



STUDENT HANDBOOK ELECTRICAL ENGINEERING



Greetings from Department Head

Congratulations on becoming a student, congratulations on being an Electrical Engineering (EE) ITK student

During your study in EE you will have the opportunity to develop new skills, enhance your personal attributes, acquire new knowledge and learn new things in thoughtful ways that will prepare you for life after graduation. You will now be expected to be more independent. You are responsible for what you do, for ensuring that you do the work that will be required of you.

Students Handbook is a guidebook for EE students to be guided, encouraged, and directed in teaching and learning activities and various kinds of supporting roles within Electrical Engineering ITK. For this reason, by understanding the ways, work procedures, mechanisms, and regulations that apply in EE ITK, it is hoped that it will be able to optimize and maximize teaching and learning activities so that students get many benefits and can complete their studies on time with maximum results.

We hope that your time as a student at Electrical Engineering is successful and enjoyable

Coordinator of Electrical Engineering
Institut Teknologi Kalimantan



I. GENERAL INFORMATION

STUDENT HANDBOOK
ELECTRICAL ENGINEERING

I. General Informations

I.1. Key Dates

While participating in lecture activities at the Kalimantan Institute of Technology, each student can find out the time for carrying out academic activities through the academic calendar

Undergraduate Students Admission 2021/2022

SNMPTN	15 February 2022 – 24 February 2022
UTBK	12 April 2022 – 18 April 2022 26 April 2022 – 2 May 2022
Private Test	1 April 2022 – 28 June 2022
SNMPTN Announcement	22 March 2021
UTBK Announcement	14 June 2021
Private Test Announcement	3 July 2021

Tuition Fee Payment

New Students

SNMPTN	23 March 2021 – 1 April 2021
UTBK	15 June 2021 – 25 June 2021
Private Test	5 July 2021 – 9 July 2021

Old Students

Odd Semester 2021/2022 Payment	9 August 2021 – 13 August 2021
Even Semester 2021/2022 Payment	24 January 2022 – 28 January 2022

Semesters and National Holiday

Odd Semester 2021/2022

Study Plan Entry	16 August 2021 – 19 August 2021
Class Enrollment Period	29 August 2021 – 17 December 2021
7 th Dies Natalis	6 October 2021
Study Suspension Application Deadline	10 September 2021
Study Plan Changes Deadline	10 September 2021
Removal of Study Plan Deadline	8 October 2021
Midterm Exam	11 October 2021 – 15 October 2021
Final Exam	6 December 2021 – 17 December 2021
Questioner Entry Deadline	17 December 2021
Final Grade Entry Deadline	31 December 2022
Revision of Final Grade Deadline	7 January 2022
Evaluation	12 January 2022
Final Project Seminar Deadline	19 January 2022
Judiciary (Department)	31 January 2022 – 4 February 2022
Judiciary (Institution)	7 February 2022 – 11 February 2022

Even Semester 2021/2022

Study Plan Entry	31 January 2022 – 10 February 2022
Class Enrollment Period	14 February 2022 – 10 June 2022

Study Suspension Application Deadline	4 March 2022
Study Plan Changes Deadline	4 March 2022
Removal of Study Plan Deadline	1 April 2022
Midterm Exam	4 April 2022 – 8 April 2022
Final Exam	30 May 2022 – 10 June 2022
Questioner Entry Deadline	10 June 2022
Final Grade Entry Deadline	24 June 2022
Revision of Final Grade Deadline	1 July 2022
Evaluation	12 July 2022
Final Project Seminar Deadline	13 July 2022
Judiciary (Department)	18 July 2022 – 22 July 2022
Judiciary (Institution)	22 July 2022 – 29 July 2022
Christmas Holiday	24 and 27 December 2022
Eid Al-Fitr Holiday	2 May 2022

Graduation

11 th Graduation Day	9 October 2021
12 th Graduation Day	9 April 2022

I.2. Department Staff

The Electrical Engineering study program is one of the study programs under the Department of Industrial and Process Technology (JTIP). The structure of the department in the department that oversees the Electrical Engineering study program, namely

Head of Department of Industrial and Process Technology (JTIP)

Himawan Wicaksono, S.S.T., M.T. (contact: himawan@lecturer.itk.ac.id)

Department Secretary

Azmia Rizka Nafisah, S.T., M.T. (contact: azmia.rizka@lecturer.itk.ac.id)

Staff

Staff for Academic, General, and Student Affairs

Rizky Dwi Meilan Sari, S.Pd. (contact: rizkymeilan@staff.itk.ac.id)

Supatmi, S.Si. (contact: supatmi@staff.itk.ac.id)

Staff for Expenditure Treasurer Assistant

Bebby Putri Indahswari, SE. (contact: bebbyputrii@staff.itk.ac.id)

Agus Setiawan, A.Md., Ak. (contact: agus.setaiwan@staff.itk.ac.id)

I.3. Electrical Engineering Study Program Staff

The Electrical Engineering study program has teaching staff who have different fields of expertise. In this study program, there are 5 (five) fields of expertise,

Electrical Engineering Study Program Coordinator

Barokatun Hasanah, S.T., M.T. (contact: barokatun.hasanah@lecturer.itk.ac.id)

Meanwhile, from the field of expertise in the Electrical Engineering study program, the existing teaching staff are:

Power System Field

Dr. Happy Aprillia, S.ST., M.T., M.Eng., Ph.D. (contact: happy.aprillia@itk.ac.id)

Yun Tonce Kusuma Priyanto, S.T, M.T. (contact: yuntonce@lecturer.itk.ac.id)

Firilia Filiana, S.T., M.T. (contact: firilia.filiana@lecturer.itk.ac.id)

Vicky Andria Kusuma, S.ST., M.T. (contact: vickyandria@lecturer.itk.ac.id)

Control System Field

Andhika Giyantara, S.T., M.T. (contact: dhika@lecturer.itk.ac.id)

Thorikul Huda, S.T., M.T. (contact: thorikul.h@lecturer.itk.ac.id)

Risty Jayanti Yuniar, S.T., M.T. (contact: risty.jayanti@lecturer.itk.ac.id)

Riza Hadi Saputra, S.T., M.T. (contact: riza.saputra@lecturer.itk.ac.id)

Electronics Field

Mudeng, Vicky Vendi Hengki, S.ST., M.Sc. (contact: mudengvicky@lecturer.itk.ac.id)

Sena Sukmananda Suprpto, S.T., M.T. (contact: s.s.suprpto@lecturer.itk.ac.id)

Kharis Sugiarto, S.ST., M.T. (contact: kharis.sugiarto@lecturer.itk.ac.id)

Muhammad Agung Nursyeha, S.T., M.T. (contact: agung.nursyeha@lecturer.itk.ac.id)

Telecommunications Field

Adi Mahmud Jaya Marindra, S.T., M.Eng.,Ph.D. (contact: adi.marindra@itk.ac.id)

Barokatun Hasanah, S.T., M.T. (contact: barokatun.hasanah@lecturer.itk.ac.id)

Mifta Nur Farid, S.T., M.T. (contact: miftanurfarid@lecturer.itk.ac.id)

Computer System Field

Himawan Wicaksono, S.ST., M.T. (contact: himawan@lecturer.itk.ac.id)

Amalia Rizqi Utami, S.T., M.T. (contact: amalia.risqi@lecturer.itk.ac.id)

Muhammad Ridho Dewanto, S.T., M.T (contact: ridho.dewanto@lecturer.itk.ac.id)

I.4. Facilities



Figure 1. ITK map

The ITK campus has comfortable classroom facilities with the availability of digital-based learning facilities. Each classroom is equipped with LCD projectors, PCs, and cameras that can support face-to-

face or virtual learning. Internet connectivity support via Wi-Fi is also available in every classroom. There are classrooms that can be used for 40 students to 80 students. The classrooms used today are in buildings E, F, G, as well as an integrated laboratory.



Figure 2. Classroom building



Figure 3. Classroom

Learning process or assignments to students can be combined offline and online. ITK has a learning management system (LMS) which is located at <https://kuliah.itk.ac.id> LMS is an online learning media to support digital learning methods. The most significant benefit of having an LMS is that assignment collection and exam administration can be done paperless. On assignments that have been collected by students, LMS ITK is able to facilitate lecturers in providing feedback in the form of comments and scribbles. In the implementation of the exam, LMS ITK is able to carry out automatic assessments if the questions are in the form of multiple choice and essay. In addition to facilitating assignments and exams, LMS ITK is also used as a medium for distributing asynchronous video material, presentation slides, and the distribution method can be dynamically adjusted to suit different student learning speeds.



Figure 4. Laboratory building

The ITK campus has an integrated laboratory to support student learning in courses. There are 15 laboratory rooms available in the integrated lab, which can be used by students to work on college projects or final projects. Students can use laboratory facilities through the booking mechanism on <https://labterpadu.itk.ac.id> by paying attention to the flow and procedures for booking according to the SOP. During work, students are required to obey the rules according to the applicable SOP in the laboratory room which can be seen on the related page. Several laboratories are used during the learning process in electrical engineering such as instrumentation and electronics laboratory and computer laboratory.



Figure 5. Instrumentation and electronics laboratory

In terms of services, ITK also provides an Integrated Service Unit (ULT) as an integrated public service center. ULT ITK is a service unit developed by ITK to provide information services needed by students, lecturers, education staff, and all stakeholders. To get ULT services, students can visit the website <https://ult.itk.ac.id/> or go directly to ULT at Building A Floor 1.

ITK Library is one of the Technical Implementation Units (UPT) which has the task of being the center of learning resources and providing scientific information for the entire academic community and students in the ITK environment. The ITK library building is located on the first floor of building A. Currently, the ITK library consists of 8 main areas, namely the administration room, reading room, book room, computer room, lesehan work area, mini amphitheater area, and meeting rooms. In the reading room there is a table, a mat in the form of a carpet, and a socket for charging laptops/smartphones, as well as a BI Corner that provides education about the role and function of the central bank through print and electronic collections. Meanwhile, the book room is available for more than 1000 book titles, Job Training report documents (KP) + softcopy, and Final Project report (TA) + softcopy both in Indonesian and English. Of these books, there are those that can only be read in places such as KP documents, TA, financial reports and there are many books that can be borrowed.



