The Architectural Experience Program® (AXP®) is an essential step in the path to becoming an architect. Through the AXP, you will learn about the daily realities of architectural practice, acquire comprehensive experience in basic practice areas, explore specialized areas of practice, develop professional judgment, and refine your career goals. The AXP is developed and administered by the National Council of Architectural Registration Boards (NCARB). In most jurisdictions, completion of the AXP is a requirement for initial registration (licensure). The AXP identifies the tasks that are essential for competent practice. The program is structured to prepare you to practice architecture independently upon initial registration.

**Demonstrating Competent Performance**

There are two methods of demonstrating competent performance of the AXP tasks. Most licensure candidates will complete the AXP by reporting hours. You will need to document a minimum of **3,740 required hours** under the six experience areas to complete the program. Some tasks may be easier to complete earlier in your career, while others may take more time and experience to complete. You and your supervisor should work together to create a plan that best fits your goals and abilities.

At least half of your experience must be completed under the supervision of a qualified architect; however, there are many ways to complete the remainder of your AXP hours outside the employment of an architect. These opportunities will be covered in the experience settings section.

The second method of demonstrating competent performance of the AXP tasks is through an AXP Portfolio. This new method is intended for experienced design professionals who put their licensure on hold and allows you to demonstrate your experience through the preparation of an online portfolio.
About NCARB

The National Council of Architectural Registration Boards (NCARB) is a global leader in architectural regulation, dedicated to helping professionals reach their career goals, providing key data about the path to licensure, and protecting the public’s health, safety, and welfare.

We are a nonprofit organization made up of the architectural licensing boards of 54 states and territories. While each jurisdiction is responsible for regulating the practice of architecture within its borders, NCARB develops and administers national programs for licensure candidates and architects to ensure they have the mobility to go wherever their career takes them.

To accomplish this, NCARB recommends and encourages national requirements for architectural licensure. We develop and recommend standards for the 54 licensing boards, who then issue licenses to applicants who meet their specific registration requirements.

Services

NCARB exists to help you advance from student to practicing architect, so our services span the many phases of your career—think of us as your professional guide. Whether you’re navigating the Architectural Experience Program (AXP), completing the Architect Registration Examination® (ARE®), or earning your NCARB Certificate, NCARB is here to help.

And with our secure digital filing system, we can store all your major milestones, including official transcripts, employment history, examination successes, and more—a safe record of all of your achievements and accomplishments, ready to be transmitted to the jurisdiction of your choice.
EXPERIENCE AREAS & TASKS

Project Planning & Design

Project Planning & Design covers the schematic design phase of a project. You’ll learn to layout the building design, review building codes and regulations, coordinate schematics with consultants, and communicate design concepts with your client.

**Project Planning & Design Tasks**

Upon finishing the AXP, you should be able to competently perform the following tasks:

- Perform building code analysis
- Develop sustainability goals based on existing environmental conditions
- Prepare code analysis documentation
- Define requirements for site survey based on established project scope
- Select materials, finishes, and systems based on technical properties and aesthetic requirements
- Determine design parameters for building engineering systems
- Prepare design alternatives for client review
- Present design ideas to client orally
- Oversee design integration of building components and systems
- Evaluate results of feasibility studies to determine project’s technical viability
- Review local, state, and federal codes for changes that may impact design and construction
- Prepare Cost of Work estimates
- Determine impact of existing utilities infrastructure on site
- Apply principles of historic preservation for projects involving building restoration or renovation
- Understand implications of evolving sustainable design strategies and technologies
- Design landscape elements for site
- Develop mitigation options to address adverse site conditions
In Project Development & Documentation, you’ll gain experience with projects after the schematic design has been approved—focusing on construction documents and coordinating with regulatory authorities to gain the necessary approvals for construction.

**Project Development & Documentation Tasks**

Upon finishing the AXP, you should be able to competently perform the following tasks:

- Communicate design ideas to the client graphically
- Prepare submittals for regulatory approval
- Communicate design ideas to client with two-dimensional (2-D) computer aided design software
- Select furniture, fixtures, and equipment that meet client’s design requirements and needs
- Communicate design ideas to the client using hand drawings
- Communicate design ideas to client with three-dimensional (3-D) computer aided design software
- Update Cost of Work estimates
In Construction & Evaluation, you’ll get involved with the construction administration and post-construction phases of a project—this includes being out on the job site; meeting with contractors, clients, and building officials; and punching lists, leading to the completion of your project.

