offers to impressive interns for post-graduation employment should be made promptly. In most construction management programs, placement rates are very high and the best students receive multiple job offers prior to their graduation.

Other Pipelines

While this resource guide has focused on high school and college students who will graduate from their schools, in 2015 over 513,000 high school students dropped out before completing the requirements for graduation. Programs that help place these youth and young adults in employment and training programs may also be sources for construction employment. These resources include the federal [YouthBuild](#) program and the [HBI Job Corps Centers](#), in addition to state and local (public and private) job training programs.

Conclusion

An internship program can be a powerful tool for recruiting talented young people who will already have a long-term relationship with the company on the day they begin their full-time, post-graduation employment. Interns bring “book learning” and computer skills that may assist in key activities such as estimating and scheduling, combined with an eagerness to learn “hands-on” skills from experienced employees in the field and in the office.

Starting an internship program is not difficult. Schools that teach a construction-related curriculum are eager to place their students with good companies, and will provide guidance to make the internship experience successful. Cultivating good working relationships with the faculty members who teach construction courses is key to finding and hiring students who are interested in a career in home building.