ITK Library Room Plan

Details:

- | | |
|---|---|
| A. Administrative staff door | J. Reception area/operational employees |
| B. Administration room | K. Casual work area |
| C. Warehouse | L. Luggage storage locker |
| D. Reading desk area for more than 2 people | M. Main door |
| E. Reading desk area per 2 people | N. Work and reading area |
| F. Collection bookcase area | O. Mini amphitheater |
| G. Reading desk area per 1 person | P. Meeting room a (portable partition) |
| H. Electronic gate | Q. Meeting room b (portable partition) |
| I. Computer room | |

Figure 6. Library sketch

ITK has other supporting facilities. Students are allowed to use public facilities such as sports fields, jogging tracks, parks, and so on while maintaining public order. If there are students who want to borrow public facilities for activities or events, the loan can be submitted to the ITK facilities and infrastructure unit.

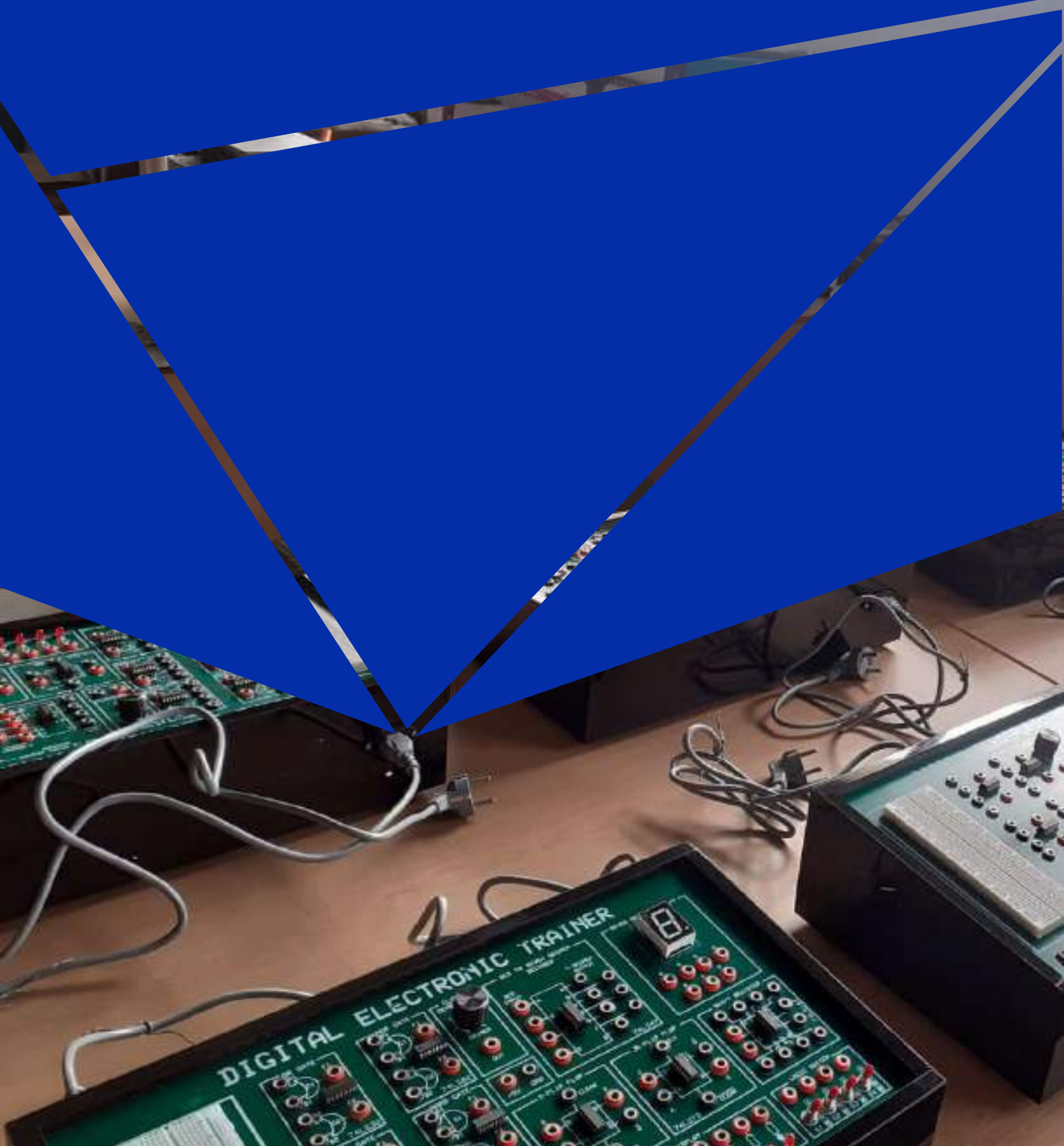


Figure 7. Student dormitories

ITK also provides student dormitories that can be rented out in accordance with applicable regulations. Student dormitories are located near the entrance gate and access is on the main road to campus. For further information, please contact the ITK facilities and infrastructure unit.

I.5. Quick Reference Link and Contact

University Link	https://itk.ac.id
Programme Link	https://ee.itk.ac.id
Learning Management System	https://kuliah.itk.ac.id
Centre for Language Studies	https://lch.itk.ac.id
Integrated Laboratorium	https://labterpadu.itk.ac.id
Library	http://digilib.itk.ac.id/
Quality Assurance	Contact via email pjm@itk.ac.id
Student Finance Contact	Contact via email infokeuangan@itk.ac.id
Facility and Infrastructure Office	Contact via email sarana.prasarana@itk.ac.id
Student Office Contact	Contact via email kemahasiswaan@itk.ac.id
Counseling Service	Contact via email careercenter@itk.ac.id



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II. PROGRAMS IN ELECTRICAL ENGINEERING

II. Programmes in Electrical Engineering

II.1. Program Learning Outcomes

Graduates of the ITK Electrical Engineering Study Program are expected to be able to work with the following profiles,

1. Graduates can have successful careers in the engineering profession
2. Graduates can continue their studies in both professional and master's programs
3. Graduates can play an active role and act as leaders in the industry, government, and education, especially in Indonesia

The learning outcomes expected to be possessed by students of the electrical engineering study program are:

ILO	Intended Learning Outcomes (ILO)
ILO1	an ability to communicate effectively in oral and written manners with a range of audiences
ILO2	An ability to solve complex problems, and make informed judgments, which must consider the sustainability aspect as well as to utilize information technology and the potential of national resources with a global perspective
ILO3	an ability to collaborate effectively in multidisciplinary and multicultural team whose members together provide leadership to achieve the objectives
ILO4	an ability to apply Pancasila values, ethical and professional responsibilities
ILO5	an ability to perform life-long learning and apply new knowledge as needed using appropriate learning strategies
ILO6	an ability to identify, formulate and solve engineering problems using knowledge of mathematics, basic science and engineering science
ILO7	an ability to apply engineering design to produce solutions that meet specified needs with consideration of technical standards, public health, safety, and welfare, as well as ease of application, and sustainable applications
ILO8	an ability to design and conduct experiments in electrical engineering, as well as to analyze and interpret data to strengthen engineering judgments

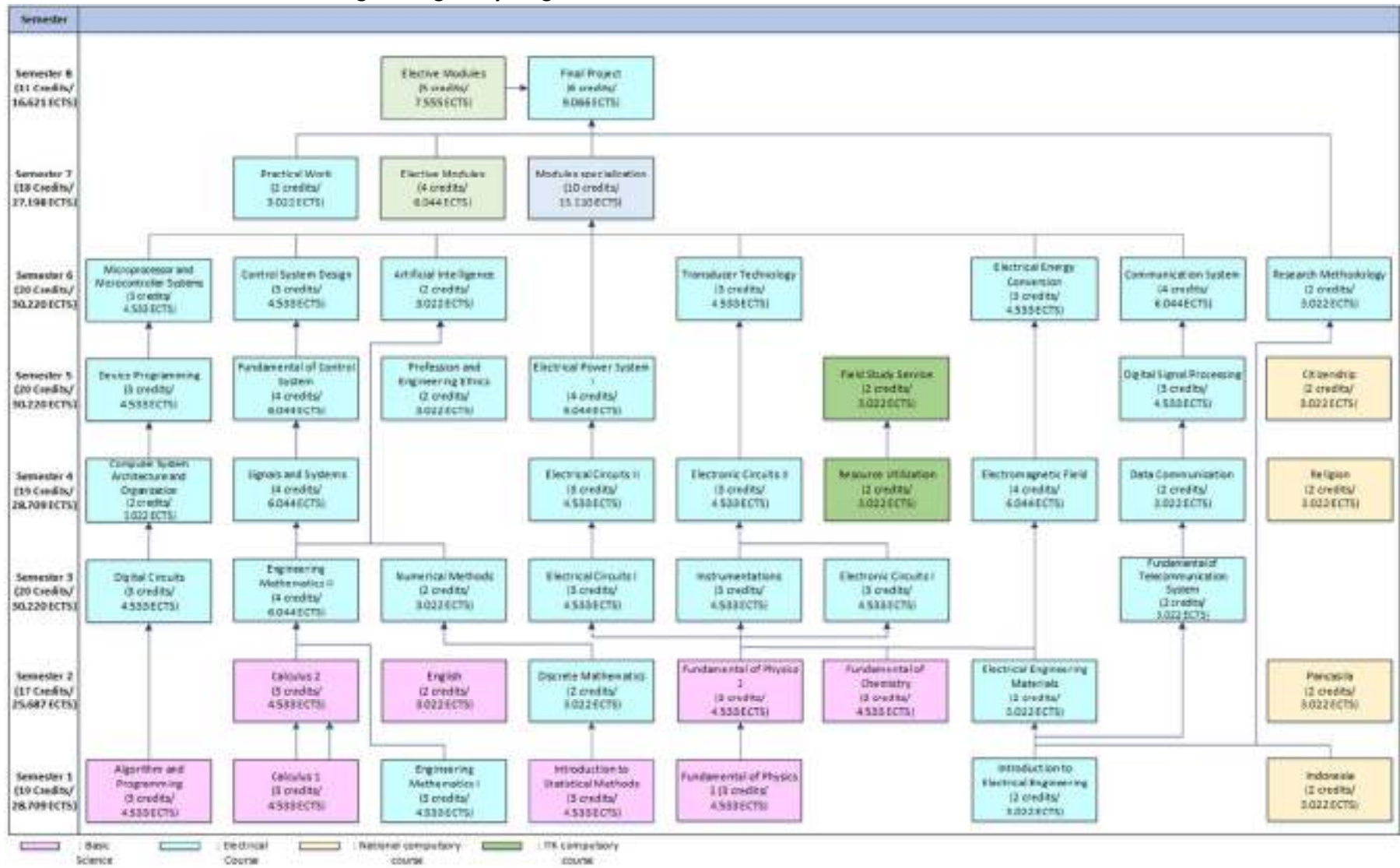
ILO9 an ability to utilize analysis tools based on information technology and computation, which are suitable for engineering activities in the field of electrical engineering

ILO10 an ability to apply the latest methods, skills and modern engineering tools, as needed in the field of electrical engineering

II.2. Curriculum

The curriculum of the Electrical Engineering study program is divided into eight semesters which can be arranged into a curriculum tree.

