

Mata Kuliah Course	Nama MK <i>Name</i>	: Dasar Pemrograman <i>Basic Programming</i>
	Kode MK <i>Code</i>	: EW184002
	Semester <i>Semester</i>	: 3 sks
	Kredit <i>Credits</i>	: I (Wajib) <i>I (Compulsory)</i>
	Beban Belajar <i>Workload</i>	: Kuliah : 3 x 50 = 150 menit/minggu Latihan/tugas : 3 x 60 = 180 menit/minggu Belajar mandiri : 3 x 60 = 180 menit/minggu <i>Lectures : 3 x 50 = 150 min/week Exercises/Assignments : 3 x 60 = 180min/week Self learning : 3 x 60 = 180 min/week</i>
	Tingkatan <i>Module Level</i>	: Sarjana (S1) <i>Undergraduate</i>
	Penanggung Jawab <i>PIC</i>	: Fajar Budiman, ST, M.Eng
	Pengajar <i>Lecturer</i>	: Eko Pramunanto, ST, MT Dr. Eko Mulyanto Yuniarno, ST, MT Dr.Ir. Yoyon Kusnendar Suprpto, M.Sc Fajar Budiman, ST, M.Eng M. Hilman Fatoni, ST, MT Atar Fuady Babgei, ST., M.Sc. Eko Pramunanto, ST, MT Dr. Eko Mulyanto Yuniarno, ST, MT Dr.Ir. Yoyon Kusnendar Suprpto, M.Sc Dr. Eng Mohammad Attamimi B. Eng. M. Eng
	Bahasa <i>Language</i>	: Bahasa Indonesia dan Bahasa Inggris <i>Bahasa Indonesia and English</i>
Persyaratan dan Peraturan <i>Requirement and Regulation</i>	: Setiap mahasiswa harus menghadiri setidaknya 75% dari jumlah perkuliahan untuk dapat mengikuti ujian <i>A student must have attended at least 75% of the lectures to sit in the exams</i>	

Deskripsi Mata Kuliah

Description of Course

Pada mata kuliah ini, mahasiswa akan mempelajari pengetahuan dasar pemrograman, konsep algoritma, pemrograman terstruktur, runtunan, pengulangan, pemilihan, fungsi, tipe data, konsep struktur dan file.

In this course, students will learn basic programming knowledge, algorithm concepts, structured programming, sequences, repetition, selection, functions, data types, structural concepts and files.

CPL Prodi yang Dibebankan

Learning Outcomes

(CPL-04) Mampu bekerja secara efektif dalam kelompok yang beranggotakan lintas disiplin dan budaya dengan menunjukkan sifat kepemimpinan, dan mampu mendefinisikan tujuan, rencana kerja, dan capaian

(PLO-4) Capable to work effectively in groups of members across disciplines and cultures by showing leadership traits, and being able to define goals, work plans, and achievements

(CPL-09) Mampu belajar mandiri untuk menumbuhkan kemampuan belajar sepanjang hayat

(PLO-9) Capable to learn independently to foster lifelong learning abilities

(CPL-11) Mampu menerapkan metode, ICT, dan perangkat modern dalam penyelesaian permasalahan dibidang teknik elektro

(PLO-11) Capable to apply methods, ICT, and modern devices in solving problems in the field of electrical engineering

Capaian Pembelajaran Mata Kuliah

Course Learning Outcomes

(CPMK-01) Mahasiswa menguasai konsep algoritma pemrograman komputer yang meliputi runtunan, perulangan dan pemilihan, konsep fungsi, struktur/ record dan file.

(CLO-01) Students is able to mastering the concept of computer programming algorithms which include collections, repetition and selection, concepts of functions, structures / records and files.

(CPMK-02) Mahasiswa mampu membuat program aplikasi komputer menggunakan bahasa pemrograman C.

(CLO-02) Students are able to make computer application programs using the C programming language.

(CPMK-03) Mahasiswa mampu membuat program dalam bahasa C untuk membantu memecahkan masalah ilmiah di bidang teknik Elektro.

(CLO-03) Students are able to make programs in C language to solve scientific problems in the field of electrical engineering.

(CPMK-04) Menunjukkan sikap bertanggungjawab atas pekerjaan di bidang keahliannya secara mandiri.

(CLO-04) Demonstrating attitude of responsibility on work in his/her field of expertise independently.

(CPMK-05) Bekerja sama untuk dapat memanfaatkan semaksimal mungkin potensi yang dimiliki.

(CLO-05) Working together to make the most of their potential.

Topik/Pokok Bahasan

Main Subjects

1. Sejarah komputer.
Computer History.
2. Sistem komputer.
Computer system.
3. Sistem bilangan.
Number system.
4. Ekspresi, operand dan operator.

- Expressions, operands and operators.*
5. Algoritma komputer, runtunan, pengulangan dan pemilihan.
Computer algorithms, collections, repetition and selection.
 6. Bahasa pemrograman C.
C programming language.
 7. Tipe data, dan struktur.
Data type, and structure.
 8. Array.
Array.
 9. Pengurutan data .
Sorting data.
 10. Barisan dan deret.
Sequence and series.

Pembelajaran dan ujian

Study and examination

- Latihan di kelas
In-class exercises
- Tugas 1, 2, 3
Assignment 1, 2, 3
- Ujian tengah semester
Mid-term examination
- Ujian akhir semester
Final examination

Pustaka

Reference(s)

- [1] Discovering Computers: Fundamentals, Fifth Edition (Shelly Cashman Series) by Gary B. Shelly and Misty E. Vermaat
- [2] Fundamentals of Computer Algorithms by Ellis and Sartaj Sahni Horowitz
- [3] Introduction to Algorithms, Second Edition by Thomas H. Cormen Programming in ANSI C by Stephen G. Kochan

Prasyarat

Prerequisite(s)

--