Princeton Plasma Physics Laboratory
Apprenticeship Information Session 2022
Message From PPPL’s Executive Management Team

Professor Steven Cowley
Laboratory Director

Kristen Fischer
Chief Financial Officer, Head, Business Operations

Craig Ferguson
Deputy Director for Operations and Chief Operating Officer

Jonathan Menard
Deputy Director for Research and Chief Research Officer

For the full leadership team click here.
• **What We Do at PPPL**- Shannon Swilley Greco, Science Education Program Leader

• **Apprenticeship Program Overview**- Diana Adel, Program Administrator

• **Benefits Overview**- Christina Liebrich, Talent Acquisition Manager

• **Q&A**- Questions may be submitted via chat box or verbal.
What We Do
• PPPL is one of 17 DOE national laboratories.
• We are managed by Princeton University but have a government mandate that focuses on fusion energy research and basic plasma science.
• 600+ employees all contributing to the mission of clean energy
The Laboratory has three major missions:

- **Fusion:** To develop the scientific knowledge and advanced engineering to enable fusion to power the U.S. and the world

- **Plasma Manufacturing:** To advance the science of nanoscale fabrication for industries of the future

- **Frontiers of Plasmas:** To further the scientific understanding of plasmas from nano- to astrophysical-scales
When small hot atoms (usually hydrogen) combine….

There is a lot of ENERGY produced!

This is FUSION!
The Sun’s Energy Comes from FUSION

The Sun relies on its incredible mass.

We don’t have that option.
We Have Another Way

• MAGNETS!
• SUPER HOT!
• Hotter than gas, charged particles that start doing weird things.
PPPL Apprenticeship Overview
WHAT IS APPRENTICESHIP?

Apprenticeship is an industry-driven, high-quality career pathway where employers can develop and prepare their future workforce, and individuals can obtain paid work experience, classroom instruction, and a portable, nationally-recognized credential.

There are five key components of an apprenticeship. These components differentiate apprenticeships from other types of workplace training programs in several ways:

**PAID JOB**
Apprenticeships are jobs! Get paid to learn throughout your apprenticeship with a guaranteed wage increase as you develop new skills.

**MENTORSHIP**
Gain workplace-relevant skills in the field of your choice through on-the-job learning and under the supervision of an experienced mentor.

**WORK-BASED LEARNING**
Gain structured on-the-job learning to prepare for a successful career.

**CREDENTIALS**
Earn a portable, nationally-recognized credential within your industry.

**CLASSROOM LEARNING**
Most apprenticeship opportunities include classroom instruction and often provide college credit for your experience while allowing you to avoid student debt.

cited from apprenticeship.gov
Pre-Apprenticeship Program

- 4-week program that includes shadowing and training skilled technicians in the areas that will be covered in the Apprenticeship Program rotations.
- Only pre-apprentices are eligible to apply to the Apprenticeship Program

Apprenticeship Program

- 4 years or 8,000 on-the-job training (OJT) hours
- Provides a unique experience, education, and skill set that prepares you for many positions in your field along with very specialized skills that you can only obtain at PPPL.
- Full time job at PPPL at a competitive salary and full benefits from Princeton University.
- Paid tuition and related materials - Attend class in the evenings (two days a week) for your related technical instruction (RTI) (576 hours), at one of our current RTI partners: Mercer County Technical School and Mercer County Community College. The best part is no college debt!
- Daily mentoring by our seasoned professionals.
All registered positions have to complete 8000 hrs.

**Electrical Technician**

<table>
<thead>
<tr>
<th>Task Description</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Low voltage power and industrial electronics (instrumentation and Control Systems)</td>
<td>2,000</td>
</tr>
<tr>
<td>AC/DC Converter and drive systems, and auxiliary equipment</td>
<td>2,000</td>
</tr>
<tr>
<td>Electronics and computerized controls (fabrication, troubleshooting, (maintenance, etc.)</td>
<td>2,000</td>
</tr>
<tr>
<td>AC Power distribution, high voltage, protective relays</td>
<td>1,000</td>
</tr>
<tr>
<td>Engineering, drafting, CAD, layout, design, power controls, etc.</td>
<td>500</td>
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<tr>
<td>Related Instruction on Grounding Systems, High V/I Sources, substation awareness (PSE&amp;G) (min hrs)</td>
<td>500</td>
</tr>
<tr>
<td><strong>TOTAL HOURS</strong></td>
<td><strong>8,000</strong></td>
</tr>
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If you would like to learn about the other registered apprentice positions here at PPPL, please visit our [apprenticeship website](#).
March 1st
Pre-Apprenticeship Applications Open

May 10th
Applications closes

June 14th
Pre-Apprenticeship selection are confirmed

July 11th
Start of the Pre-Apprenticeship Program

August 12th
End of Pre-Apprenticeship Program

August 13th
Apprenticeship Selection notified

August 30th
Start of the Apprenticeship Program
Join us as we lead the nation and world on the road to clean energy by becoming a PPPL apprentice!

Currently hiring Pre-Apprentices:
• 2-Electrical Tech- Engineering
• 2-Machinists-Engineering
• 2-Electronic Tech- Engineering
• 2-IT Generalists- IT
• 2-HVAC Tech-Facilities

Apprentice Positions
• 1-Electrical Tech- Engineering
• 1-Machinists- Engineering
• 1-Electronic Tech- Engineering
• 1-IT Generalists- IT
• 1-HVAC Tech-Facilities

2023 we are looking to expand in new areas such as Accounting, ES&H and Facilities.
PPPL Employee Benefits

Comprehensive Health/Welfare Benefits:
- Medical, Dental and Vision; different plan options
- Flexible Spending Accounts
- STD/LTD
- Tuition Reimbursement
- Retirement/Pension Plan – Princeton contributes 9.3%
- Various health and wellness resources (optional)
- Various life insurances
- Generous paid time off (24 vacation days, 11 university holidays, sick days and 2 personal days)

PPPL Recreation & Perks
- On-site gym
- Health Coach
- Yoga Club
- Walk and Run Club
- Snow Ski and Board Club
- On-site subsidized cafeteria
- Flexible work arrangements

Employee & Affinity Resource Groups
- Asian Cultural Alliance (ACA)
- Latino Princetonians at PPPL (LP)
- Women in Engineering (WiE)
- Women in Plasma Physics (WiPP)
- Young Professionals Network (YPN)
- *Employees of PPPL can and are encouraged to join ERGs at Princeton University

Community Involvement
- Communiversity
- United Way
- Science on Saturdays
- Science Bowl
- PPPL Tours (pre-covid-19)
- Young Women’s Conference in STEM
- American Physical Society (APS)
- Student Reception Event
- *Employees of PPPL can be a part of participating Princeton University’s community events
Helpful Links:

- Princeton Plasma Physics Laboratory (PPPL)
- U.S. Department of Energy National Laboratory
- Princeton University
- PPPL Apprenticeship Program
- Mercer County Technical Schools
- Mercer County Community College
- Department of Labor Apprenticeship Program

For information, contact Diana Adel - Program Administrator, apprenticeship@pppl.gov