Main Structure of Electrical Engineering Study Program Curriculum



Structure of Compulsory Courses in the Electrical Engineering Study Program

Modules specialization									
Power System		Control System		Electronics		Telecommunication		Computer System	
Electrical Power System I (3 credits/ 4.500 ECTS)	Power System Protection (4 credits/ 6.044 ECTS)	Network Analysis (2 credits/ 3.022 ECTS)	Introduction of Stochastic Process (2 credits/ 3.022 ECTS)	Digital Electronics (3 credits/ 4.533 ECTS)	Modeling and Simulation (2 credits/ 3.022 ECTS)	Radio Frequency and Microwave Engineering (3 credits/ 4.533 ECTS)	Traffic Engineering (2 credits/ 3.022 ECTS)	Object Oriented Programming for Software Engineering (4 credits/ 6.044 ECTS)	Operating System (3 credits/ 4.533 ECTS)
Power Electronics (3 credits/ 4.533 ECTS)		Instrumentation Control (2 credits/ 3.022 ECTS)	Control Signal Processing (2 credits/ 3.022 ECTS)	Bio-mechanical Engineering (3 credits/ 4.533 ECTS)	Biomedical Engineering (3 credits/ 4.533 ECTS)	Digital Communication (2 credits/ 3.022 ECTS)	Antenna and Wave Propagation (3 credits/ 4.533 ECTS)	Digital Image Processing (3 credits/ 4.533 ECTS)	
		Fundamental of PLC Programming (2 credits/ 3.022 ECTS)							

Structure of Elective Courses in the Electrical Engineering Study Program

Elective Modules									
Capita Selecta (2 credits/ 3.022 ECTS)	Internship A (4 credits/ 6.044 ECTS)	Internship B (6 credits/ 9.066 ECTS)	Internship C (12 credits/ 18.132 ECTS)	Internship D (16 credits/ 24.176 ECTS)	Internship E (20 credits/ 30.220 ECTS)	Internship F (24 credits/ 36.264 ECTS)	Power System Reliability (2 credits/ 3.022 ECTS)	Power Quality (2 credits/ 3.022 ECTS)	Power Plant Optimum Operation (2 credits/ 3.022 ECTS)
Electrical Machines Control (2 credits/ 3.022 ECTS)	Renewable Energy Systems (2 credits/ 3.022 ECTS)	High Voltage Engineering (2 credits/ 3.022 ECTS)	Robot Dynamics (2 credits/ 3.022 ECTS)	Robot Kinematics (2 credits/ 3.022 ECTS)	Project Management (2 credits/ 3.022 ECTS)	Industrial Automation (2 credits/ 3.022 ECTS)	Stochastic Processes (2 credits/ 3.022 ECTS)	Electrical Machine Control System (2 credits/ 3.022 ECTS)	Artificial Intelligence for Control System (2 credits/ 3.022 ECTS)
Agrotechnology Electronics (3 credits/ 4.533 ECTS)	Arts Technology (2 credits/ 3.022 ECTS)	Smart City Electronics (3 credits/ 4.533 ECTS)	Disaster Prevention Electronics (3 credits/ 4.533 ECTS)	Auto-Electronics Engineering (3 credits/ 4.533 ECTS)	Smart Vehicle Electronics (3 credits/ 4.533 ECTS)	Wireless Access Network (3 credits/ 4.533 ECTS)	Fiber Optic Communication System (2 credits/ 3.022 ECTS)	Satellite Communication System (2 credits/ 3.022 ECTS)	Radar and Navigation System (3 credits/ 4.533 ECTS)
Modeling of Communication Network (2 credits/ 3.022 ECTS)	Audio Forensics (2 credits/ 3.022 ECTS)	Mobile Computing Applications (3 credits/ 4.533 ECTS)	Human Computer Interface (2 credits/ 3.022 ECTS)	Applied Artificial Intelligence for Computer System (3 credits/ 4.533 ECTS)	Computer Vision (3 credits/ 4.533 ECTS)				

II.3. Credits

The education administration system uses the Semester Credit System (SKS) which is defined as a system for providing education using semester credit units (sks) to state student burdens, lecturers' workloads, and program administration burdens. The period and learning load for administering an educational program is a maximum of 7 (seven) academic years for undergraduate programs with a student learning load of at least 144 (one hundred and forty-four) credits.

For each module, 1 credit can be defined depending on the form of learning implemented by the module. The weight of one credit score or credit depends on the form of learning applied to the course. For more details, it is presented in the following table

No.	Learning Form	Activity	Duration	Hour
1	Lecture, response and tutorial	Learning process	50 minutes/week/semester	2.83
		Structured assignment	60 minutes/week/semester	
		Individual study	60 minutes/week/semester	
2	Seminar	Learning process	100 minutes/week/semester	2.83
		Individual study	70 minutes/week/semester	
3	Labwork, studio practice, workshop, field trip, on-the-job training		170 minutes/week/semester	2.83
4	Research, design, or development			
5	Military training			
6	Student exchange			
7	Internship			
8	Entrepreneurship and/or community service			

The weight of 1 credit is equal to 1,511 ECTS, so the weight of the student's learning load is 144 credits or equivalent to 217.6 ECTS.

II.4. Completion of Study

a. Assessment of Student Graduation Predicate

The results of the assessment of graduate learning achievements in each semester are expressed by the semester achievement index (IPS). Meanwhile, the results of the assessment of graduate learning outcomes at the end of the Study Program are expressed by the Grade Point Average (GPA). The degree of student academic success to determine the graduation predicate is determined by the GPA. The amount of Semester GPA (IPS) and Cumulative GPA (IPK) can be calculated as follows:

$$IPS = \frac{\sum_{s=1}^m K_s \times N_i}{\sum_{s=1}^m K_i}$$

$$IPK = \frac{\sum_{k=1}^n K_k \times N_i}{\sum_{k=1}^n K_k}$$

With:

N : the numerical value of the evaluation results for each course

K_s : the amount of credit for each course in one semester

K_k : the number of credits for each course from the beginning to the last semester without the value of E

m : the number of courses that have been taken in one semester

n : the number of courses that have been taken from the beginning to the last semester without the value of E

First year undergraduate students can only take the entire study load in semester I and semester II. Undergraduate students in the third semester and higher, the study load is determined by the Semester GPA (IPS) achieved in the previous semester, with the following references:

No	IPS	Maximum Course Load
1	$IPS < 2.50$	18 SKS or 27.198 ECTS
2	$2.50 \leq IPS < 3$	20 SKS or 30.22 ECTS
3	$3 \leq IPS < 3.5$	22 SKS or 33.242 ECTS
4	$IPS \geq 3.5$	24 SKS or 36.264 ECTS

b. Student Graduation Requirements

Students are stated to have passed the undergraduate program if they meet several requirements, as follows:

- Have completed the entire course load of 144 credits including the final project
- Has submitted scientific articles. Scientific articles resulting from the final project are submitted to journals, conferences/seminars, or published in the ITK repository.
- Have learning outcomes targeted by study programs with a minimum grade of C
- Meet the minimum score requirements of the ITK English Score or its equivalent (TOEFL). With an English proficiency score of 460.
- Meet the requirements of credit units for student activities and achievements (SK2PM) with a minimum of 1500 points obtained from student activities participated in by students.

c. Student Graduation Predicate

ITK graduates are given graduation predicate consisting of three levels, namely satisfactory, very satisfactory, and cumlaude. The graduation predicate is determined based on the GPA and the study period as follows:

Predicate	IPK	Study Period
Cumlaude	$3.50 < \text{IPK}$	Study period ≤ 4 years
Very Satisfactory	$3.50 \leq \text{IPK}$	Study period > 4 years
	$3.01 \leq \text{IPK} \leq 3.50$	Study period ≤ 4 years
Satisfactory	$2.76 \leq \text{IPK} \leq 3.00$	-

II.5. Diploma Supplements

Diploma Companion Activity Letter or SKPI is an academic document that contains information about non-academic competencies possessed by ITK graduates. In addition to issuing diplomas and academic transcripts, universities are required to issue SKPI for students. SKPI issued by ITK contains information about student academic achievements, extracurricular activities, as well as non-formal education undertaken while studying at ITK. With the SKPI, it is hoped that stakeholders can get an overview of the competencies possessed by students other than those contained in transcripts and diplomas. The benefits of SKPI for graduates are:

- a. An additional document that states a student's academic achievement which includes co-curricular, extracurricular or non-formal education of a graduate that is easier for graduate users to understand.
- b. An objective explanation of the holder's achievements and competencies
- c. Increase employability

SKPI will be printed in Indonesian and English versions. The order of priority of activities written in the SKPI is composed of:

1. Professional
2. Entrepreneurship
3. Performance
4. Award
5. Organization
6. Academic Assistant
7. Event Committee
8. Training

The information contained in the SKPI can be in the form of activities from SK2PM that have been validated by the academic advisor. The description of SK2PM will be explained further in section III.6. The advisor will assist in the preparation of student SKPIs according to the types of prioritized activities. Students can contact the academic advisor when preparing the SKPI draft. The procedure for printing SKPI is as follows:

- a. Students input Activities, Achievements and Awards at the ITK Gate by attaching evidence of activities.
- b. The uploaded activities, achievements and awards will be verified by the academic advisor by bringing physical evidence.
- c. The advisor selects a maximum of 10 Activities, Achievements and Awards based on the priority standards set.
- d. SKPI will be printed by an academic advisor and distributed at the time of graduation.

After the SKPI is approved, students can view the draft SKPI that has been made on the <https://gerbang.itk.ac.id> on the SKPI menu.

II.6. Merdeka Belajar Kampus Merdeka (MBKM)

The Merdeka Belajar Kampus Merdeka (MKBM) is a program initiated by the Ministry of Education, Culture, Research, and Technology in 2020. The MBKM program aims to encourage students to master various sciences that are useful for entering the world of work through learning activities outside the study program and campus.

