



Apprenticeship Ready: Exploring Career Pathways

Course Resources

A Complete List of Resources Provided in the Course

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The Interstate Renewable Energy Council

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Module 1

Exploring Clean Energy and Energy Efficiency Careers - Learn about the range of careers in clean energy and energy efficiency and begin identifying which pathways align with your interests and goals.

Lesson 1.1: Why Clean Energy and Energy Efficiency Matter to Your Future

Registered Apprenticeship Information:

- [ApprenticeshipUSA](#) - Discover Registered Apprenticeships across industries, how programs are started by employers, and how to become an apprentice.

Occupation and Employment Information:

- [U.S. Bureau of Labor Statistics: Occupational Outlook Handbook](#) - Search official government data on employment statistics, wages, job growth projections, and career outlooks for all U.S. occupations and industries.

Lesson 1.2: Exploring Career Pathways in Clean Energy and Energy Efficiency

Explore Interactive Career Maps:

- [E2: Clean Jobs America Interactive Map](#) - Explore clean energy and energy efficiency jobs by county across all U.S. states.
- [IREC: Clean Energy Career Maps](#) - These maps—including the Solar Career Map, the HVAC/R Career Map, and the Green Buildings Career Map—describe dozens of careers as well as their various routes for advancement.

Occupation and Employment Information:

- [Green Workforce Connect: Apprenticeable Occupations in Clean Energy](#) - Explore common apprenticeable occupations for clean energy employers.

- [Green Workforce Connect: Careers in Information Technology \(IT\)](#) - Learn about IT professionals who manage software, networks, cybersecurity, data, and other technological systems and processes.

Green Workforce Connect Occupation Profiles:

Learn more about experience requirements, the work environment, and advancement opportunities for each of the following occupations.

- [Green Workforce Connect: What Is a Solar Installer?](#)
- [Green Workforce Connect: What Is an Equipment Operator?](#)
- [Green Workforce Connect: What Is a Carpenter?](#)
- [Green Workforce Connect: What Is a Solar Operations and Maintenance \(O&M\) Technician?](#)
- [Green Workforce Connect: What Is an Advanced Manufacturing Technician?](#)
- [Green Workforce Connect: What Is a Battery Repairer?](#)

Lesson 1.3: From Interest to Action

Career Exploration:

- [U.S. Department of Labor: CareerOneStop](#) - Comprehensive career exploration tools including salary information, required education and training, and career videos.

Industry Certifications:

- [The North American Board of Certified Energy Practitioners® \(NABCEP®\)](#) - NABCEP offers certifications and credentials for skilled professionals, specialists, and those new to working in the areas of photovoltaics, solar heating, and small wind technologies.
- [The Building Performance Institute, Inc. \(BPI\)](#) - BPI is the nation's premier standards development and credentialing organization for the home performance industry.
- [Global Wind Organization](#) - GWO is a non-profit industry association representing leading wind turbine manufacturers and renewable energy operators and acts as a leading body for standardised training.

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Module 2

Exploring Apprenticeships - Understand the structure, benefits, and real-world value of Registered Apprenticeships as a career pathway.

Lesson 2.1: What Is a Registered Apprenticeship?

Understanding Registered Apprenticeships

- [U.S. Department of Labor: Apprenticeship Overview](#) - Comprehensive information on apprenticeship benefits, requirements, and how programs work.
- [Apprenticeship USA: Registered Apprenticeship Program](#) - Official DOL resource explaining program structure and components.

State-Level Information

- [Apprenticeship USA: State Apprenticeship Agencies Directory](#) - Find your state agency for local program information and support services.

Lesson 2.2: The Benefits of Apprenticeship

Financial Benefits & Data

- [U.S. Government Accountability Office: Registered Apprenticeship Earnings](#) - Government research showing strong starting salaries and significant lifetime earning advantages.
- [Urban Institute: Setting Wages in Registered Apprenticeships](#) - Detailed analysis of progressive wage structures in apprenticeships.
- [U.S. Department of Education: College Scorecard](#) - Search and compare colleges by cost, fields of study, graduate salaries, and typical debt loads.

Program Benefits and Workforce Initiatives

- [U.S. Department of Energy: Apprenticeships & Workforce Development](#) - Information on energy sector workforce initiatives and training pathways.

Lesson 2.3: Is Apprenticeship Right for You?

