**Joshua R. Wiens**

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# Education

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| Bachelor of Science – Mechanical Engineering | *University of Oklahoma, Norman, OK* |

* Minor: Electrical & Computer Engineering

**Primary Interests:** Electromechanical Systems

# Professional Experience

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| Systems Engineering | *Ion Beam Applications, Oklahoma City, OK – Nov 2015* |

* Cyclotron system maintenance involving various subsystem including:
  + High power distribution
  + Large scale cooling
  + Mechanical patient positioning and beam delivery
  + High vacuum particle acceleration and transport
* Troubleshooting and resolving day-to-day system failures using various software and measurement tools.
* Trained to work in hazardous environments including high voltage, heights, and radiation.

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| Shift Manager | *Five Guys, Norman OK – Jan 2014* |

* Team Leader, coordinator, and personnel training specialist.
* Detail oriented inventory and money management.

# Academic Experience/Achievements

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| Capstone Team Leader |  |

* Managed simultaneous development of multiple modular electro-hydraulic subsystems.
* Designed and fabricated control/power infrastructure for electrical and hydraulic power systems.
* Fabricated hierarchical hardware control system using multiple networked microcontrollers.
* Developed software for plug & play system to efficiently test separate system modules.

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| Precapstone Autonomous Design Competition |  |

* Pioneered the use of hexagonal matrix for ideal strength-weight characteristics in 3D printed chassis.
* Manually machined aluminum for particular components such as the axels and steering column.
* Designed, fabricated, and installed electrical control/power systems.
* Developed embedded control software applying DSP to external sensor feedback.
* Achieved highest score in competition with back-to-back flawless attempts.

# Skills

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| Hardware/Design | | Computer/Software | Interpersonal |
| * Electromechanical System Diagnostics. * CAD(Solidoworks/Autodesk) * 3D Printing * Cable & Wiring | * C/C++ * Python 3 * MATLAB * LabVIEW (Former CLAD) * Embedded Digital Control * Data Acquisition & Processing | | * Team Communication * Information Presentation * Personnel Training * Customer Service |