The maximum number of credit hours that can be taken in the context of implementing MBKM activities in different study programs at ITK is 20 (twenty) credits or equivalent of 1 semester. While the maximum number of credits that can be taken outside of ITK is 40 (forty) credit hours or equivalent of 2 semesters. MBKM activities can only be carried out by:

1. Universities that have BAN-PT accreditation equal to or higher than the accreditation status of ITK as institution or Study Programs
2. Universities that have a cooperation agreement with ITK stated in the MoU and/or MoA
3. Non-university institutions that have a cooperation agreement with ITK stated in the MoU and/or MoA.



Figure 8. Activities of MBKM

The activities of MKBM is described in the Table below:

No	MBKM Activity	Description
1	Student exchange	Students can conduct student exchanges between study programs at the same university, exchanges in the same study program at different universities, and student exchanges between study programs at different universities
2	Apprenticeship	In this program, students have the opportunity to gain hands-on experience working in the world of work.
3	Teaching assistance	This learning activity allows students to become teaching assistants in educational units such as elementary, middle and high schools located in cities and remote areas.
4	Research	This activity is carried out by students at research institutions or study centers
5	Humanitarian project	Students can participate in social activities such as humanitarian projects both in Indonesia and abroad
6	Entrepreneurship	Through this program, students can develop their businesses and overcome unemployment problems
7	Independent study project	The equivalence of independent project activities depends on the role and contribution of students in activities that can be proven and carried out under the coordination of the academic advisor
8	Community Service program	Students can contribute to solving problems that exist in the community by going directly to help the community.

The implementation of the MBKM has also been carried out to improve and enrich student competencies outside the ITK Electrical Engineering Study Program. The MBKM program that has been followed by students of the Electrical Engineering Study Program includes internship programs in Industry and independent studies. It is recorded that 7 (seven) students have completed internships in Industry and 1 (one) other student who has run an independent study program. In addition, there are additional competencies in the field of power systems and telecommunications that allow ITK Electrical Engineering students to deepen their knowledge by attending lectures outside of Electrical Engineering. There were 3 students who carried out PMMDN (Independent Student Exchange in the Country) activities in the 2021/2022 academic year at Telkom University, Tribhuwana Tungga Dewi University and Tidar University.

II.7. Programs Link

Other information on the study program can be checked through the website <https://ee.itk.ac.id>



III. Student Informations and Supports

III.1. Course Enrolment

Course enrollment is a facility used by students to take courses in filling out study plan forms (FRS) and changing study plans. Each activity must be carried out according to the schedule that has been circulated in the academic calendar. The rules for taking courses must be in accordance with the current curriculum. Students must take all compulsory courses in the semester that will be undertaken. Both compulsory and elective courses must be approved by the academic advisor. If they have remaining credits from the total maximum load of credits given, students are allowed to take compulsory courses in accordance with the order in the curriculum in each study program, namely courses that are in two semesters and above from the semester to be undertaken. With a note, if the upper semester courses have prerequisite courses, they must take prerequisite courses first. A detailed explanation of the prerequisite courses can be found in sub-chapter **3.2 Course Requirements**.

As for other activities in course enrollment, namely changes to the study plan, it can be in the form of reducing courses and/or changing courses that have been taken at the beginning of filling out the FRS. Study plan change activities can only be approved if:

1. The class capacity in the selected courses when adding courses is still adequate for students who make changes to their study plans.
2. The class schedule taken when adding courses does not crash with the class schedule taken before making changes to the study plan.
3. Students must have remaining credits from the maximum total credits given according to the GPA obtained if they want to add courses.

The procedure for students to do course enrolment at the beginning of taking courses:

1. Students take courses available at the ITK gate (<https://gerbang.itk.ac.id/>) according to the semester they will be undergoing.
2. Students approve courses taken through supervising activities with academic advisor.
3. If approved by the advisor, students can print the FRS, if not approved then continue the process of taking courses in accordance with the direction of the academic advisor of each student.

Procedures for students to do course enrolment when the study plan changes:

1. Students hold discussions with their academic advisor regarding changes to the study plan.
2. Students submit the FRS change form through the administration staff of the department according to the study program.
3. Fill in the form by writing the name of the course for which the FRS changes will be made as needed (dropping courses and/or changing courses).
4. Return the form that has been filled in to the administration staff.
5. Administration Staff continues to send to the coordinator of the study program
6. Then it is approved by the academic advisor.

III.2. Course Requirement

Compulsory courses

Compulsory courses are courses that must be taken by students every semester in accordance with the order already in the curriculum. Based on the Rector's Regulation Number 5 of 2020, the period and learning load for administering the Education program is a maximum of 7 (seven) academic years for undergraduate programs with a student learning load of at least 144 credits, consisting of 136 credit hours of compulsory subjects.

Elective courses

Elective courses are additional courses that students must take at least 9 credits to achieve the total credits required for graduation (144 credit hours). Each study program has different elective courses. The Electrical Engineering study program has several focus areas of elective courses, including power system field, control system field, electronics field, telecommunication field, and computer system field. Students can take elective courses according to the focus of their preferred area of interest. A list of elective courses in the Electrical Engineering Study Program (PSTE) can be seen on the PSTE website <https://ee.itk.ac.id/akademik/kurikulum>

Prerequisite courses

Prerequisite courses are courses that must be taken before taking courses in the upper semester. The requirement for taking upper semester courses that have prerequisites is that students get a minimum of D grades. Just like elective courses, the prerequisite courses in each study program are also different. Compulsory courses in Electrical Engineering study programs that have prerequisites can be seen on the PSTE website <https://ee.itk.ac.id/akademik/kurikulum>

III.3. Timetable

Students are expected to adjust the schedule of courses to be taken. The course schedule can be seen when selecting courses when filling out the study plan. After the FRS is approved, the schedule of courses taken in the current semester can be viewed on <https://gerbang.itk.ac.id> in the report menu -> student class schedules. Students can also access through the calendar on the LMS related to lecture activities that will run in one week/month. Changes in the class schedule may occur and be informed through the LMS by the respective lecturers.

III.4. Attendance Policy

Monitoring of student attendance in learning activities will be carried out periodically every 4 weeks. Filling out the list of student attendance in learning will be given by the lecturer. The presence of students may have an impact on the final results of the course, so students are expected to be able to attend every meeting. Each lecturer will provide a lecture contract before starting the lecture.

Students are allowed to apply for permission not to attend lectures according to the procedures set by the lecturer. Lecture permits are allowed such as illness, dispensation due to important academic or non-academic activities, and permission due to special cases. For licensing procedures, students can directly ask the lecturer in charge of the course.

III.5. Special Cases of Study

Leave Application

Students are allowed to apply for leave in one or more semesters, but not consecutively for more than 2 semesters. Students are declared on study leave if based on justifiable reasons cannot take part in academic activities based on the student's request and permission from the Rector.

The period of leave does not count as the study period. Students with study leave status do not pay UKT and are not entitled to academic services. The procedure for applying for student leave has several stages, namely:

1. Submitting an application for leave permission by requesting a leave permit form to the academic department of the department
2. Consideration and approval of student leave applications by academic advisor
3. The signing of the student leave permit by the study program coordinator
4. Students send a leave application form that has been approved by the academic advisor and study program coordinator to the BAAK(Student Administration Bureau)
5. Giving disposition and ratification by the Vice Rector for Academic Affairs in accordance with applicable rules and regulations
6. Giving notification of a reply letter for submitting a leave permit that has been ratified through the academic service counter
7. Students get a reply letter for requesting leave in accordance with the provisions

Resignation

Students are allowed to withdraw from the study program that has been taken. Preferably, students who want to resign can first consult their academic advisor if they experience problems or have problems during lectures. The hope is that by consulting students, they can get solutions to problems or get motivated to attend lectures again.

Students who resign at their own request are determined by the Rector's Decree. Students who do not re-register for two consecutive semesters can also be considered resigning through the Rector's Decree. The application procedure for student resignation has several stages, as follows:

1. Submitting an application for permission to resign by requesting a resignation permit form to the academic staff of the department
2. Consideration and approval of the student resignation permit application by the advisor
3. The signing of the student resignation permit by the study program coordinator
4. The student sends the resignation permit application form which has been approved by the academic advisor and study program coordinator to the BAAK.
5. Giving disposition and ratification by the Rector in accordance with applicable rules and regulations
6. Giving notification of a reply letter for submitting a resignation permit that has been ratified through the academic service counter
7. Students get a reply letter for submitting a resignation permit according to the provisions

Switching Study Program

Students can switch from one study program to another with several conditions, namely:

1. Have passed the Joint Preparation Stage (TPB).
2. Students get permission from the Departments and Study Programs that are left or intended.
3. There is no additional study period due to the switch of study program.

The opportunity to switch study programs is allowed only once at the end of the first year.

More complete rules regarding the switch of study programs can be seen in ITK Rector Regulation No. 5 of 2020 Chapter 3 Article 7. The procedure for applying for a study program switching permit has several steps as follows:

1. Students submit an application to switch study programs by preparing an application file.
2. The application for switching of study program is sent to the academic program of the major that will be left behind.
3. The head of the department considers the student's application to switch study programs in accordance with applicable regulations.
4. If approved, the head of the department who will be left will send the application file to the rectorate.
5. The Rector and Vice Rector for Academic Affairs provide responses to the submitted submission files.
6. The head of the intended department will check the completeness of student files and the availability of quotas for the intended study program.
7. The results of the consideration of the head of the intended department will be forwarded to the Vice Rector for Academic Affairs for further consideration.
8. A reply letter will be made and ratified by the Vice Rector for Academic Affairs regarding whether or not the transfer of the study program is approved.
9. Students will get a notification in the form of a reply letter and the results of the application can be seen at the academic counter service.

For further information, please contact the ITK academic section whose contact details can be found in **section I.4**.

III.6. Student Activity and Achievement Credit Unit

Student activities and achievements in non-academic fields get recognition from ITK through the Student Activity and Achievement Credit Unit (SK2PM). The rules regarding SK2PM are contained in ITK Rector Regulation No. 6 of 2020. In general, SK2PM is a unit of activity credit obtained by ITK students after participating in extracurricular activities. Extracurricular activities are student activities that include character development, reasoning and scholarship, interests and talents, organization and leadership, entrepreneurship, and recognition. Meanwhile, the student activities in question are non-academic activities to develop themselves towards broadening their horizons and increasing intellectuality and personality integrity in achieving higher education goals which include

1. reasoning and science,
2. entrepreneurship,
3. interests and talents,
4. development of student welfare, and
5. community service.

