ANSYS AIM Learning Modules

What is ANSYS AIM?

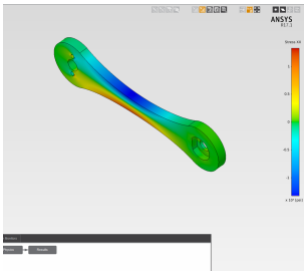
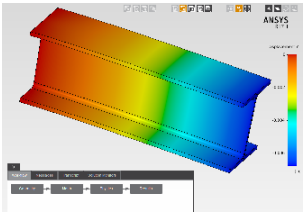
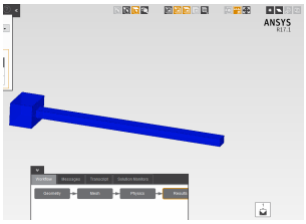
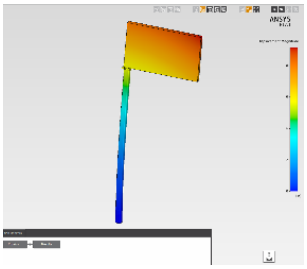
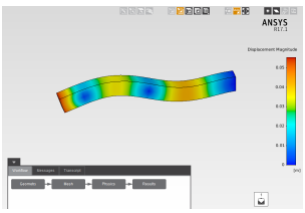
ANSYS AIM is a simulation package that offers single and multiphysics solutions for thermal, modal, structural, fluid, and electrical analyses. ANSYS AIM uses finite-element and related methods to solve the underlying governing equations and the associated problem-specific boundary conditions.

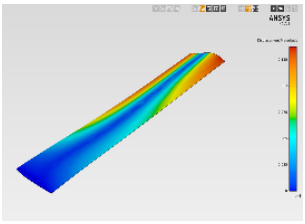
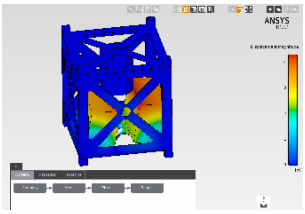
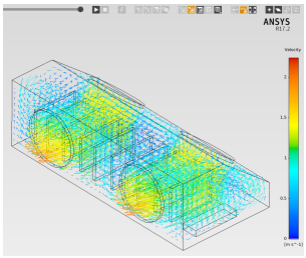
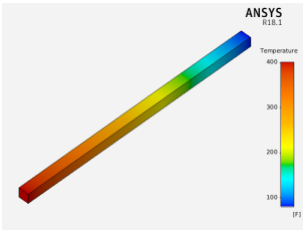
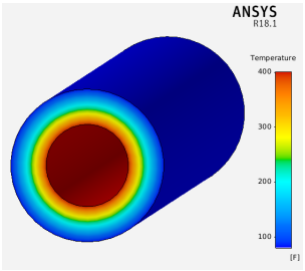
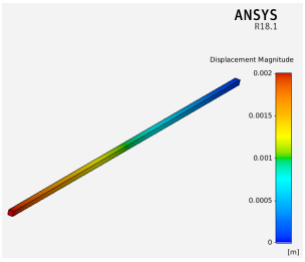
List of Learning Modules

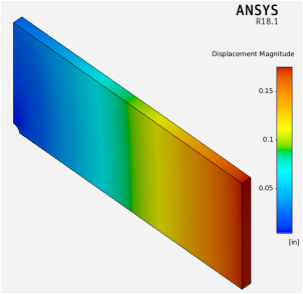
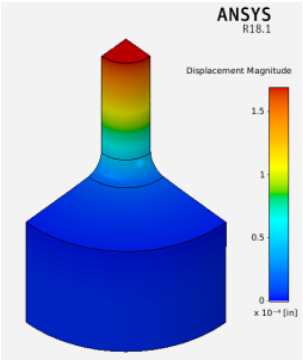
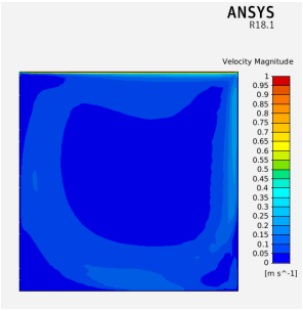
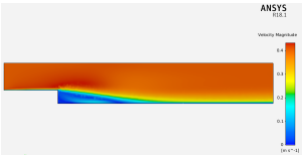
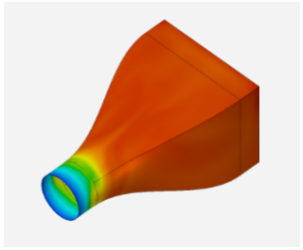
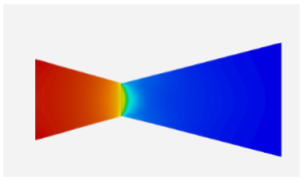
In this short course you will be taken through ANSYS AIM and learn how to solve a variety of problems. The learning modules lead the user through the steps involved in solving a selected problem or set of problems. We not only provide the solution steps but also the rationale behind them. It is worthwhile for you to understand the underlying concepts as you travel through the learning modules in order to be able to correctly apply ANSYS AIM to other situations that you may encounter. You would be ill-served by clicking through the learning modules in zombie-mode. Each learning module is followed by problems which are geared towards strengthening and reinforcing the knowledge and understanding gained in the learning modules. Working through the problem sets is an intrinsic part of the learning process and shouldn't be skipped.