Programs for Women in Trades

- [Chicago Women in Trades](#) - Mentorship, advocacy, and community support for women entering skilled trades.
- [Nontraditional Employment for Women \(NEW\)](#) - Training and placement services for women in construction and technical fields.
- [Tradeswomen, Inc.](#) - National advocacy organization supporting women in construction trades.

Veterans Services

- [Helmets to Hardhats: The Benefits of Apprenticeship](#) - Connects military service members to construction Registered Apprenticeships.

Lesson 2.4: Apprenticeship in Historical Context

Historical Context

- [U.S. Department of Labor: History and Fitzgerald Act](#) - Official DOL page with historical overview of the U.S. apprenticeship system from colonial times to present.
- [Congressional Research Service: Registered Apprenticeship: Federal Role and Recent Federal Efforts](#) - Comprehensive report including historical context of federal apprenticeship policy from the 1937 National Apprenticeship Act to present.

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Module 3

Understanding Registered Apprenticeships - Break down how apprenticeship programs are designed, how to evaluate them, and which pathways best fit your situation.

Lesson 3.1: The Five Key Components of Registered Apprenticeship

Finding Programs

- [Apprenticeship USA: Apprenticeship Finder](#) - Search for Registered programs by occupation and location.

Legal Quality and Protections

- [Apprenticeship USA: Laws and Regulations Behind Apprenticeship](#) - Review the federal legislation and regulations that establish the quality standards, worker protections, and equal opportunity requirements that every Registered Apprenticeship Program must meet.
- [National Institute for Workers' Rights \(NIWR\)](#) - The National Institute for Workers' Rights (NIWR) focuses primarily on the private enforcement of workplace law and is dedicated to building worker power among those who are not represented by a union.

Apprenticeship by the Numbers

- [Apprenticeship USA: Data and Statistics](#) - Explore national data on active apprentices, program completions, and industry growth to see the scale and impact of Registered Apprenticeship across the United States.

Lesson 3.2: Program Types and Entry Pathways

Pre-Apprenticeship Programs

- [Apprenticeship USA: Explore Pre-Apprenticeship](#) - Provides guidance on quality pre-apprenticeship elements.

- [YouthBuild USA](#) - YouthBuild is a national pre-apprenticeship program for young adults.
- [Job Corps](#) - Job Corps is a federal program offering pre-apprenticeship training.

Finding Programs by Type

- [Apprenticeship USA: Apprenticeship System](#) - This database of State Apprenticeship Agencies makes it easy to contact state agencies for information on local programs of all types.
- [North America's Building Trades Unions \(NABTU\)](#) - NABTU provides information on union apprenticeship programs in construction trades.

Group Sponsored: Joint-Labor Management

- [IBEW | International Brotherhood of Electrical Workers](#) - IBEW is one of the largest sponsors of Electrician apprenticeships in the country, offering joint labor-management programs that combine union wages, structured on-the-job training, and strong job placement networks.
- [LIUNA | Laborers' International Union of North America](#) - LIUNA sponsors Construction Craft Laborer apprenticeships across dozens of states, giving workers in solar, wind, and utility-scale construction a structured pathway to union wages and a nationally recognized credential.
- [IUOE | International Union of Operating Engineers](#) - IUOE trains apprentices in the Operating Engineer and Heavy Equipment Operator occupations, preparing workers for the equipment-intensive roles found in large-scale renewable energy construction projects.
- [UBC | United Brotherhood of Carpenters](#) - UBC sponsors Carpenter apprenticeships through a national network of training centers, combining paid on-the-job learning with related technical instruction for construction roles in solar and clean energy projects.
- [AFL-CIO | The American Federation of Labor and Congress of Industrial Organizations](#) - AFL-CIO is a voluntary federation of 65 national and international labor unions that represent nearly 15 million working people. The work is anchored in making sure everyone who works for a living has family-supporting wages and benefits and the ability to retire with dignity.

Group Sponsored: Non-Joint

- [Independent Electrical Contractors \(IEC\)](#) - IEC offers non-union Electrician apprenticeship programs through local chapters nationwide, providing a structured pathway to electrical credentials for workers outside of union-affiliated programs.
- [WECA | Western Electrical Contractors Association](#) - WECA sponsors non-union Electrician apprenticeship programs primarily serving California and surrounding states, connecting learners with contractor employers in the solar and commercial electrical industries.

- [ABC | Associated Builders and Contractors](#) - ABC sponsors group apprenticeship programs in Electrician, Construction Craft Laborer, and Carpenter occupations through its chapter network.
- [AGC | Associated General Contractors](#) - AGC supports group apprenticeship programs in Electrician, Construction Craft Laborer, and Operating Engineer/Equipment Operator occupations through contractor associations, serving workers on commercial and utility-scale construction projects.

