OVERVIEW

Raytheon Company is a technology and innovation leader specializing in defense, civil government and cybersecurity solutions. Founded in 1922, Raytheon provides state-of-the-art electronics, mission systems integration, capabilities in C5I (command, control, communications, computing, cyber and intelligence), sensing, effects and mission support services.

Roles and Responsibilities
Raytheon's Electrical Design Directorate (EDD) provides engineering design, integration, test and production to core radar, sonar, torpedo and combat system competencies including process and control, integration and test, power systems, torpedo and sonar electronics, receivers and exciters, antennas, and microwave subassemblies. Opportunities currently exist within the following EDD departments:

- Antenna & Microwave
- Microelectronics Engineering and Technology
- Power and Electronic Systems
- Receiver, Exciter and Signal Processing
- Ship Electronics Systems
- Test Development
- Test Engineering

Electrical Engineer I or II
Job Description: The newly hired Electrical Engineer researches, develops, designs and tests electrical (Analog, Power, RF/Microwave, and/or Digital) components, equipment, systems, sub-systems, and networks for defense, commercial, industrial, domestic and foreign purposes. Applications include, but are not limited to, radar, missile, ship systems electronics, torpedoes, and communication systems. The tasks may include laboratory integration, test and evaluation, and fault isolation of prototype hardware. The engineer may also support system studies, analyses, and simulations from concept through detailed design and production. New engineers will work with and will be mentored by senior engineers.

Possible focus areas:
- Antenna Design - Radiating Elements, Reflectors, Feedhorns, Radomes/Frequency Selective Surfaces, Simulation and Layout, Antenna Test
- Antenna Systems - Antenna System Analysis, Array Analysis, Electromagnetic Analysis, Array Calibration and BITE, Signal Level, Assembly, Integration and Test
- Antenna/Microwave Subsystems - Phased Array Subsystems, High Power Subsystems, Antenna Subsystems, Signal Level Analysis, Subsystem Integration and Test
- Mixed Signal Design - Receiver A/D Converters, Direct Digital Converters, Receiver D/A Converters, Digital Waveform Generators, Mixed Signal CCAs, Mixed Signal Modules and Subsystems
- Digital Hardware - Subsystem/Module Digital Circuits, FPGA/ASICs, Mixed Process/Photonics/Sensors, COTS systems, COTS Interfaces, Subsystem Development, VME/PCI interfaces Digital Systems, System Trades, Architecture, Embedded Processing
- Software Design - Real-time Signal Processing, Embedded Software, High Speed Computing hardware and software
- RF/Microwave Design - Simulation and Layout, Passive Circuits, Amplifiers, Ferrites, Component Test, Material Characterization, Module Design and Test, RF ICs, MMICs Perform measurements on state-of-the-art microwave circuits and devices for the purpose of characterization and modeling.
- Semiconductors –Transistor device physics and design; compound semiconductor processing and manufacturing; materials and materials growth (Including GaAs and GaN),reliability of devices and materials; testing, characterization and development.
- Servo Control Design
- Power Conversion - AC/DC, DC/DC and DC/AC, Linear and Switching Supplies, PFC, ZVS, ACS and Resonant Circuits, Synchronization, Noise Controls
- Power Design - Filter, Harmonic Control, EMI, Circuit Simulation, Magnetic Design, Overload, Short Circuit, Stress Analysis
- Test Development - Hardware and/or Software Test Program Set generation, for testing radar, communication, missile, combat control systems, subsystems and components for various IDS programs
- Test Engineering - Test execution and debug of failures
- Research and Development – Emerging Technologies, Wafer Fabrication, Process Design, Reliability testing

This position requires the eligibility to obtain a security clearance. (Non-US citizens may not be eligible to obtain a security clearance. The Defense Industrial Security Clearance Office (DISCO) an agency of the Department of Defense, handles and adjudicates the security clearance process. Security clearance factors include, but are not limited to, allegiance to the US, foreign influence, foreign preference, criminal conduct, security violations and drug involvement. Employment is contingent on other factors, including, but not limited to, background checks and drug screens.).

Education and Qualifications
Do you have this Basic Qualification?
- Candidates must be currently enrolled in a BS or MS degree program (or completed a degree no more than 18 months prior to start date) with an emphasis in Electrical
Do you have the following Desired Qualifications?

- GPA of 3.0 or higher
- MS Degree (would be a plus)
- Customer focus and collaboration skills
- Excellent written and oral communication skills
- Strong analytical skills
- Experience with hardware/software design for embedded control
- Experience with VHDL or Verilog
- Exposure to Electromagnetic simulation tools such as Ansoft HFSS, HP ADS, and analytical tools such as MatLab/Simulink
- Familiarity with simulation and CAD tools is a plus
- One or more of the following courses: Microwave/RF Engineering, Electromagnetic Theory, Antenna Theory, Communications, Power Electronics Design, Digital Design, Digital Signal Processing, Control Systems Design
- Previous internship or co-op with a defense contractor and/or government agency
- Some project work or co-op/intern experience in control systems design, digital design, Power or Analog design, antenna or RF/Microwave design, analysis or simulation
- Willingness to travel for company business to non-Raytheon facilities

Be a key contributor to our Electrical Design team…

Members of the Electrical Design Directorate hold key roles in all of Raytheon's Integrated Defense Systems (IDS) programs. The work performed in the Electrical Design Directorate falls within many different categories. An example of the work that is performed within one of the departments in this directorate is working with phased array antenna design teams who analyze array performance, examine time side lobes, noise figure, noise floor, and other parameters. This would require someone that is familiar with numerical modeling techniques and tools so that they could determine the impact of array performance on radar or communication system performance.

Working in this directorate involves close cooperation and communication with other engineering disciplines including systems, mechanical, and software. Engineers in this directorate also follow through their designs into production supporting manufacturing operations and system integration and test functions. Teamwork, trust and accurate results are essential to the success of working within the Electrical Design Directorate.

How to Apply