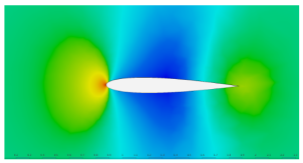
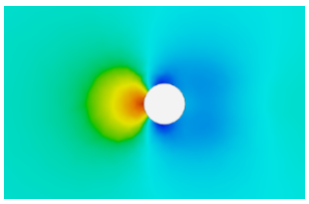
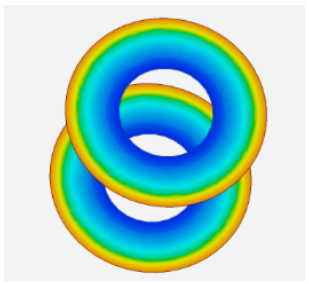
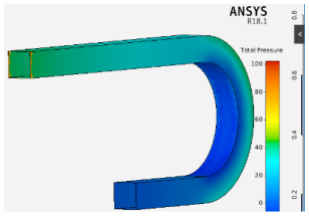
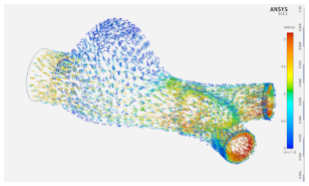
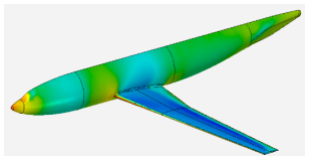
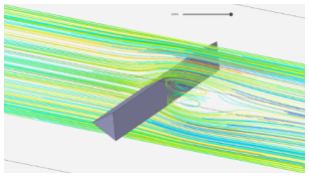
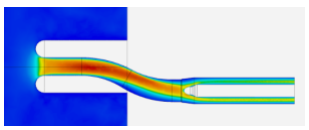
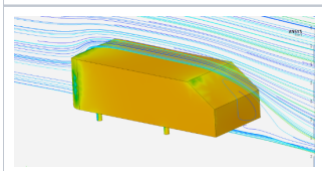
Analysis Using ANSYS AIM

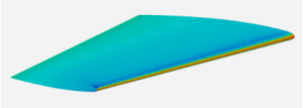
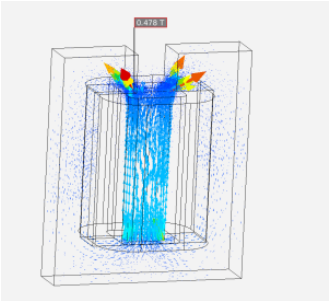
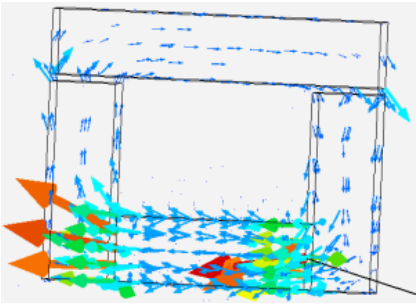
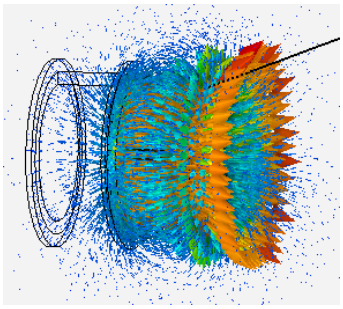
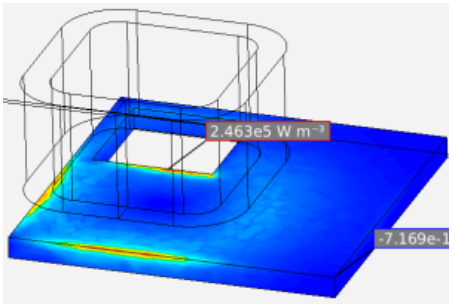
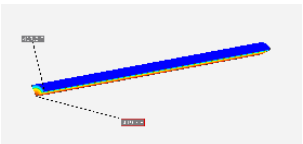
The following ANSYS tutorials show you how to obtain a solution from scratch using *ANSYS AIM.*

	Bike Crank	Static Structural
	I Beam	Static Structural
	Stress Due to Gravity	Static Structural
	3D Sign Post	Static Structural
	Cantilever Beam Modal Analysis	Modal Analysis

	Modal Analysis of a Wing	Modal Analysis
	Satellite Modal Analysis	Modal Analysis
	3D Convection through an Electronics Box	Fluid Flow
	Heat Conduction in a Bar	Thermal
	Heat Conduction in a Hollow Cylinder	Thermal
	Thermal Stresses in a Bar	Thermal

	Plate with a Hole	Static Structural
	Stepped Shaft in Axial Tension	Static Structural
	3D Lid Driven Cavity - Cube	Fluid Flow
	3D Backwards Facing Step	Fluid Flow
	Fluid Flow Through a Transition Duct	Fluid Flow
	Compressible Flow in a Nozzle	Fluid Flow

	Compressible Flow Over an Airfoil	Fluid Flow
	Steady Flow over a Cylinder	Fluid Flow
	Taylor-Couette Flow between Rotating Cylinders	Fluid Flow
	Flow Through U-Duct	Fluid Flow
	Flow Through an Aortic Aneurysm	Fluid Flow
	Compressible Flow over a Wing-Body Junction	Fluid Flow
	Fluid Flow over a Bluff Body	Fluid Flow
	Flow in a S-Duct	Fluid Flow
	Flow over an Ahmed Body	Fluid Flow

	Transonic Flow over a Wing	Fluid Flow
	3D Static Force Computation	Magnetostatics
	Permanent Magnetic Circuit with Air Gap	Magnetostatics
	Forces in Permanent Magnets	Magnetostatics
	Eddy Current / Magnetic Frequency Response	Magnetics
	Thermal Analysis of an Electrical Wire	Electrical Conduction & Thermal