Core Information:

Position: R&T Engineer – Structural Analyst – Entry Level

Location: Rochester, NH

Reports to: Analytical Design & Simulation Team Leader – Research and Technology

The R&T Engineer with structural analysis focus is responsible for performing technical work on internal and customer funded R&T projects directed toward the computational modeling of problems associated with the fabrication of composite structures that include three-dimensional fiber reinforcement. This work includes process modeling (such as thermal and structural analysis of molding tools and fabric forming simulations), material modeling at the micro and macro scales, and structural modeling (linear and non-linear static, dynamic, and thermal analyses).

Key Duties/Responsibilities:

1. Execute R&T project plans under the direction of a Senior R&T engineer or Engineering Specialist. These projects will typically be focused on analyzing processes used at AEC to fabricate composite structures and on evaluating the performance of the structures being produced.
2. Building computational models of physical phenomena, with an emphasis on finite element modeling.
3. Evaluate results of computational models to assess the performance of processes, materials, and structures.
4. Assess the validity of numerical solutions.
5. Document analyses.
6. Provide supervisors with input for engineering/technical project updates and communications as needed by internal and external customers.

Position Competencies:

Knowledge:
- Engineering degree in Mechanical or Civil engineering preferred; advanced degree is considered a plus.
- Finite Element Analysis related coursework or formal training in this area is required.
- Exposure to commercial software for performing finite element analysis (e.g., Abaqus, ANSYS, Nastran - MSC or NX).
- Exposure to a scripting and programming language such as Python; C++ is considered a plus.
- Exposure to aerospace materials and structures.

Skills:
- Understanding of numerical methods for process, material, and/or structural modeling.
- Understanding of finite element modeling techniques.
- Understanding of a scripting and programming language such as Python; C++ is considered a plus.
- Understanding of manufacturing processes for polymer matrix composites.
- MSOffice proficient: Excellent written and oral communication.
- Project Management.

Abilities:
- Proven problem solving skills in teamwork setting.
- Willingness to perform "hands-on" work in dynamic work setting.
- Strong Decision-making with ability to set and balance priorities.
- Customer Focus.
- Attention to detail.

"KSA" Definitions:
Knowledge: examines educational requirements as well as body of facts, information or disciplines that are key- include certifications please.

Skills: proficiencies or expertise that come from specific training or practice.

Abilities: a- cluster of integrated skills some of which may not be obtained through training or practice (attitude or trait plus skill= ability) (example- “customer focus” or “results driven”)