Companies Sponsoring Group Programs

- [Adaptive Construction Solutions \(ACS\)](#) - ACS sponsors group apprenticeship programs in Construction Craft Laborer, Electrician, and Equipment Operator occupations, with a specific focus on expanding access to apprenticeship for workers from communities that have faced barriers to construction careers.
- [Cam Solar Training](#) - Cam Solar Training sponsors apprenticeship programs in Construction Craft Laborer, Electrician, and Electronic Utility Worker occupations, with curriculum designed around the practical demands of solar installation and utility work.
- [Apprentix](#) - Apprentix serves as a group sponsor for Construction Craft Laborer, Electrician, and Equipment Operator apprenticeships.
- [Interplay Learning](#) - Interplay Learning sponsors apprenticeship programs in Electrician, Residential Wireperson, and Construction Craft Laborer occupations, combining hands-on training with digital simulation tools that make technical instruction more accessible and flexible.
- [Learning Alliance Corporation](#) - Learning Alliance Corporation sponsors group apprenticeship programs in Construction Craft Laborer, Electrician, and Equipment Operator occupations, acting as a program intermediary that connects apprentices with employer partners across multiple states.
- [Halco Home Solutions](#) - Halco Home Solutions operates a dedicated Training Center to ensure the highest level of workmanship across HVAC, plumbing, electrical, and home performance services throughout the Finger Lakes region of New York State.

Lesson 3.3: How Apprenticeship Training Is Structured

Understanding Training Models and Work Process Schedules

- [Urban Institute: Time-Based, Competency-Based, or Hybrid Programs?](#) - Learn how the three apprenticeship training approaches differ in the way they measure your skill development, including a side-by-side comparison showing how the same occupation looks under each model.
- [Urban Institute: What Are National Occupational Frameworks?](#) - Understand how Work Process Schedules outline the specific job functions, competencies, and training hours that define your apprenticeship journey from day one to completion.
- [Apprenticeship USA: Apprenticeship Occupations](#) - Visit the DOL website to find approved occupations and download template work process schedules. Use the Search by Occupation tab to search for specific job roles you're interested in, such as electrician or wind turbine technician. Alternatively, you can use the Browse by Industry tab to see apprenticeable occupations in different sectors. Although Clean Energy and Energy Efficiency aren't listed in the dropdown menu, the Construction and Utilities industries have overlap with some of the skilled trades roles we've talked about so far.

Explore Apprenticeships by Industry

- [Urban Institute: National Apprenticeship Resource Hub, Energy and Climate](#) - Browse apprenticeship frameworks in Energy and Climate to see how training is structured.
- [Green Workforce Connect \(GWC\)](#) - Explore up-to-date apprenticeship resources on IREC's platform connecting job seekers, employers, and training providers.

Lesson 3.4: The Role of Your Mentor

Registered Apprenticeship Mentoring Resources

- [U.S. Department of Labor: Strategies for Success as an Incoming Apprentice](#) - This video provides success strategies for Apprentices beginning their Registered Apprenticeship. Topics include being your personal best, working as a team player, and representing your company as a champion.
- [Introduction to Apprenticeship Mentoring: Roles, Responsibilities, and Benefits Webinar](#) - This session explains what apprentices' mentors do, what makes them effective, and how managers select and support them.
- [TradeMentor.org](#) - TradeMentor.Org is a non-profit organization dedicated to providing information, resources, and mentoring to individuals interested in pursuing a career in the skilled trades.

Lesson 3.5: Evaluating Program Quality

Search Registered Programs and Job Centers

- [Green Workforce Connect: Connect Now Map](#) - Discover Registered Apprenticeship training programs across the USA using IREC's Connect Now map on Green Workforce Connect.
- [Apprenticeship USA: Apprenticeship Finder](#) - Search registered programs by occupation and location to compare options.
- [American Job Centers: CareerOneStop](#) - Find local workforce centers that may partner with quality programs.

