# Architectural Student Internship Guide for SMACNA Members

**Sheet Metal and Air Conditioning Contractors'**

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## Architectural Internship Guide for SMACNA Members

SMACNA, in collaboration with the American Institute of Architecture Students (AIAS) have prepared this guide to assist SMACNA members with establishing and implementing an architectural student internship program in their companies.

**Why Implement an Architectural Internship Program?**

- Benefits to the company include:
  - Positive public relations by supporting the construction industry and young people entering the workforce
  - Short term planned increase in resources to support projects
  - Getting a unique perspective and fresh ideas on your organization and approach
  - Management practice for your supervisors and project managers acting as mentors to the students
  - Insight into potential future workforce and how they impact how work gets done
  - Recharge company imagination
  - Potential future employee or defining "sought after" traits

- Benefits to the student are:
  - Obtaining required credits towards architecture license
  - Better understand the role of the architect, sheet metal/HVAC contractor and fabricator, and other trades represented on a construction project
  - Hands-on experience in a dynamic sector of the construction industry and exposure to high level craftmanship
  - Real life exposure to fabrication/installation coordination and challenges
  - Expanded technical awareness of construction and architectural metals
  - Observing how things get done – practical fabrication and installation processes and best practices
  - Development of real-world experimental professional relationships
  - Insight into the potential future jobs market and what it will require to be successful
  - Opportunity to engage in design work beyond the traditional architect's practice and exposure to other future opportunities

- Benefits to the industry include:
  - Increased awareness and promotion of architectural sheet metal to other parts of the industry, specifically architects
  - Expansion and invigoration of advocacy for the architectural sheet metal industry
  - Better understanding of the new and up and coming work force – the strengths and opportunities that it will provide
  - Opportunity to influence the quality of the design community of the future
  - An opportunity to improve the design/construction collaborative relationship

Important Points About the Internship

- Paid Internship – student interns must be employed and compensated through existing company policies and procedures. The AIAS maintains that employers must properly compensate all student employees. Compensation must be in compliance with the regulations for the jurisdiction in which they are working.
- Internship Schedules – internships typically are conducted in the summer; however, semester internships, school break co-ops and school-sponsored sabbaticals are also an option.
- Student Selection Process – AIAS follows internal procedures for selecting students for internships. AIAS will provide a list of available students to companies interested in employing a student intern.
- Application Process – Contractors interested in employing a student intern will contact AIAS through a dedicated website link and further information from AIAS would follow.
- Interaction with AIAS – AIAS is available as an advisor to contractors and students. Program specific questions / approvals may need to go directly to NCARB.
- Who is NCARB? The National Council of Architectural Registration Boards (NCARB) is a nonprofit organization made up of the architectural licensing boards of 55 states and territories. NCARB develops and administers national programs for licensure candidates and architects. NCARB's Architectural Experience Program™ (AXP™) is an important resource for interns. Explore the AXP™.

**Steps the Student Must Take to Become an Architect**

There are four main steps that a student must take to become a licensed, practicing architect. The "experience" step is where SMACNA members and an internship program get involved.

Education

The first step is finding a school that will support the students career goals. Most states require a degree from a program accredited by the National Architectural Accrediting Board (NAAB).

Experience

This is where an architectural sheet metal internship fits in. Students have to earn and document a certain amount of professional experience to ensure they are ready to be an architect. The Architectural Experience Program administered by NCARB provides a framework to guide students through developing and recording that experience.

Examination

Another key part of becoming an architect is completing the Architect Registration Examination® (ARE®). With exam divisions designed to reflect the current profession, the ARE® ensures that students are ready to practice architecture independently.

Licensure

Once students meet the education, experience, and examination requirements, as well as any additional requirements set by a licensing board, they can apply for a license to practice architecture.

**How SMACNA Members Provide the Required Experience**

Internship programs provide the experience through available credit outlined in the AXP™. The AXP™ covers various architecture-related opportunities and areas. To demonstrate ability to perform specific tasks, students need to report a total of 3,740 hours, and demonstrate competent performance, in 96 tasks identified across six experience areas shown below.

The AXP™ identifies the 96 key tasks that fall into six practice areas.

| Experience Area | Required Hours |
|---|---|
| Practice Management | 160 |
| Project Management | 360 |
| Programming & Analysis | 260 |
| Project Planning & Design | 1,080 |
| Project Development & Documentation | 1,520 |
| Construction & Evaluation | 360 |
| **Total** | **3,740** |

One half of the experience hours (1,860) must come from working directly with an architect in an architectural firm. However, the remaining 1,860 experience hours can come from working outside an architectural firm including SMACNA member company internships. A typical summer internship can contribute approximately 320 experience hours depending on the work conducted in the opportunities of design, construction, and other work experience.

**Opportunities for Credit Hours Through an Internship**

The four areas of opportunity for credit hours afforded through an architectural internship with a SMACNA contractor are: 1. Other Work Experience Under Licensed Professional, 2. Design or Construction Related Employment, 3. Construction Work, and 4. Site Visit with a Mentor. The available experience hours outside an architectural firm are shown in the table in Appendix One. With assistance from AIAS, students will identify and document the internship experience they receive in a SMACNA sponsored internship.

