機械工学科

Department of Mechanical Engineering

http://www.oyama-ct.ac.jp/M/

■機械製図
Mechanical Drawing

機械工学はあらゆる機械システムを生み出す原動力となる「ものづくり」の学問であり、自動車の設計製造、ロボット制御、医療福祉機器の機構設計、産業機械の設計生産など広い分野で重要な役割を果たしています。

機械工学科では、材料、加工、熱、流体、運動、情報、設計、システム、ロボット、計測、制御などの幅広い分野の教育、研究を行ない、科学的・技術的基礎を身につけた創造性豊かな工学技術者の育成を目標としています。そのため、低学年では数学、物理の基礎学力と理解力、機械製図、工作実習などの演習、実習を通してものづくりの楽しさを学びます。高学年になると材料力学、水力学、熱力学、機械力学などの機械工学の基礎科目やメカトロニクス、材料強度学などの応用科目を学びます。また、機械設計製図では強度計算やCADを習得します。さらに、卒業研究へと発展し、これまでに培った専門知識から問題解決力と創造力を養い、工学技術者としての基礎的素養を高められるよう教育体系を整えています。

取得可能な資格の例として、「消防設備士」、「ボイラー技士」などがあります。

Mechanical Engineering is the academic program designed to create all mechanical systems in various fields in modern technology and society such as designing and manufacturing of vehicles, electromechanical robotic systems, medical and welfare equipment design and industrial machinery design and production.

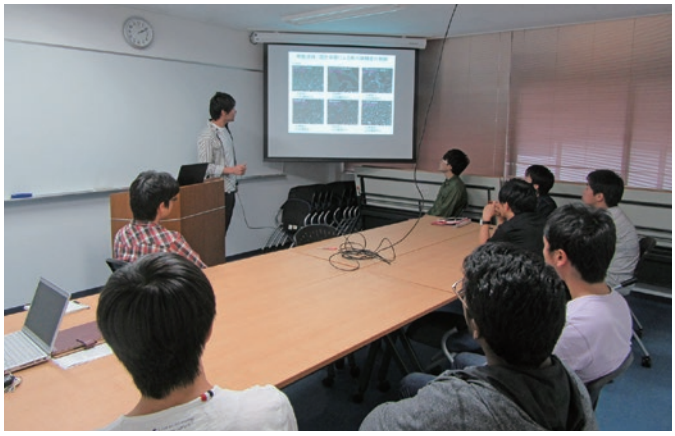
The Department of Mechanical Engineering provides courses in the field of materials, machining, heat, fluid, motion, information technology, machine design, system engineering, robotic system, measurement and instrumentation, and control engineering. In these, the department aims to provide students with a solid foundation and scientific knowledge of the engineering sciences that will help them become professional engineers in their chosen fields of endeavor.

Therefore, in the beginning years, the students develop their academic and comprehension ability through lectures on mathematics and physics. They also gain the knowledge of manufacturing through mechanical drafting, practices and experiments. In the fourth and fifth years, students take the theoretical courses concerning mechanics of materials, hydraulics, thermodynamics, and dynamics of machinery. They learn computer aided design and the methods for computing mechanical strength through the course on mechanical design. Furthermore, by graduation research and application of their knowledge, the students develop their ability of solving problems in practical engineering and become more creative.

Thus, the department has established the educational system which is capable of fostering professional engineers.

Examples of qualifications that can be acquired include “Fire Defense Equipment officer”, “Boiler Expert”, and so on.

■機械工学実験
Experiment of Mechanical Engineering



■卒業研究
Graduation Research