**Construction & Evaluation Tasks**

Upon finishing the AXP, you should be able to competently perform the following tasks:

- Review shop drawings and submittals during construction for conformance with design intent
- Respond to Contractor Requests for Information
- Complete field reports to document field observations from construction site visit
- Review results from field reports, third-party inspections, and other test results for conformance with contract documents
- Review Application and Certificate for Payment
- Manage project close-out procedures and documentation
INTRODUCTION: WHAT IS THE ARE®?

The Architect Registration Examination® (ARE®) is developed by the National Council of Architectural Registration Boards (NCARB). The ARE is used by U.S. state and territorial registration boards as the registration examination for candidates for architectural registration. It is also accepted by select Canadian provincial and territorial architectural associations for registration.

The ARE assesses a candidate’s knowledge, skills, and abilities to provide various services required in the practice of architecture. No single examination can test for competency in all aspects of architectural practice; the ARE is not intended for that purpose. The ARE concentrates on the professional services that affect the public health, safety, and welfare. The intent of the examination is to evaluate a candidate’s competence to protect the public by providing the architectural services of pre-design, site design, building design, building systems, and construction documents and services as they relate to social, cultural, natural and physical forces, and to other related external constraints.

In addition to testing for competence in specific subject areas, NCARB is aware of the responsibilities an architect may have for coordinating the activities of others involved in the design/construction process. The ARE attempts to determine a candidate’s qualifications not only in performing measurable tasks, but also in exercising the skills and judgment of a generalist working with numerous specialists. In short, the objective is to reflect the practice of architecture as an integrated whole.

The ARE is administered exclusively on computers at a network of test centers across the United States and its territories; Canada; London, England; Hong Kong, People’s Republic of China; and Abu Dhabi, United Arab Emirates. Scores for each division will be made available to the board of architecture that qualified the candidate for the examination. That board of architecture has the ultimate authority to determine a candidate’s qualifications to practice architecture within its jurisdiction.

Prior to taking the ARE, you must be made eligible by one of NCARB’s member registration boards or one of the Canadian provincial architectural associations (or via NCARB for boards participating in NCARB’s Direct Registration Program). It is not possible to “sign-up” for the exam with NCARB’s testing consultant. Only individuals who have been made eligible for the ARE will be permitted to take the exam. For more on eligibility, please see page 8.

ARE 4.0 consists of the following seven divisions:

- Programming, Planning & Practice
- Site Planning & Design
- Building Design & Construction Systems
- Schematic Design
- Structural Systems
- Building Systems
- Construction Documents & Services

To help candidates prepare for the examination, the content areas and references for each division are available to be downloaded from NCARB’s website here.

Languages
ARE 4.0 is only available in English.

Units of Measurement
Effective July 2013, the ARE includes measurements in inch-pound units only.

ARE 5.0
ARE 5.0 will launch in late 2016.
Learn more.
## APPPOINTMENT TIMES

Each testing appointment you schedule includes an overall amount of time for various introductory screens, a mandatory scheduled break, and a post-administration survey. The following tables show the total scheduled appointment time for each division along with a breakdown of the time allotted for each testing portion.

### PROGRAMMING, PLANNING & PRACTICE

**SCHEDULED APPOINTMENT TIME:** 4:00

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### SITE PLANNING & DESIGN

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### BUILDING DESIGN & CONSTRUCTION SYSTEMS

**SCHEDULED APPOINTMENT TIME:** 5:30

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### SCHEMATIC DESIGN

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### STRUCTURAL SYSTEMS

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### BUILDING SYSTEMS

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### CONSTRUCTION DOCUMENTS & SERVICES

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</table>
The division has been broken down into a listing of knowledge and skills directly related to each major content area.

1. **GENERAL STRUCTURES**
   
   (50-54 percent of scored items)

   **A. Principles**
   
   Apply general structural principles to building design and construction.
   
   1. **Building Design**
      
      Analyze and investigate the structural loads and conditions that affect building design through use of engineering principles and functional requirements.
   
   2. **Building Systems and their Integration**
      
      Determine appropriate building structural systems and components.
   
   3. **Implications of Design Decisions**
      
      Evaluate the impact of structural design decisions on other building design issues.

