Mechanical Engineering

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Mechanical Facts Figures
Students Number: 542
Academic Staffs: 46
Technical Staffs: 7

Department Chair
Head:
Ir. I Made Suarda, M Eng
Secretary:
IDG Ary Subagia, ST, MT
IGP Agus Suryawan, ST, MT

Brief History
Our mechanical engineering department was established in 1984. Currently we have 'B' rating by the National Accrediation Board (BAN) in recognition of our teaching and resources.

Currently we have 542 registered full time students with annual intake of arround 90 students.

Curriculum
Our undergraduate study is designed as a four-years program with 144 total study credit units. The modules consist of 136 units compulsory subjects and 8 units as optional subjects.

In the sixth semester, students can choose one of two major studies offered; manufacturing engineering or energy conversion.

Academic Staffs
Our department is suppported by 46 full time academic staffs and administrative support staffs as well as technical staffs to assist student during labs courses.

Teaching and Seminar Rooms
We have sufficient classrooms for teaching and teaching is delivered using both conventional whiteboard and over head projector as well as LCD projector with multimedia pc.

Laboratories
We have 9 different labs to support our teaching, lab course and also our research. Labs for mechanical technology, metal, combustible engine, cooling, fluid mechanics, heat transfer, workshops, manufacturing and lab for basic phenomenon study.

Library and English
Our departmental library holds arround 700 textbooks and journals, theses, research reports, industrial placement reports as well as scientific magazines.

Responding to the increasing role of English language in our society particularly our students communication skills, we are developing English language lab so student can develop their communication skills.

Computing Facility
Computing facility is available for students for laboratory courses as well other computing purposes. The lab is part of the SQ and TPSDP development programs.

Teknik Mesin

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Sekilas Teknik Mesin
Jurusan Teknik Mesin didirikan pada tahun 1984. Saat ini, Jurusan menyandang akreditasi 'B' yang diberikan oleh Badan Akreditasi Nasional (BAN) sebagai penghargaan atas kualitas pengajaran dan fasilitas Jurusan.

Saat ini jurusan Teknik Mesin memiliki 542 mahasiswa dengan penerimaan mahasiswa baru sebanyak 90 orang setiap tahun.

Kurikulum
Program studi sarjana Teknik Mesin didesain sebagai program studi empat tahun dengan 144 SKS. Matakuliah terdiri dari 136 SKS matakuliah wajib dan 8 SKS matakuliah pilihan.

Pada semester enam, mahasiswa bisa memilih salah satu bidang spesialisasi; rekayasa manufaktur atau konversi energi.

Staf Pengajar
Jurusan Teknik Mesin didukung oleh tenaga dosen sebanyak 46 orang dengan kualifikasi Master dan Doktor lulusan dalam dan luar negeri serta staf pendukung administrasi dan teknisi.

Ruang Kuliah
Jurusan memiliki ruang kuliah dan seminar yang memadai dengan perlengkapan mengajar mulai dari papan, overhead projector hingga LCD projector.

Laboratorium
Jurusan meiliki 9 buah laboratorium untuk mendukung pengajaran dan riset; lab teknologi mekanik, logam, motor bakar, pendingin, mekanika fluida, pemindahan panas, bengkel, manufaktur dan lab untuk praktikum fenomena dasar.

Perpustakaan dan Bahasa Inggris
Jurusan memiliki lebih kurang 700 buah buku teks dan koleksi lain seperti jurnal, skripsi, laporan penelitian, laporan kerja praktek dan publikasi ilmiah lainnya.

Untuk meningkatkan kemampuan komunikasi bahasa Inggris, Jurusan mengembangkan laboratorium bahasa Inggris.

Fasilitas Komputer
Jurusan meimiliki laboratorium komputer yang bisa digunakan oleh mahasiswa untuk pratikum ataupun untuk kegiatan komputasi yang lain. Lab ini merupakan hibah dari SQ dan TPSDP.

Curriculum

Student will have to take all the common compulsory modules, all of their major compulsory modules depending on the selected major and select modules from the optional modules to make up 144 credit units including all other general modules.

Compulsory Common Core Modules
The modules include technical drawing, material science, metallurgy, static of structures, machine drawing, computer programming, thermodynamics, material and process selections, heat transfer, production processes, fluid mechanic, mechanic of material strength, machine elements, kinematics, energy conversion machines, basic electrical engineering, dynamics, management of machine maintenance, quality control, health and safety procedures, industry management, mechanic of vibration, communication skills, automatic control, fuel-oil-combustion techniques, mechatronics, engineering economics, industrial placements, ethical profession - entrepreneurships, writing methods and presentation.

Labs
Physics experiments, metallurgy lab, production processes, electrical engineering experiments, and basic phenomenon experiments

Optional Modules
Construction and stability of vehicles, optimum design and processes, robotics, finite elements method, lifting vehicle – heavy equipments, reliability theory, experimental stress analysis, breakdown analysis, polymers and composites, metal industry, corrosions, coating techniques, metal casting techniques, operational research, machine processes, CAD/CAM, welding techniques, cast and pouring techniques, vibration of machines, manufacturing simulation, manufacturing systems, special topics on manufacturing engineering, solar energy, wind energy, geothermal energy, biogas, and fluids systems.

Manufacturing Engineering Compulsory Modules
Product design, material failure analysis, matrix method for structural analysis

Energy Conversion Compulsory Modules
Water and steam turbines, refrigeration and air conditioning, pumps and compressors

Mahasiswa wajib mengambil semua matakuliah inti wajib, semua mata kuliah bidang keahlian sesuai dengan bidang yang dipilih, dan memilih matakuliah dari kelompok matakuliah pilihan sehingga tercapai jumlah 144 SKS termasuk matakuliah umum wajib.

Matakuliah Inti Wajib

Matakuliah wajib ini terdiri dari menggambar teknik, pengetahuan bahan, metalurgi, statika struktur, menggambar mesin, pemrograman komputer, termodinamika, pemelihan proses dan bahan, perpindahan panas, proses produksi, mekanika fluida, mekanika kekuatan bahan, elemen mesin, kinematika, mesin konversi energi, dasar teknik elektro, dinamika, manajemen pemeliharaan mesin, pengendalian kwalitas, keselamatan dan kesehatan kerja, manajemen industri, mekanika vibrasi, ketrampilan kominikasi, kontrol otomatik, bahan bakar – pelumas – teknik pembakaran, mekatronik, ekonomi teknik, kerja praktek, etika profesi – kewirausahaan, metode penulisan dan presentasi.

Laboratorium Keahlian

Laboratorium metalurgi, proses produkasi, perpindahan panas, dan motor bakar

Matakuliah Pilihan

Konstruksi dan stabilitas kendaraan, desain dan proses optimal, robotika, metode elemen hingga, kendaraan pengangkat – peralatan berat, teori keandalan, analisa tekanan eksperimental, analisa kegagalan, polimer dan komposit, logam industri, korosi, teknik pelapisan, teknik pengecoran, riset operasional, mesin proses, CAD/CAM, teknik pengelasan, teknik pengecoran dan penuangan, vibrasi mesin, simulasi manufaktur, sistem manufaktur, topik khusus dalam teknik manufaktur, energi surya, energi angin, energi geothermal, biogas, dan sistem fluida

Matakuliah Wajib
Rekayasa Manufaktur

Desain produk, analisa kegagalan bahan, metode matrik untuk analisa struktur

Matakuliah Wajib
Konversi Energi

Turbin air dan gas, refrigasi dan pengkondisian udara, pompa dan kompresor