

Robotics is the field of designing, building, and operating robots to perform tasks autonomously or semi-autonomously. Robots integrate mechanical components, sensors, control systems, and software.

Robotics applications include manufacturing automation, medical surgery, space exploration, and service robots. Advances in artificial intelligence have enhanced robot perception and decision-making.

Robotics improves productivity and safety but also raises concerns about job displacement and ethics. Research continues to focus on human-robot interaction and responsible deployment of robotic systems.