In accordance with ITK's academic regulations, SK2PM is one of the requirements for graduation at the undergraduate stage (S1). To qualify for graduation, students must have a minimum of 1500 SK2PM points obtained from student activities. In addition, the SK2PM scores for undergraduate students are divided into several criteria, namely:

1. Enough, if the student can collect the value of 1500 points.
2. Good enough, if students can score 1501 points up to 2000 points
3. Good, if students can score 2001 points up to 2500 points.
4. Very Good, if the student can collect a value greater than 2500 points.

This SK2PM regulation was issued with the aim of regulating student activities in improving soft skills through student extracurricular activities. The scope of SK2PM is student activities participated by ITK students which are divided into six categories of activities, namely:

1. Character development
2. Reasoning and science
3. Interest and talent
4. Organization and leadership
5. Entrepreneurship; and
6. Recognition

The student activities in question can be in the form of activities held at the level of study programs, departments, institutes, regional, national, and international levels. The assessment of SK2PM is regulated in ITK Rector's Regulation No. 6 of 2020. Students can also see the values obtained for each student activity directly at <https://gerbang.itk.ac.id> in the SK2PM section. Student activities that are entered in SK2PM will be connected to the SKPI which is sorted according to the highest points.

At the time of supervising at the beginning of the semester, the academic advisor will direct and provide advice regarding SK2PM planning. At the end of each semester, the SK2PM plan will be seen by the academic advisor. To get SK2PM value recognition, students can enter student activities that have been carried out in the current semester accompanied by evidence of activity implementation at <https://gerbang.itk.ac.id> in the SK2PM section. Assessment can be obtained if students can show evidence in the form of certificates, decision letters, or other supporting evidence. After students fill out activities accompanied by evidence, the academic advisor will validate the filling made by students. If fulfilled, then the SK2PM will be assessed by the parties entitled to conduct the assessment.

III.7. Support for Students

a. Academic advisor

Each student will have an academic advisor while studying at ITK. The advisor is one of the study program lecturers appointed by the head of the study program. The advisor has the responsibility to assist students in preparing study plans and student activities for the upcoming semester, monitor the progress of studies and student activities, and guide students to overcome academic problems. It is hoped that the academic advisor will be the first contact for students to consult while studying at ITK.

The advisor will be conducted at least three times per semester. Students are required to meet the academic advisor during the academic calendar, but students can also contact the advisor if they encounter academic problems. If students find it difficult to meet or have certain problems with the advisor, students can meet the head of the study program. The distribution of advisors will be announced during the orientation period, or the information can be viewed directly at <https://gerbang.itk.ac.id>.

b. Counseling Service

ITK provides Counseling Services assisted by professional psychologists. Counseling Service is provided at the Integrated Service Unit every Friday from 08:00 – 16:00 WIB. Students can register for counseling at <https://s.itk.ac.id/konselingkarier>

c. Services Centre (ULT)

ULT ITK provides various integrated services for the ITK students and academic staff. The ULT service counter is open every weekday from 07.30 to 16.00 WITA (especially for Fridays to 16.30 WITA). There are 4 counters that provide several services including:

1. Personnel Service
2. Academic and Student Services
3. Financial Services and State Property
4. Public Relations Service
5. Planning Service
6. Facilities and Infrastructure Services

ULT is located near the lobby of building A on the 1st floor. Further information about ULT services can be found at <https://ult.itk.ac.id>, send an e-mail to the address ult@itk.ac.id or contact the telephone number (0542) 8530801. After receiving service, students can fill out a service satisfaction survey which will be notified via campus e-mail.

d. Language and Culture Hub

ITK has a language and culture hub known as UPT Language ITK which is a technical implementation unit in the field of learning and language development. Students can learn and do some activities to improve their language skills. The staff works together to develop material, media and course

instruction. They also have a responsibility towards their programs in terms of finance, equipment and service delivery as well as customer satisfaction. The summary of LCH routine programs is stated as follow:

- Foreign Language Training
- TOEFL ITP Training
- IELTS training
- Public speaking training in English.
- IAET (Internal Academic English Test) training for prospective graduates
- TOEFL ITP
- Pre-test Equivalent TOEFL
- TOEIC Simulation
- IELTS Simulation
- IAET Online Test
- International Foreign Language Test

In brief, LCH provides foreign language tests for students to support their employability, such as Internal Academic English Test (IAET) and Test of English as a Foreign Language (TOEFL) Exam, but other test schemes are also available for specific needs. To meet CEFR standards, UPT. Language composes an internal test that will be used by students, lecturers, and staff as a diagnostic test of English language proficiency, which is called the IAET while to determine the actual English proficiency of UPT. Language cooperates with IIEF as a test center to hold the TOEFL ITP test. Broadly speaking, the IAET and TOEFL ITP have evolved from written exam formats, computer-based tests to date adopting a 'remote proctoring' system, namely a test system that makes it easy for participants to do it online from home without compromising the credibility of the test results.

LCH is located at floor 1, building A, room A-103 and open for service every Monday to Friday from 07:30 AM - 04:00 PM except public holidays. If you wish to know more about UPT Language ITK, please open the link <https://lch.itk.ac.id/> or contact us by e-mail uptbahasa@itk.ac.id.

e. Other Supports

For students who have special needs or need other assistance that has not been mentioned, students can first consult with their advisor or go directly to ULT. The advisor or ULT will contact the relevant party and provide direction in accordance with the applicable procedures. For service improvement, students can provide input to the Integrated Service Unit by sending an e-mail to ULT.

III.8. University Information

ITK in providing information to students and the entire ITK students and academic staff is divided into several types of information, including:

- 1) Announcements in the form of important matters that might affect ITK's academic activities.
- 2) Informational Letter, the letter that is made with the aim of conveying or informing a policy to the entire ITK students and academic staff.
- 3) Information related to university tri dharma activities to provide information on research, teaching, and community service.

- 4) Information on independent campus activities, namely student exchanges, internships/work practices, teaching assistance, research/research, humanitarian projects, entrepreneurial activities, independent studies, and real- work practices (KKN).

The form of information published by ITK to the mass media is in the form of educational and entertainment videos, infographics, posters, notices, news articles, and press releases. In order for the information to be conveyed properly to the ITK student and academic staff, the publication of the information is carried out through several platforms including:

- 1) Website
 - itk.ac.id (Website Utama ITK)
 - ppid.itk.ac.id (Pejabat Pengelola Informasi dan Dokumentasi ITK)
 - ult.itk.ac.id (Unit Layanan Terpadu ITK).
- 2) Email
 - humas@itk.ac.id (Email Humas ITK)
 - rektorat@itk.ac.id (Email Rektorat ITK)
- 3) Social Media
 - Instagram: @itk_official
 - Twitter: @itk_official_
 - Facebook: Institut Teknologi Kalimantan
 - Whatsapp: +62 811-1539-0901

III.9. Additional Information for International Students

ITK can accept transfer students from overseas universities for the same and accredited study programs. The implementation of transfer student admissions is carried out at the beginning of each academic year by considering the capacity of the intended department/study program and the learning progress obtained from the abandoned university. Students who are interested in moving must submit an application to the chancellor accompanied by an equivalency letter from the ministry in charge of higher education, transcripts during study in the study program that was left behind, a statement from the head of the original university regarding the status in question, and the reason for the transfer. If the application is approved, students must re-register and accept the determination of the study load that must be taken at ITK through the equivalence process approved by the study program coordinator.

ITK International Office is a gateway for ITK international students. International students are very welcome to visit the office and meet with ITK IO staff. It is located at the Lab Terpadu building. ITK provides accommodation for International Students. The accommodation provided by ITK is the international dormitory. International students are also allowed if they prefer to stay in the local dormitory. They can arrange their own accommodation or ask assistance from ITK International Office. Buddy will help international students to adjust environmental conditions and the education system in ITK. Buddy are selected ITK students who are ready to help international students learn about the cultures that exist in ITK.

