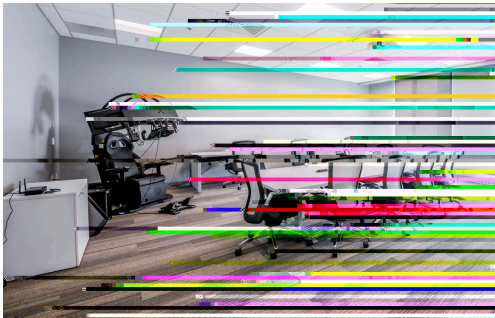
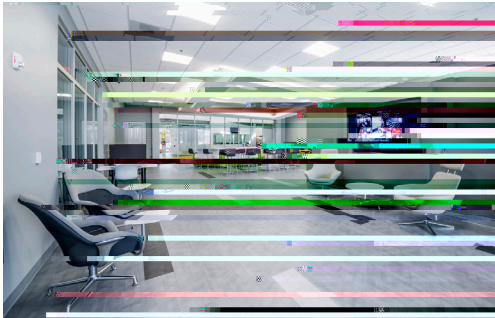
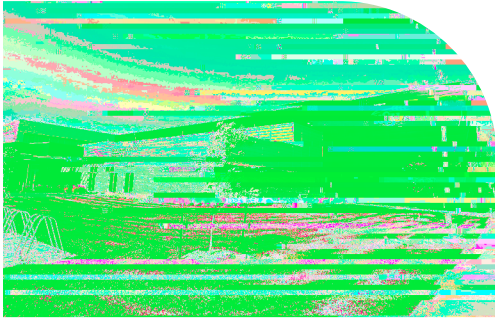


# ADVANCED VIRTUAL ENGINEERING & TESTING



## LOCATION

JERRY MORAN CENTER

1111 N. 17th St., Wichita, KS 67260



WICHITA STATE UNIVERSITY

## AVET LABORATORIES

### VIRTUAL ENGINEERING

Virtual engineering involves the use of computer-aided design (CAD) and simulation tools to create and test digital models of physical systems. This process allows engineers to identify and resolve design issues before physical prototypes are built, saving time and resources. Key applications include structural analysis, fluid dynamics, and system integration.

### BUILDING BLOCK

Building blocks are the fundamental components used in the construction of complex systems. In the context of virtual engineering, these blocks represent individual modules or sub-systems that are designed and tested separately before being integrated into a larger, more complex model. This modular approach simplifies the design process and facilitates the identification of component-level issues.

### FLIGHT SIMULATION

Flight simulation is a critical tool for testing and validating aircraft designs. It involves the use of computer models to simulate the flight characteristics of an aircraft under various conditions. This allows engineers to study the aircraft's performance, stability, and control systems in a safe and controlled environment. Flight simulation is essential for identifying potential flight issues and optimizing aircraft performance.

Flight simulation is a complex process that involves the integration of various data sources, including aerodynamic data, engine performance data, and sensor data. This data is used to create a realistic and accurate simulation of the aircraft's flight. The simulation results are then used to inform design decisions and to develop flight test plans. Flight simulation is a key component of the virtual engineering process.

### CRASH DYNAMICS

Crash dynamics is the study of the forces and motions that occur during a crash event. This is a critical area of research for the design of safe and reliable aircraft. Crash dynamics simulations are used to predict the behavior of aircraft components and structures during a crash, allowing engineers to identify potential failure points and to design components that can withstand the forces of a crash. This research is essential for improving aircraft safety and performance.

### CONTACTS

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