Other Career Technical Education and Training

- [Home Builders Institute \(HBI\): Job Corps](#) - Learn about HBI's Job Corps program, which provides individuals aged 16–24 years old with career technical education and training.
- [Center for Employment Opportunities \(CEO\): Locations](#) - CEO provides people returning from prison with immediate paid employment, skills training, and ongoing career support.
- [Solar Energy International \(SEI\): SEI Training Now Counts Toward Licensed Electrician Apprenticeship in Colorado & Wyoming](#) - SEI has established a pre-apprenticeship-plus agreement with Independent Electrical Contractors Rocky Mountain (IECRM) that creates a direct pathway from SEI's solar training into a four-year Electricians Apprenticeship Program
- [GRID Alternatives](#) - GRID's installation training programs offer experienced participants additional training to further develop their skills and prepare for opportunities in the solar jobs market.

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Module 4

Finding Your Entry Point - Take action by identifying target occupations, researching programs, preparing application materials, and planning for success.

Lesson 4.1: Matching Your Profile to Clean Energy and Energy Efficiency Occupations

Career Interest and Skills Assessment

- [O*NET Interest Profiler](#) - Use this tool to identify careers, including clean energy and energy efficiency occupations, that match your interests. Takes 10–15 minutes and is free, with no login required.
- [MySkills MyFuture Skills Matcher](#) - Enter your past jobs and this tool will help identify transferable skills and matching occupations.

Industry-Specific Career Information

- [O*NET OnLine \(Occupational profiles\)](#) - The O*NET database is the nation's primary source of occupational information covering more than 55,000 job roles across the U.S. economy.
- [O*NET OnLine: Green Economy Occupations](#) - Detailed occupation profiles including tasks, skills needed, wages, and outlook for clean energy and energy efficiency careers. Search by occupation such as wind, solar, HVAC, etc.
- [Bureau of Labor Statistics: Green Jobs Overview](#) - Official government data on green careers, wages, and job outlooks.
- [Interstate Renewable Energy Council \(IREC\): Career Maps](#) - These visual maps show career pathways in clean energy and energy efficiency with education requirements for different roles and advancement paths between them.

Resources for Women

- [Oregon Tradeswomen](#) - Learn how Oregon Tradeswomen helps transform lives by building community and economic independence through empowerment, training, career education, advocacy, and leadership development in the skilled trades.
- [Tradeswomen, Inc. \(TWI\)](#) - Discover Tradeswomen, Inc. (TWI), one of the most active and effective organizations in the nation focused exclusively on the needs of women in the skilled trades.

Office/Administrative Role Exploration

Get an overview of tasks, technology skills, work activities, and other details about each of these roles.

- [O*NET: Customer Service Representatives \(43-4051.00\)](#)
- [O*NET: Human Resources Specialists \(13-1071.00\)](#)
- [O*NET: Project Management Specialists \(13-1082.00\)](#)

Lesson 4.2: Navigating the Application Process

Workforce Support Services

- [CareerOneStop: American Job Centers](#) - Find a local job center to help you with your employment-related needs.
- [National Association of Workforce Boards \(NAWB\): Registered Apprenticeship Program Resource Hub](#) - Explore how Registered Apprenticeships work in practice, through a collection of resources on different topics.

Math and Academic Preparation

- [Khan Academy: Math](#) - Free courses covering arithmetic, fractions, and algebra—everything needed for apprenticeship testing prep.
- [ACT WorkKeys: Career Readiness](#) - Understand the most common type of apprenticeship testing (ACT WorkKeys Assessments).

Language Support

- [USA Hello: Free English Classes](#) - A complete list of free English classes online and other helpful resources for English language learners.

Financial Literacy

- [Next Gen Personal Finance \(ngpf\)](#) - ngpf is revolutionizing the teaching of personal finance in all schools and helping to improve the financial lives of the next generation of Americans.
- [Two Cents](#) - TWO CENTS is an educational show about personal finance.

Lesson 4.3: Essential Skills Employers Seek

Soft Skills Overview

- [Coursera: Soft Skills Courses](#) - Online courses for developing soft skills employers are looking for. Many offer financial aid for job seekers.
- [U.S. Department of Labor: Soft Skills: The Competitive Edge](#) - An overview of soft skills, including communication, teamwork, and problem solving for job seekers.

Resume Building and Interviews

- [Jobs for the Future: Resume Building Tool](#) - This tool can help you create skills-based resumes that highlight the skills employers are looking for.
- [CareerOneStop: Get Ready to Interview](#) - A step-by-step interview preparation guide from the U.S. Department of Labor covering research, practice, professional presentation, and follow-up—written for job seekers at all experience levels.

Growth Mindset Resources

- [SkillUp: Developing a Growth Mindset for Career Changers](#) - A free, recorded career coaching session exploring how a growth mindset can empower you during a job search—including practical steps for overcoming a fixed mindset, embracing continuous learning, and building the resilience to navigate career transitions.