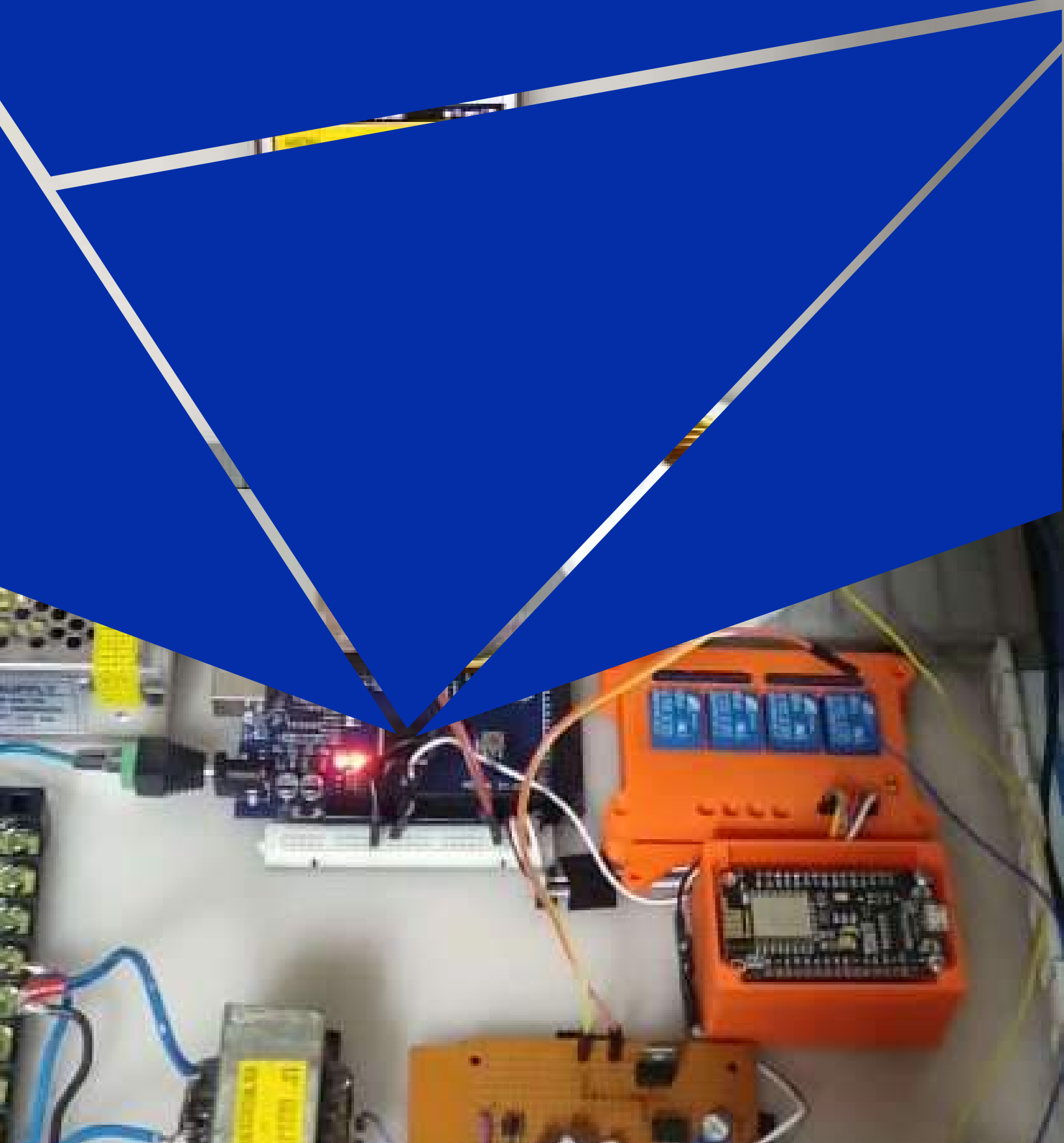
III.10. Confirmation of Student Status

Students are declared active if they meet administrative requirements, pay tuition fees, undergo academic supervising, and participate in all teaching and learning processes in the current semester. The application for the issuance of an active study certificate for active students can only be done at the Academic and Student Service Counter of the Institut Teknologi Kalimantan. To obtain a certificate of active study, students can undergo the following procedures:

1. Submit an application for the issuance of an active study certificate through the site: <https://bit.ly/LayananITK>
2. Application verification process and completeness by the central academic section
3. If fulfilled, the letter will be made and processed further. A notification will be given if the result of the verification of the application is found to be non-compliant.
4. Waiting for the process of making the letter and signing by the authorized official.
5. A notification will be given when the process is complete, students can pick it up at the academic service counter.

Students are declared inactive if they do not re-register and plan studies with their advisor without permission. If they want to be active again, students must submit a written application to the ITK Rector. Students who are declared inactive are required to continue to pay UKT. To take care of the active application again, students can send an email along with the completeness or go directly to the Academic Service Counter with the completeness. The procedure for resubmitting students is as follows:

1. Submit a letter of application to be active again as an ITK student to the central academic section
2. Application verification process and completeness by the central academic section
3. If fulfilled, the application will be processed by the academic section which will then be assigned to the Rector, Vice Rector for Academic Affairs, and the head of the department.
4. A reply to the decision will be made by the academic department and ratified by the Vice Rector for Academic Affairs.
5. A notification will be given if a reply letter is available and students can pick it up at the academic service counter.



STUDENT HANDBOOK
ELECTRICAL ENGINEERING

IV. TEACHING AND LEARNING SKILL

IV. Teaching and Learning Skills

IV.1. Lectures

The form of learning for courses in the Electrical Engineering study program can be face-to-face lectures, seminars, and practicums. This form of learning can be in the classroom, auditorium, or laboratory.

The forms of face-to-face lectures include group discussions, simulations, case studies, collaborative learning, cooperative learning, project-based learning, and problem-based learning that can effectively facilitate the fulfillment of graduate learning outcomes. The learning process is carried out in a systematic and structured manner through various courses and with a measurable learning load.

The form of learning in the form of research, design, or development are student activities under the guidance of lecturers in the context of developing attitudes, knowledge, skills, and authentic experiences, improving community welfare and national competitiveness.

In addition, there are other forms of learning carried out such as research, student exchanges, internships, community service, practical work, and final assignments which will be discussed in the next sub-chapter.

IV.2. Self-Learning

Independent learning is a process, portion, and control of learning that students determine based on their individual circumstances and learning pace. Independent learning can be held remotely. Distance Learning (PJJ) is carried out openly, independently, and based on information and communication technology. PJJ has the characteristics

The independent learning process has flexibility as a consequence of PJJ which has open characteristics. In addition, independent learning utilizes the appropriate application of information and communication technology to facilitate communication and learning interactions between lecturers and students.

IV.3. Supervisions

Both academic and student activities. The form of academic activities can be in the form of Research Groups, Practical Work, Final Projects, and MBKM activities (Independent Studies or Internships). Meanwhile, student activities can be in the form of student organization activities and competitions.

Research group activities provide opportunities for students to participate in research activities carried out by lecturers. For information related to the research group in the Electrical Engineering study program, it can be accessed at https://ee.itk.ac.id/penelitian/group_penelitian.

Practical work and final assignments are mandatory courses that must be taken by students. Practical work gives students the opportunity to gain experience in the world of work, both in government agencies and in industry. Explanation of practical work can be seen in **sub chapter IV.7**.

The final project is an activity at the end to complete studies in the Electrical Engineering study program. Students carry out research activities as outlined in the final report. The implementation of the final project can be seen from the guidelines for the implementation of the final project which can be accessed at https://ee.itk.ac.id/akademik/panduan_tugas_akhir_skripsi. In addition, there are other academic activities including MBKM activities which can be found in **sub chapter II.4**.

In addition to carrying out academic activities, supervision is also carried out on student activities. Student activities must be based on the principles of benefit, education, mutual respect, order, independence, unity and integrity while still upholding human rights, social values, and academic values. Student activities as described include:

- a. Character development
- b. Reasoning and science
- c. Interest and talent
- d. Organization and leadership
- e. Entrepreneurship
- f. Recognition;

Information related to the implementation of student activities in the Electrical Engineering study program can be accessed at <https://ee.itk.ac.id/kemahasiswaan>

IV.4. Laboratory

One form of learning in the Electrical Engineering study program is practicum activities. The implementation of the practicum is intended to assist students in understanding and applying the lecture material. This is done as one way to achieve the learning objectives of the course. In the Electrical Engineering study program curriculum, not all courses have a practicum. The practicum implementation process is carried out at the ITK Integrated Laboratory through the assistance of practicum assistants and according to a predetermined schedule.

Information related to the implementation of practicum and courses that have practicum can be accessed at <https://ee.itk.ac.id/akademik/kurikulum>



Figure 9. Practicum activities

IV.5. Field Trips

Field trips are activities carried out per batch of students by visiting industries. This activity was carried out accompanied by two lecturers who helped supervise the implementation of student activities.

IV.6. Projects

The form of project learning is applied to project-based courses, namely courses, equipment programming; power electronics; transducer technology, control system design, microprocessor and microcontroller systems, artificial intelligence, mobile computing applications, electric motor control, electrical machine control systems, robot kinematics, robot dynamics, and project management. Students will be given a project to solve a problem and the lecturer will guide the process of completing the project. At the final stage, students will make presentations and prepare analysis reports on projects that have been done.

In addition, there are courses with project learning in collaboration with partners from the industry. Some of the courses carried out are basic PLC programming, industrial automation, and others. Partners participate in the preparation of lesson plans for courses, and conduct lectures to assist in testing students' abilities. The tasks are given start from basic tasks to projects that will be or have been carried out by the industry. Students can participate in evaluating projects that are being worked on by the industry.

IV.7. Field Work and Internships

1. Field works

Program that must be taken by students to be able to complete studies in the Electrical Engineering study program. This activity can help students to improve their practical experience both in government agencies and in the industry in accordance with practical work topics agreed with the supervisor. In general, the stages of implementing practical work are:

- a. Preparation of practical work proposals
- b. Practical work registration
- c. Implementation of practical work
- d. Preparation of practical work reports
- e. Implementation of practical work seminars

For more information related to practical work, see the practical work guide on the https://ee.itk.ac.id/akademik-en/student_handbook_and_guidelines

2. Internships

Internship activities are carried out in various partners for a minimum of 6 (six) months and a maximum of 12 (twelve) months. Internships can be converted into credits for courses that have the same Learning Outcomes. For students who have carried out the Internship by the provisions, they are not required to take Practical Work. During the Internship, students will carry out the tasks and work assigned by the Field Supervisor. The tasks and work that have been given must be accompanied by guidance and direction from the Advisory Lecturers and Field Supervisors so that students can carry out their duties and work well.

In general, the implementation of the Internship goes through several stages, namely:

1. Apprenticeship Registration;
2. Inputting Internship credits;
3. Implementation of the Internship;
4. Implementation of Internship Results in Seminar and Preparation of Internship Reports.

For more information related to practical work, see the practical work guide on the https://ee.itk.ac.id/akademik-en/student_handbook_and_guidelines

IV.8. Module Surveys and Annual Module Reports

Evaluation of the teaching and learning process will be carried out at the end of each semester according to the academic calendar schedule on week 14 to 17. This evaluation consists of a questionnaire to review the performance of lecturers during teaching and a questionnaire related to the suitability of the implementation of course learning. The results of this evaluation are in the form of a lecturer teaching index (IPD) on a scale of 1 - 4, which will be used as evaluation

material in the implementation of the next teaching and learning process for lecturers as ITK's commitment to learning quality assurance.

Students can fill out a questionnaire evaluating the teaching and learning process that has been carried out for one semester at <https://gerbang.itk.ac.id> in the lecturer and MK questionnaire menu. The schedule for filling out the questionnaire will be listed on the page. Filling out this questionnaire is mandatory for students. If students do not fill out the lecturer's and MK's questionnaires, then students cannot see the scores directly at <https://gerbang.itk.ac.id/>. In addition to filling out questionnaires, students can also provide comments or suggestions to supporting lecturers to improve the quality of learning. The identity of the questionnaire filler will be kept confidential so that there is no subjectivity to the results submitted.



STUDENT HANDBOOK
ELECTRICAL ENGINEERING

V. ASSESSMENT AND EXAMINATION

V. Assessment and Examination

V.1. Course works

The form of the assignment given to students is conveyed in the lecture contract which is described at the first meeting of the lecture and is stated in the Semester Learning Plan (RPS) for the course. The form of assignments can be different for each course, which can be in the form of individual assignments, group assignments, or project assignments.