   **B. Materials & Technology**
   
   Analyze the implications of design decisions in the selection of systems, materials, and construction details related to general structural design.
   
   1. **Construction Details and Constructability**
      
      Analyze the impact of structural decisions on the construction process.
   
   2. **Construction Materials**
      
      Apply knowledge of the properties of materials that affect their structural characteristics.

   **C. Codes & Regulations**
   
   Incorporate building codes, specialty codes, and other regulatory requirements in the design of general structural systems.
   
   1. **Government and Regulatory Requirements**
      
      Assess and apply building codes and other regulations that affect structural systems.
2. **SEISMIC FORCES**  
(18-22 percent of scored items)

A. **Principles**
   Apply seismic forces principles to building design and construction.

1. **Building Design**
   Analyze and investigate seismic loads and conditions that affect building design through use of engineering principles and functional requirements.

2. **Building Systems and their Integration**
   Determine appropriate seismic load resisting systems and components.

3. **Implications of Design Decisions**
   Evaluate the impact of seismic load design decisions on other building design issues.

B. **Materials & Technology**
   Analyze the implications of design decisions in the selection of systems, materials, and construction details related to seismic forces design.

1. **Construction Details and Constructability**
   Analyze construction details and non-structural elements relative to their resistance to seismic forces.

2. **Construction Materials**
   Consider construction materials relative to their resistance to seismic forces.

C. **Codes & Regulations**
   Incorporate building codes, specialty codes, and other regulatory requirements related to seismic forces.

1. **Government and Regulatory Requirements**
   Assess and apply building codes and regulations with respect to the design of structures for resistance to seismic forces.

3. **WIND FORCES**  
(18-22 percent of scored items)

A. **Principles**
   Apply lateral forces principles to the design and construction of buildings to resist wind forces.

1. **Building Design**
   Analyze and investigate wind loads and conditions that affect building design through use of engineering principles and functional requirements.

2. **Building Systems and their Integration**
   Determine appropriate wind load resisting systems and components.

3. **Implications of Design Decisions**
   Evaluate the impact of wind load design decisions on other building design issues.

B. **Materials & Technology**
   Analyze the implications of design decisions in the selection of systems, materials, and construction details related to wind forces.

1. **Construction Details and Constructability**
   Analyze construction details and non-structural elements relative to their resistance to wind forces.

2. **Construction Materials**
   Consider construction materials relative to their resistance to wind forces.

C. **Codes & Regulations**
   Incorporate building codes and other regulatory requirements related to wind forces.

1. **Government and Regulatory Requirements**
   Assess and apply building codes and regulations with respect to the design of structures for resistance to wind forces.
4. **LATERAL FORCES**  
(7–9 percent of scored items)

**A. Principles**
Apply lateral forces principles to the design and construction of buildings.

1. **Building Design**  
Analyze and investigate lateral loads and conditions that affect building design through use of engineering principles and functional requirements.

2. **Building Systems and their Integration**  
Determine appropriate lateral load resisting systems and components.

3. **Implications of Design Decisions**  
Evaluate the impact of lateral load design decisions on other building design issues.

**B. Materials & Technology**
Analyze the implications of design decisions in the selection of systems, materials, and construction details related to lateral forces.

1. **Construction Details and Constructability**  
Analyze construction details and non-structural elements relative to their resistance to lateral forces.

2. **Construction Materials**  
Consider construction materials relative to their resistance to lateral forces.
Program
The preliminary floor plan for an urban mini-mall has been completed and approved, and you are now required to develop a roof framing layout for the building or portion of the building shown on the work screen. The layout must accommodate the conditions and requirements given below.

Site/Foundation
1. The site has no seismic activity and wind pressures are negligible.
2. The soils and foundation system should be assumed adequate for all standard and normal loads.
3. The distribution of concentrated or special loads need not be considered.

Construction/Materials
1. Structural steel/open web steel joist construction has been chosen for the roof structure type.
2. Steel beam sections are to be rolled or built-up.
3. The metal roof deck is capable of carrying the design loads on spans up to and including 4 ft.
4. Joists are sized to carry roof loads only.

General Requirements
1. All portions of the roof framing are flat.
2. Cantilevers are prohibited.
3. Structural members must not extend beyond the building envelope, except to frame a designated covered entry.