Lesson 4.4: Overcoming Barriers and Accessing Support

Finding General Support

- [National Community Action Partnership \(NCAP\)](#) - Locate a community action agency near you to learn what support services they offer.
- [Child Care Aware: State by State Resources](#) - Find local childcare resources and assistance programs.
- [Benefits.gov](#) - Find financial support using this full federal benefits finder, including housing assistance, SNAP, and healthcare.

- [211.org](#) - Dial 2-1-1 or visit this website to find free, local transportation assistance and other support services—including rides to work, gas vouchers, and public transit information—available in your community. You can call 24/7, and resources are available in multiple languages.
- [Career OneStop: Library Finder](#) - Need support with computer and internet access? Public libraries in virtually every community have free computer and internet access; use this tool to find one near you.
- [The National Safety Council \(NSC\): Work Safety Topics](#) - Nearly 13,000 American workers suffer an injury every day; each is preventable. Here are some of the workplace safety topics NSC is focusing on.
- [Chicago Women in Trades: Equity Resource Center](#) - Chicago Women in Trades provides guidance and practical support to industry stakeholders nationwide through its Equity Resource Center, aiming to increase the number of women entering and staying in the skilled trades.

Veterans Support

- [U.S. Department of Veterans Affairs: How to Use Your GI Bill Benefits](#) - Explore information on how to use your GI Bill benefits to supplement apprenticeship wages.
- [Veterans Crisis Line](#) - Call 1-800-273-8255 and Press 1 to access crisis support services specifically for veterans.

Legal Support

- [Legal Services Corporation](#) - Use this site to find free legal aid to understand your rights and options. LSC is an independent nonprofit established by Congress in 1974 to provide financial support for civil legal aid to low-income Americans. The Corporation currently provides funding to 130 independent nonprofit legal aid organizations in every state, the District of Columbia, and U.S. Territories.
- [Legal Action Center: National H.I.R.E. Network Clearinghouse](#) - This site includes state-specific governmental agencies and community-based organizations that may assist people with criminal records in reentering the workforce.

Mental Health Resources

- [Mental Health America: Take a Mental Health Test](#) - A free, confidential online screening tool that helps you understand your mental health by asking simple questions about how you've been feeling. Results take just a few minutes and can be a useful first step toward getting support.

- [Mental Health First Aid](#) - Mental Health First Aid gives you the skills to recognize when someone is facing mental health or substance use challenges—and the confidence to be their first source of support.
- [NAMI: Finding a Mental Health Professional](#) - Step-by-step guidance from the National Alliance on Mental Illness on how to find a therapist, counselor, or psychiatrist—including tips on navigating insurance, costs, and what to look for in a provider.
- [U.S. Department of Labor: Accommodations for Employees with Mental Health Conditions](#) - This webpage has information explaining the workplace accommodations available to employees with mental health conditions under the law, and how to request them from an employer.
- [The Construction Industry Alliance for Suicide Prevention \(CIASP\)](#) - CIASP's mission is to provide resources and support for suicide prevention, mental wellness, and safety in construction.
- [SAMHSA National Helpline](#) - SAMHSA's National Helpline is a free, confidential, 24/7, 365-day-a-year treatment referral and information service (in English and Spanish) for individuals and families facing mental and/or substance use disorders.
- [SAMHSA 988 Suicide and Crisis Lifeline](#) - 988 offers 24/7 judgment-free support for mental health, substance use, and more. Text, call, or chat 988.

Disability Resources Available

- [The Americans with Disabilities Act \(ADA\)](#) - The official ADA website explains your legal rights as a person with a disability—including mental health conditions—in employment, public services, and the workplace.
- [U.S. Department of Labor: Disability, Protected Characteristics](#) - Information on disability and protected characteristics.
- [Job Accommodation Network](#) - Free, expert, and confidential guidance on workplace accommodations.
- [Working with Vision Loss: Real Careers. Real Strategies](#) - Explore how professionals who are blind or have low vision navigate their workdays and build successful careers.

Lesson 4.5: Commitment to Action—Your Next Steps

Goal Setting and Planning Tools

- [Indeed: 30-60-90 Day Plan Guide](#) - Template and guidance for building your plan, broken into 3-day, 60-day, and 90-day time periods. Note that this resource is focused on a plan for when you start a new job, but the steps and template are just as applicable for setting your goals for the application process.

Apprenticeships in Clean Energy (ACE) Network

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