In individual assignments and group assignments, problems are usually given from the lecture material delivered or presentations. While the assignment is in the form of a project, the problem can be in the form of analysis, simulation, or tool making. Information related to assignments is usually delivered directly in class and can also be viewed on the ITK online learning page, namely Kampus.itk.ac.id. If there is a delay in submitting assignments, there are usually consequences, it could be a reduction in grades or being deemed not to have submitted assignments depending on the lecture contract agreed with the lecturer in charge of the course.

V.2. Examinations

In addition to assignments, students also conduct exams to determine the learning achievement of the courses. The form of the exam can be divided into three, namely quizzes, midterm exams, and final exams.

1. Quiz

The quiz can usually be given during lectures. The form of the quiz and its technical form is usually mutually agreed upon with the lecturer at the beginning of the lecture at the time of delivery of the lecture contract.

2. Mid-Semester Exam and Final Exam

Meanwhile, the midterm and end-semester exams are usually given in the 8th and 16th weeks of lectures. Information regarding the implementation of the midterm and end-semester exams can be obtained from the academic calendar. The form of midterm exams and end-of-semester exams is not only in the form of problem-solving but can also be in the form of project work results such as analytical reports. This was also conveyed during the submission of the lecture contract.

V.3. Feedbacks and Results

The principles of learning assessment include educative, authentic, objective, accountable, and transparent principles which are carried out in an integrated manner. Assessment of student learning outcomes is part of the process of determining student academic achievement. Learning assessment is designed based on learning outcomes, so that it can be used as a parameter for measuring the level of fulfillment of course learning outcomes.

The final result of the assessment is an integration of various assessment techniques and instruments used. Learning assessment techniques can be in the form of observation, participation, performance, written tests, oral tests, and questionnaires. Meanwhile, the assessment instrument consists of a process assessment in the form of a rubric and/or an assessment of the results in the form of a portfolio or design work. The measurement scale for student learning assessment results is stated as follows:

Score	Mark	Numerical Value	Category
$86 \leq \text{score} = 100$	A	4	Excellent
$76 \leq \text{score} < 86$	AB	3.5	Very Good
$66 \leq \text{score} < 76$	B	3	Good
$56 \leq \text{score} < 66$	BC	2.5	Good Enough
$51 \leq \text{score} < 56$	C	2	Enough
$41 \leq \text{score} < 51$	D	1	Poor
$0 = \text{score} < 41$	E	0	Very Poor

Lecturers will provide feedback on every form of evaluation given to students, either directly during the learning process or through LMS. Feedback can be in the form of comments both orally and in writing, so that students can reflect on their work to improve the achievement of course competencies. The results of the assessment are announced to students a maximum of 2 calendar weeks after the evaluation is carried out and can be directly seen in the grade section of the LMS according to the courses taken. Students' final grades for the courses taken are at the end of the semester and can be seen at <https://gerbang.itk.ac.id>. If students are not satisfied with the results of the assessment, students can appeal the scores which are described in detail in section VI.4.

Each course will have a varying assessment component, depending on the desired learning outcomes. Usually at the first meeting, the lecturer will explain the components of the assessment when making a lecture contract. Lecturers may be able to evaluate not only offline/face-to-face, but also take advantage of the activities contained in the LMS. Students should look at the semester learning plans (RPS) given to see the activities per week and the form of assessment carried out by the supporting lecturers on the courses taken.

V.4. Course completion

A student is declared passed if the learning achievement targeted by the study program is at least a C grade. If a student does not achieve a C grade, students are allowed to take the course again in the next semester or academic year. If a student repeats a course, then the value obtained is the last value after completing the course.

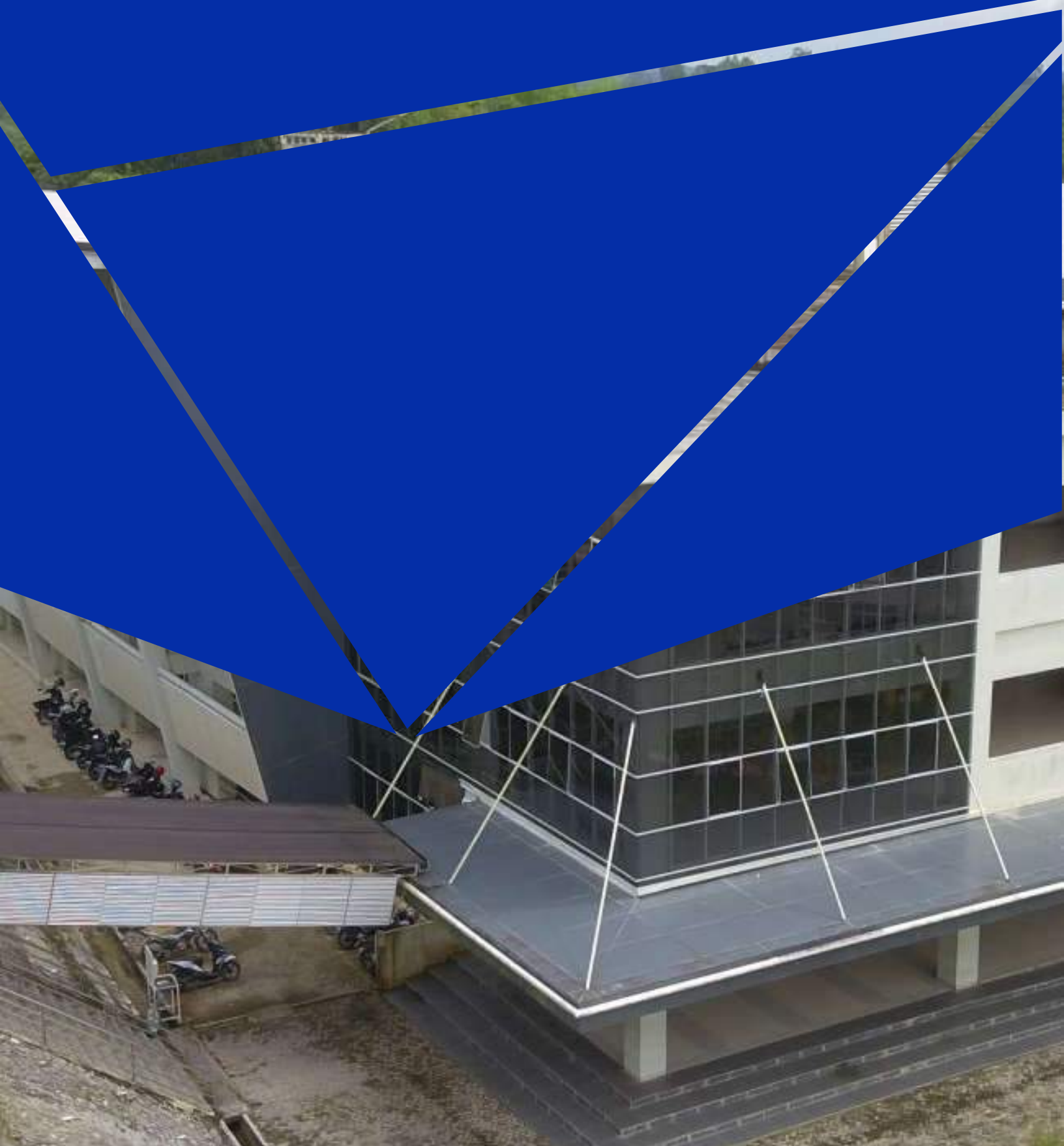
The longest study time for students is 14 semesters. However, there are two stages of evaluation that will be carried out, namely the evaluation of ***the preparation stage*** and ***the advanced stage***. Students who do not meet the requirements will be evaluated based on the Rector's decision. At the preparation stage, students are allowed to continue their studies if:

1. At the end of the second semester, 18 credit hours of the 36 credit hours that have been taken in the *preparation stage* will receive a GPA ≥ 2.0 .
2. At the end of the fourth semester, they have completed the entire *preparation stage* of study with a GPA ≥ 2.0 and a minimum grade of C;

While the evaluation at the *advanced stage* will only be applied if students who have undergone 12 semesters but have not succeeded in completing the study load of 144 credit hours, including the Final Project.

For students taking MKBM courses, the implementation of recognizing MBKM activities into credits for courses in study programs or institutional courses is carried out based on MBKM activity guidelines. The MBKM program, which is attended by students, gets ECTS recognition in courses in the study program and outside the study program at ITK based on the CPMK. If MBKM activities do not conform to the ILO in courses inside and outside the study program at ITK, MBKM activities that have been carried out are recognized in the form of implementing activities listed in the Certificate of Companion Diploma (SKPI).

Recognized courses from MBKM activities cannot be used to replace credit for courses that do not pass at ITK. To view the MKBM activity guide, students can download it on the study program website or can be accessed via <https://gerbang.itk.ac.id> site on the MKBM menu.



VI. UNIVERSITY REGULATION

STUDENT HANDBOOK
ELECTRICAL ENGINEERING

VI. University Regulation

VI.1. Academic Regulations

Every academic community must comply with all applicable regulations at ITK. In the implementation of academic activities, ITK has rules that refer to SN DIKTI. ITK academic regulations are officially stated in the ITK Rector's regulation No. 5 of 2020 which consists of rules regarding:

1. Education programs
2. Student Admission
3. Campus Life Rules
4. Academic Curriculum and Calendar
5. Academic Activities
6. Learning Assessment
7. Student activities
8. Graduation
9. Education Quality Assurance
10. Academic Cooperation

In total there are 33 articles from all chapters in the academic regulations. Further information regarding academic regulations can be downloaded at <https://document-mutu.itk.ac.id/lampiran/11>.

VI.2. Students Regulations

ITK campus life is a combination of etiquette and discipline, which guides all student activities, regulations governing rights, obligations, prohibitions, sanctions, and guidance to create a safe, peaceful, orderly and disciplined Campus Life System. The Campus Life System binds students in carrying out their activities both on and off campus, as long as the activities carried out are directly and indirectly related to the provisions in force at the ITK.

The Campus Life System aims to:

1. Ensuring the maintenance of campus life that supports the implementation of the Tri Dharma of Higher Education and other supporting activities properly on campus.
2. Ensure the achievement of a harmonious, orderly and polite campus life.
3. Provide a foundation and guidelines for students as members of the scientific community and campus residents to behave and behave in everyday life, especially on campus, so that students are able to continuously develop science and technology based on noble character by referring to the moral rules and scientific ethics.
4. Provide the basis and guidelines for the imposition of sanctions for violations of the provisions that have been set.

Students are expected to read in detail about the order of campus life as stated in the ITK Rector's Regulation No. 12 of 2009. More detailed information about campus life can be downloaded at <https://document-mutu.itk.ac.id>.

