# Structural Engineer: Associate Principal Structural Engineer

Analyzes, researches and develops structural engineering specifications involving metals and non-metallic or composite structural materials for product design. Develops specifications for operation of product to include structural, mechanical, hydraulic, electrical, power plant, armament, heating and ventilating equipment and maintenance designs. Analyzes damage tolerance, durability, design allowables and structural modeling. Specific structural engineering specialties may include dynamics and loads, stability and stress fatigue and thermal analysis. Tools utilized may include CATIA, IDEAS, ProEngineer and a variety of software applications.

#### Discretion/Latitude

Work is performed without appreciable direction. Exercises considerable latitude in determining technical objectives of assignment. Completed work is reviewed for desired results from a relatively long-term perspective.

# Knowledge, Skills, & Dilities

Applies extensive technical expertise and has full knowledge of other related disciplines. Answers technical questions regarding products and services, and may take part in putting together proposals, configurations and product offerings.

#### **Problem Solving**

Develops technical solutions to complex problems that require the regular use of ingenuity and creativity.

## **Impact**

Regularly called upon to function in a project leadership role. Erroneous decisions or recommendations would typically result in failure to achieve major organization objectives

#### Liason

Represents the organization as the prime technical contact on contracts and projects. Interacts with senior external personnel on significant technical matters often requiring coordination between organizations.

### **Minimum Education and Experience**

10-12+ years with a BS in designated Engineering or a related field. Employees usually have an advanced degree in their field of specialization.