

# OPTICS 107

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## Education

- Master of Science**, Applied Physics (Focus Optical Materials and Devices) **Expected Sept 2018**  
University of Oregon, Eugene, OR
- Bachelor of Science**, Physics, Math Minor – Sigma Pi Sigma Honor Society **June 2017**  
Central Washington University, Ellensburg, WA
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## Research

- Central Washington University, Ellensburg, WA** **Sept 2016 - June 2017**
- Studied special relativistic effects of in-flight electron-positron annihilation by collecting precision measurements with high resolution gamma ray spectroscopy instruments.
  - Performed data normalization, background subtraction, and distortion scaling with Mathematica and Excel.
  - Practiced safe handling of radioactive sources and liquid nitrogen.
  - Wrote research grant which received funding and presented research at Central Washington University's SOURCE convention.
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## Work Experience

- Central Washington University Physics Department, Ellensburg, WA** **Mar 2016 - June 2017**  
*Physics Teaching Assistant*
- Assisted professor in labs and lectures, guiding students to develop good problem solving techniques.
  - Delivered electromagnetism lectures to a class of 35 students during professor's absence and lead review sessions to prepare students for upcoming exams
  - Developed solutions to errors in lab procedures by constructing and testing circuits prior to lab.

- Northwest Medical Physics Center, Kennewick, WA** **June 2016 – Aug 2016**  
*Summer Intern*
- Operated a linear accelerator to perform mandated quality assurance (QA) tests for patients' cancer treatment plans and performed statistical analysis of dose distribution for treatment plan approval.
  - Compiled the annual linear accelerator QA tests by collecting data on field profile, intensity, x-ray energy distribution, and geometric alignments using a variety of equipment including ionization chambers, electrometers, water tanks, and attenuating phantoms.
  - Created new normalization file for CAT scan on Varian Eclipse treatment planning software.

- Kingston Adventures, Kingston, WA** **Summers 2010-2014**  
*Assistant Manager*
- Provided kayak and paddleboard training to first-time customers and ensured customers had an overall positive experience.
  - Sold retail items, maintained and racked equipment, and performed maintenance on the shop's building and grounds.
  - Guided highly profitable nighttime paddle board groups in water with fluorescence algae.

- Summit at Snoqualmie, Snoqualmie Pass, WA** **Dec 2011 - April 2012**  
*Snowboard Instructor*
- Responsible for teaching snowboarding basics to groups of 4 to 8 students.
  - Received the highest number of parent commendations of instructors working at Kid's camp.
  - Adaptively developed effective methods to coach students.
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## Skills

### Programming

Mathematica intermediate proficiency, Matlab basic proficiency, Java basic proficiency

### Software

AutoCAD intermediate proficiency, Zemax intermediate proficiency