

Module Description

Module name	Course Module
Module level, if applicable	Bachelor of Electronics Engineering
Code, if applicable	5215-xxx-x
Subtitle, if applicable	
Course, if applicable	Pneumatic Control Techniques Practice
Semester(s) in which the module istaught	VI
Person responsible for the module	Lecturer of Course
Lecturer	Drs. Pitoyo Yuliatmojo, M.T
Language	Indonesian Language [Bahasa Indonesia]
Relation to Curriculum	This course is a mandatory course for Control Electronics Specialization and offered in the 6 th semester.
Type of teaching, contact hours	<p>Teaching methods used in this course are:</p> <ul style="list-style-type: none"> - Lecture (i.e., group investigation, small group discussion, casestudy, and video based learning) - Practice (i.e., computer simulation and case study in laboratory) <p>The class size for lecture is 30 students. Contact hours for lecture is 46 hours.</p>
Workload	<p>For this course, students are required to meet a minimum of 46 hours in one semester, which consist of:</p> <ul style="list-style-type: none"> - 46 hours for lecture,
Credit points	1 credit points (equivalent with 1.44 ECTS)
Requirements according to the examination regulations	Students must have attended all classes and submitted all class assignments that are scheduled before the final tests.
Recommended prerequisites	Students must have attended all classes and submitted all class assignments that are scheduled before the final tests.

<p>PLO-ILO-CLO</p>	<p>After completing the course and given with this case:</p> <p>Course Learning Objectives (CLO1): Mahasiswa mampu menerapkan konsep teknik kendali pneumatik (K2, S1, S3, C1) (40)</p> <p>Course Learning Objectives (CLO2): Mahasiswa mampu merancang prototype sebuah mesin sederhana dengan sistem pneumatik (K2, S1, S3, C1) (60)</p> <p>Program Learning Outcome (PLO3): Menerapkan kompetensi teknik elektronika untuk memecahkan masalah keteknikan</p> <p>Attitude (A2): Untuk berkolaborasi sebagai sebuah tim, berkomunikasi secara efektif baik lisan maupun tulisan dalam lingkungan akademik dan profesional.</p> <p>Knowledge (K2): Untuk menerapkan prinsip-prinsip teknik elektronika untuk memecahkan masalah dalam sistem teknik elektronika</p> <p>Engineering and Education Skill (S1): Mampu merancang prinsip dan aplikasi sistem rekayasa elektronik</p> <p>Engineering and Education Skill (S3): Mampu mencari alternatif solusi dan pemecahan masalah di bidang teknik elektronika.</p> <p>Competence (C1): Menerapkan teknologi baru di bidang rekayasa dengan mempertimbangkan standar teknis, aspek kinerja, keandalan, penerapan, dan keberlanjutan</p> <p>Competence (C2): Mampu mengelola dan mengembangkan proses, sistem operasi, dan peralatan dengan mempertimbangkan dampak teknis dan nonteknis dari kegiatan industri di bidang teknik elektronika.</p>
<p>Content</p>	<p>Students will learn about: Pratikum tabung gerak tunggal, katup-katup, pengontrol tabung, kecepatan gerak torak, Sistem penundaan, rangkaian otomatis, sistem dan peralatan angin. Merancang prototype sebuah mesin sederhana dengan sistem pneumatik</p>
<p>Forms of Assessment</p>	<p>Assessment is carried out based on written examinations, assessment/evaluation of the learning process and performance with the following components: Sikap: 10%; Keterampilan Umum: 5%; Rancangan praktik: 15%; TI dan UAS: 60%</p>

Study and examination requirements and forms of examination	Study and examination requirements: <ul style="list-style-type: none"> - Students must attend 15 minutes before the class starts. - Students must switch off all electronic devices. - Students must inform the lecturer if they will not attend the class due to sickness, etc. - Students must submit all class assignments before the deadline. - Students must attend the exam to get final grade. Form of examination: Written exam: Essay
Media employed	Direct Whiteboard, Google classroom, Tutorial Video by Youtube and Power Point Presentation.
Reading list	<ol style="list-style-type: none"> 1. P.Hasebrink, R.Kobler, Fundamentals Of Pneumatik Kontrol Engineering -Textbook, Esslingen, Festo Didactic, 1989 2. P. Croser, Pneumatiks, Basic Level Textbook, Esslingen ,Festo Didactic,1989 3. P.Croser, Pneumatik, Tingkat Dasar, Jakarta, Festo Didactic, PT Nusantara Cybernetic Eka Perdana, 1994 Werner Deppert, Kurt Stoll, Pneumatik Kontrol, Wurzburg, Vogel-Verlag,1987.