1. Other Work Experience Under Licensed Professionals

**If a SMACNA contractor has a licensed architect or professional engineer on staff, the student can earn hours working directly for that individual**. Students may earn hours working under direct supervision of an individual licensed as an architect in a U.S. or Canadian jurisdiction in an organization **not engaged in the practice of architecture**. Or, the hours can be earned working under direct supervision by an individual licensed in a U.S. or Canadian jurisdiction as a landscape architect or engineer practicing as a structural, civil, mechanical, fire protection, or electrical engineer in the field of building construction.

2. Design or Construction Related Employment

Students may earn hours for working in design or construction related employment (SMACNA member includes fabrication). Students cannot operate equipment and may not perform hands-on field or shop work typically conducted by bargained personnel. SMACNA members should refer to their local collective bargaining agreement for reference. Design or construction related activities qualify under the direct supervision of a person experienced in the activity of:

- Analysis of existing buildings
- Planning
- Programming
- Design of interior space
- Review of technical submissions, RFIs, project data, claims documentation, etc.
- Assist project manager with administrative building construction activities
- Prepare spreadsheets and other project forms

One example of related work is a student intern developing a material management program for a contractor's fabrication shop including learning how the material flows from the fabrication to installation process.

3. Construction Work

Students may earn hours in Construction working and interacting with related organizations such as general contractors, sub-contractors (field project and shop fabrication) and material suppliers. Qualifying construction activities include "hands-on" experience working in a variety of scenarios. Refer to the AXP™ Guidelines for lists and explanations of the types of work that may qualify as related experience.

Approval of Construction Work

An AXP™ supervisor who meets the requirements of direct supervision and is experienced in the activity being performed (e.g. foreman, project manager, etc.) must certify Construction Work experience. An AXP™ **supervisor does not have to be licensed** to certify work in this opportunity.

4. Site Visit with Mentor

If your company is working with an architectural firm on a project, the student can earn hours by attending a site meeting led by a licensed architect. The architect would then sign off on the experience hours.

## AXP™ Supervisors

Each student is required to maintain a record of their experience including internship work. SMACNA members assist the student with this documentation by assigning a supervisor who documents the work completed by the student. The supervisor is an important part of the entire learning experience as they are the main point of contact for the student through the internship process.

Understanding the skills and knowledge architects need to practice independently is your candidate's responsibility—but they can't do it alone.

Supervisors and mentors play an important role in helping candidates complete the path to licensure, so it's vital that you have a basic understanding of the experience program, its goals, and the responsibilities involved. As a supervisor or mentor, your role is to encourage and support candidates' professional development by providing work assignments that will guide them through developing the skills identified by the AXP™.

Understanding Your Role - AXP™ Supervisor

As an AXP™ supervisor, you manage the candidate on a daily basis and are ultimately responsible for their work. Your main task is to assign projects that give candidates the opportunity to develop the knowledge and skills required by the AXP™. Care should be taken to avoid work activities and tasks typical to bargained personnel. You'll also review your candidate's experience reports and provide feedback and approval to help guide their professional development.

While most AXP™ supervisors are architects, you do not have to be an architect to be an AXP™ supervisor. Under certain experience opportunities, you may be a professional from another discipline.

### Typical Work That May Be Eligible for Experience Credit

To assist with developing, marketing and implementing a SMACNA company architectural internship, it is important that your company proactively identify shop, office, and field work that a student intern may complete. Here is a partial list of work that may result in AXP™ credit:

- Participate in pre-construction, pre-installation, and regular progress meetings with design team
- Understand implications of project delivery technologies and methods
- Assist with managing information exchange during construction

- Maintain compliance with established milestones
- Prepare diagrams illustrating spatial relationships and functional adjacencies
- Perform building code analysis
- Prepare cost of work estimates
- Review shop drawings and submittals during construction for conformance with design intent
- Assist with managing project close-out procedures

Refer to the AXP™ Experience Areas for lists and explanations of the tasks and types of work that may qualify as related experience.

Note: internship experiences can and will differ depending on the work, the current options for supervisors (licensed architect/engineer vs. non-licensed), and more.

For more information on architectural internships, contact SMACNA's Market Sectors Department at 703-803-2980.

**Appendix One – Chart of Available Experience Hours**

| Opportunity | Whether or Not Employed? | Who Approves | Where the Hours Go | Hours |
|---|---|---|---|---|
| **Other Work Experience Under Licensed Professionals** | **See employment requirements** | **AXP™ Supervisor** | **Any AXP™ experience area** | **Up to 1,860 hours** |
| **Design or Construction Related Employment** | **See employment requirements** | **AXP™ Supervisor** | **Any AXP™ experience area** | **Up to 320 hours** |
| Community-Based Design Center/Collaborative | Yes | "Designated" AXP™ Supervisor (Licensed Architect) | Any AXP™ experience area | Up to 320 hours |
| CSI Certification: CCCA | Yes | NCARB | Construction & Evaluation | 40 hours |
| CSI Certification: CCS | Yes | NCARB | Project Planning & Design | 40 hours |
| Design Competitions | Yes | Mentor (Licensed Architect) | Any AXP™ experience area | Up to 320 hours |
| NCARB's Professional Conduct Monograph | Yes | NCARB | Practice Management | 10 hours |
| **Site Visit with Mentor** | **Yes** | **Mentor (Licensed Architect)** | **Construction & Evaluation** | **Up to 40 hours** |
| **Construction Work** | **Yes** | **AXP™ Supervisor** | **Construction & Evaluation** | **Up to 320 hours** |
| AIA Continuing Education for HSW | Yes | NCARB | Any AXP™ experience area | Up to 20 hours per area |