



Matthew Rioux

Staff Engineer

Education

BS, Mechanical Engineering
with Finite Element Analysis,
Computational Fluid
Dynamics and Computer
Aided Design, University at
Buffalo, 2021

Year Joined AMPHION
2022

Years of Experience
Since 2022

Professional Registrations
Engineer In Training (E.I.T) –
New York
NCEES Record Certificate

Mr. Matthew Rioux has been a Staff Engineer with Amphion Analytical Engineering, P.A. since January 2022. Mr. Rioux has experience with mechanical Engineering and technical projects including finite element analysis (FEA), Computational Fluid Dynamics, and computer integrated programming.

Mr. Rioux has performed structural analysis of existing components, finite element analysis (FEA), drafting and modeling, component design, and computational fluid dynamics (CFD). He specializes in 3-D modeling of mechanical equipment and structural elements using programs such as AutoCAD and Solidworks.

Mechanical Engineer

Mechanical design engineering consisted of created a new approach for fixtures, and creating a new universal method to manufacturing small components. These projects reduced production time and saved company spent money annually. Analysis of these components using FEA and CFD was used to validate the loads applied to mechanical components. Creation of drawings were provided to produce these components following ASME Y14.5 standards.

Computational Fluid Dynamics

Design Engineer to assist with analyzing multiple complex fluid power systems and fluid transport systems to understand heat transfer and fluid coupled systems. Assisted a team to analyze the HVAC System in a hospital environment to understand the fluid flow within the room.

Storm-Water Drainage Design

Design Engineer to assist with the design of a slip line for a deteriorating culvert. During this process, created an innovative software that would allow engineers nationwide to calculate the storm-water-runoff location and flow-rates.