



## Project Name

Crane Design

Project Overview	
<p>Cranes are essential equipment for heavy lifting especially for the construction industry. The aim of this project is to propose a new crane design able to carry construction materials to elevated heights. The structure of the crane should be properly designed first to withstand static and dynamic loads. These cranes are usually dangerously attached to the ground and are prone to wind excitations. Therefore, design for fatigue is vital for the safety of the workers, buildings and structures in the vicinity of the construction area. Finally, the mechanism that will be used to operate the crane will be proposed.</p>	
Project Areas	
<ul style="list-style-type: none"> <li>MEE442 Mechanical Vibration</li> </ul>	<ul style="list-style-type: none"> <li>MEE422 ME Design</li> </ul>
Team Size and Majors needed	
MEE: 4 students	INE: 0 student
Project Deliverables	
<p>Project should consist of the following:</p> <ul style="list-style-type: none"> <li>- Design of the crane structure.</li> <li>- Static finite element analysis.</li> <li>- Dynamic finite element analysis.</li> <li>- Fatigue analysis of the final design.</li> <li>- Design of the operating mechanism.</li> </ul>	