4. Columns may be located within walls, including the window wall and the clerestory window wall.
5. Walls shown on the background floor plan may be designated as bearing walls. Additional bearing walls are not allowed.
6. Lintels are required to be shown in bearing walls only. Other lintels shall not be indicated.
7. The opening located between the common area and the seating area must be unobstructed and column-free.
8. The common area must be column-free.
9. The window wall and the clerestory window extend to the underside of the structure above. All other openings have a head height of 7 ft above finish floor.
10. The roof over the high ceiling space must be higher than the roof over the low ceiling spaces.
   ▶ THE COMMON AREA REQUIRES A HIGH CEILING WITH A TOP OF STRUCTURE HEIGHT OF 18 FT.
   ▶ THE REMAINING SPACES REQUIRE A LOW CEILING WITH A TOP OF STRUCTURE HEIGHT OF 12 FT.
11. The structure must accommodate a clerestory window to be located along the full length of the north wall of the common area.
### ARE 5.0 Divisions

Use these columns to determine which ARE 4.0 division(s) you will need to pass to earn an ARE 5.0 credit.

<table>
<thead>
<tr>
<th>ARE 4.0 Divisions</th>
<th>Practice Management</th>
<th>Project Management</th>
<th>Programming &amp; Analysis</th>
<th>Project Planning &amp; Design</th>
<th>Project Development &amp; Documentation</th>
<th>Construction &amp; Evaluation</th>
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**ARE 4.0 Divisions**

If you do not pass a division of ARE 4.0, use these rows to determine which ARE 5.0 division(s) you will need to complete.

**ARE 5.0 Credit Model**

This matrix identifies the relationships across the current seven divisions of ARE 4.0 and the future six divisions of ARE 5.0. Exam expiration date(s) of ARE 4.0 divisions will be applied to ARE 5.0 credits earned.
Division: Project Planning & Design (continued)

Section 3. Building Systems, Materials, & Assemblies (19-25%)

Objective 3.1 Determine mechanical, electrical, and plumbing systems (A/E)

Objective 3.2 Determine structural systems (A/E)

Objective 3.3 Determine special systems such as acoustics, communications, lighting, security, conveying, and fire suppression (A/E)

Objective 3.4 Determine materials and assemblies to meet programmatic, budgetary, and regulatory requirements (A/E)

Section 4. Project Integration of Program & Systems (32-38%)

Objective 4.1 Determine building configuration (A/E)

Objective 4.2 Integrate building systems in the project design (A/E)

Objective 4.3 Integrate program requirements into a project design (A/E)

Objective 4.4 Integrate environmental and contextual conditions in the project design (A/E)

Section 5. Project Costs & Budgeting (8-14%)

Objective 5.1 Evaluate design alternatives based on the program (A/E)

Objective 5.2 Perform cost evaluation (A/E)

Objective 5.3 Evaluate cost considerations during the design process (A/E)
Division: Project Development & Documentation

Division Description:
This division will assess objectives related to the integration and documentation of building systems, material selection, and material assemblies into a project. The division will focus on issues related to the development of design concepts, the evaluation of materials and technologies, selection of appropriate construction techniques, and appropriate construction documentation. Candidates must demonstrate an understanding of and abilities in, integration of civil, structural, mechanical, electrical, plumbing, and specialty systems into overall project design and documentation.

This division will test a candidate’s ability to protect the public’s health, safety and welfare by:

- Evaluating project documentation for the constructability of a building and site
- Integrating technical knowledge and information to refine a design
- Integrating materials and building systems to meet the project design requirements
- Translating design decisions into appropriate construction documentation

Division Specification:

Section 1. Integration of Building Materials & Systems (31-37%)

Objective 1.1. Analyze the integration of architectural systems and technologies to meet project goals (A/E)

Objective 1.2. Determine the size of mechanical, electrical, plumbing systems and components to meet project goals (U/A)

Objective 1.3. Determine the size of structural systems to meet project goals (U/A)

Objective 1.4. Integrate specialty systems such as acoustics, lighting, fire suppression, conveying, security, and communications to meet project goals (U/A)

Objective 1.5. Determine how to detail the integration of multiple building systems and technologies (U/A)

Objective 1.6. Coordinate mechanical, electrical, plumbing, structural, and specialty systems and technologies (U/A)