VI.3. Official Guidelines

In carrying out academic and non-academic activities, students are given a guide document that is made centrally or specifically for the study program. These guidelines regulate student procedures when carrying out activities such as real work lectures, internships, practical work, final assignments, and so on. With this guide, it is hoped that it can help facilitate students so that the implementation of activities can be more organized, starting from the stages of preparation, implementation, reporting, to evaluation.

In addition to the guide document for the implementation of learning activities, there are guidelines for occupational safety and health (K3) that must be adhered to during activities in the ITK environment. This K3 guide is useful for protecting and safeguarding the ITK academic community in order to avoid mistakes that can have a negative impact on both individuals and organizations. Guidelines for centralized academic activities can be downloaded at <https://document-mutu.itk.ac.id> or can also be downloaded on the respective study program websites.

Each work unit at ITK has a standard operating procedure (SOP) so that the coordination flow is well organized and the work carried out is efficient so that service standards for students are well maintained. Students who need services should obey the SOP so that the process is carried out in an orderly manner. SOPs can be asked to each unit related to student needs.

VI.4. Complaints and Academic Appeals

If there is dissatisfaction with the assessment given by the lecturer in charge of the course, students are allowed to file an appeal with strong reasons. Grade appeals can be made during the appeal deadline and edit grades according to the academic calendar. To file an appeal, students can undergo the following procedures:

1. Students file a grade complaint to the lecturer in charge of the course on a clear basis by bringing related evidence
2. Lecturers will check student documents and give time for determining answers
3. If the change in grades is approved, students will be directed to take a grade complaint form which can be taken at the department's program and submitted to the study program coordinator.
4. The grade change process will be carried out and students can view it at <https://gerbang.itk.ac.id>

VI.5. Fees, Charges, Expenses, and Additional Costs

Single Tuition Fee or UKT is a fee charged to each student to be used in the learning process. To get academic services every semester, students are required to pay UKT. Tuition fees at ITK are paid according to a predetermined amount. UKT in ITK is divided into 8 (eight) categories which are

adjusted to the economic ability of students and regulated in the ITK Rector's Decree No. 5309/IT10/KM.03/2021. UKT rates for study programs Electrical Engineering are as follows:

Category UKT	Cost of Tuition (UKT)
Category I	500.000
Category II	1.000.000
Category III	2.500.000
Category IV	4.000.000
Category V	6.000.000
Category VI	8.000.000
Category VII	9.000.000
Category VIII	10.000.000

If students object to the Tuition (UKT) per semester that has been determined, students can appeal the UKT. The UKT appeal is the process of reducing the UKT per semester for students who have objections or are less able to pay the UKT amount. To file a UKT appeal, students can send an application along with the required documents to the UKT ITK coordinator. If the appeal file is complete and validated by the UKT ITK coordinator, the application will be processed. After the process of determining the new UKT rate has been completed, students will receive a notification via email regarding the approved UKT category.

UKT payment notification will be given at the beginning of each semester via email prior to the implementation of the FRS. Students cannot carry out FRS if they have not paid UKT. UKT payments can be made by Teller Bank/ATM/e-Banking/M-Banking by transferring to the Virtual Account number as follows:

1. Bank BNI 98800684+Student ID Number
2. Bank Mandiri 10085+Student ID Number

The amount of UKT that must be paid will be stated when making the transfer. Further information about UKT can be asked at the ITK Integrated Service Unit.

VI.6. Update on Regulations

Notification of any changes related to ongoing academic and non-academic activities can be contained in the ITK Rector's Decree. Updates regarding the applicable rules will be further informed to students via ITK's official email or can be viewed on the ITK official website and respective study programs.



VII. STUDENT ORGANIZATION

STUDENT HANDBOOK
ELECTRICAL ENGINEERING

VII. Student Organization

VII.1. Organization Mentors

All activities of ITK student organizations are fostered by competent lecturers in their fields. Guidance from lecturers can help students to get the expected achievements for organizations and individuals. The student center manages student and alumni development activities centrally.

1. Head of student and alumni development center:

Ainun Zulfikar, S.T., M.T.

2. Student center secretariat:

- Citra Ayu Afriyana, S.E.
- Istigfarin, S.Sos
- Mufida Fatma A., A.Md
- Della Febriana, S.E.

3. Reasoning and scholarly:

- Destyariani Liana Putri, S.T., M.T.
- Dian Rahmawati, S.T., MEngSc.
- Ismi Khairunnisa Ariani, M.Sc.

4. Entrepreneurship:

- Marita Wulandari, S.T., M.T.
- Eka Krisna Santoso, S.T., M.T.
- Devi Triwidya Sitaresmi, S.T., M.T.

5. Student Organization:

- Charul Qalbi AM, S.T., M.Sc.
- Eko Agung Syaputra, S.Si., MBA

6. Tracer Study:

- Diana Nurlaily, S.T., M.Stat
- Dwiana Novianti Tufail, S.T., M.T.

7. Career Development & Job Market:

- Amanda Dwi Wantira, S.Tr., M.T.
- Lia Amalia, S.T., M.S
- Noni Oktiana Setiowati, S.T., M.Sc.

8. Spirituality:

- Abdul Mudjib SYadzali, S.Pd.I., MA.Pd
- Yohanes Dwi Saputra, S.Si., M.Si.

- Christianto C S Khala, S.T., M.T.
- Ade Wahyu Yusariarta Putra Parmita, S.T. M.T.
- Adrian Gunawan, S.Si., M.Si.

9. Counseling Service:

Annisa Dwi J, S.Psi

Student Organization Advisor

Organization name	Advisor name
1 Himpunan Mahasiswa Fisika ITK	Dian Mart Shoodiqin, S.Si., M.Si.
2 Himpunan Mahasiswa Matematika ITK	Kartika Nugraheni, S.Si., M.Si.
3 Himpunan Mahasiswa Teknik Mesin ITK	Andi Idhil Ismail, S.T., M.Sc., Ph.D.
4 Himpunan Mahasiswa Teknik Elektro	Barokatun Hasanah, S.T., M.T.
5 Himpunan Mahasiswa Teknik Kimia ITK	Adrian Gunawan, S.Si., M.Si.
6 Himpunan Mahasiswa Teknik Material dan Metalurgi ITK	Jatmoko Awali, S.T., M.T
7 Himpunan Mahasiswa Teknik Sipil ITK	Muhammad Hadid, S.T., M.T.
8 Himpunan Mahasiswa Perencanaan Wilayah dan Kota ITK	Achmad Ghozali, S.T., M.T
9 Himpunan Mahasiswa Teknik Perkapalan ITK	Taufik Hidayat, S.T., M.T.
10 Himpunan Mahasiswa Sistem Informasi	M. Gilvy Langgawan Putra, S.Kom., M.MT
11 Himpunan Mahasiswa Informatika	Ariyadi, S.ST., M.T
12 Himpunan Mahasiswa Teknik Industri	Abdul Alimul Karim, S.T., M.T.
13 Himpunan Mahasiswa Teknik Lingkungan	Muhammad Maarij Harfadli, S.T., M.T
14 Himpunan Mahasiswa Teknik Kelautan	Nurmawati, S.Kel., M.Si.
15 Kabinet KM ITK	Ainun Zulfikar, S.T., M.T.
16 Dewan Perwakilan Mahasiswa KM ITK	Lia Amalia, S.T., M.S.
17 Dewan Perwakilan Mahasiswa Matematika ITK	Kartika Nugraheni, S.Si., M.Si.
18 Dewan Perwakilan Mahasiswa Teknik Elektro ITK	Barokatun Hasanah, S.T., M.T.
19 Dewan Perwakilan Mahasiswa Mahasiswa Teknik Kimia ITK	Adrian Gunawan, S.Si., M.Si.
20 Dewan Perwakilan Mahasiswa Teknik Material dan Metalurgi ITK	Jatmoko Awali, S.T., M.T
21 Dewan Perwakilan Mahasiswa Teknik Sipil ITK	Muhammad Hadid, S.T., M.T.
22 Dewan Perwakilan Mahasiswa Perencanaan Wilayah dan Kota ITK	Achmad Ghozali, S.T., M.T
23 Dewan Perwakilan Mahasiswa Sistem Informasi ITK	M. Gilvy Langgawan Putra, S.Kom., M.MT

24	Dewan Perwakilan Mahasiswa Teknik Mesin ITK	Andi Idhil Ismail, S.T., M.Sc., Ph.D.
25	Dewan Perwakilan Mahasiswa Teknik Perkapalan	Taufik Hidayat, S.T., M.T.
26	Keluarga Mahasiswa Hindu ITK	Ade Wahyu Yusariarta Putra Parmita, S.T., M.T.
27	Persekutuan Mahasiswa Kristen (PMK) ITK	Yohanes Dwi Saputra, S.Si., M.Si.
28	Keluarga Mahasiswa Katolik ST. Benediktus ITK	Chistiano C.S. Khala, S.T., M.T.,
29	Unit Kegiatan Kerohanian Islam Al-Fatih	Andul Mujib Syadzali, S. Pd. I., MA. Pd
30	Student Automotive Association ITK	Illa Rizianiza, S.T., M.T.
31	Koperasi Mahasiswa	Muhammad Azka, S.Si., M.Sc
32	FOLKS (Foreign Language ITK Society)	Alfi Suci Dirgantari, S.Pd., M.Pd
33	UKM Pramuka ITK	Dr. Moch. Purwanto, S.Si., M.Si
34	UKM Paduan Suara Mahasiswa ITK	Yun Tonce Kusuma Priyanto, S.T., M.T.
35	UKM Voli ITK	Yun Tonce Kusuma Priyanto, S.T., M.T.
36	UKM Tari	Chandra Suryani Rahendaputri, B.Sc., M.Sc
37	UKM Developer Student Club ITK	Ariyadi, S.ST., M.T
38	UKM Musik ITK	Yun Tonce Kusuma Priyanto, S.T., M.T.
39	UKM Futsal	Wira Setiawan, S.T.,M.T.
40	UKM ASMAWARMAN ITK	Abrari Noor Hasmi, S.Si., M.Si.
41	UKM Badminton ITK	Ade Wahyu Yusariarta Putra Parmita, S.T., M.T.
42	UKM Tenis Lapangan ITK	Budiani Fitria Endrawati, STP., M.T.
43	UKM Enggang EV Team	Andre A. Matarru, S.T., M. Han
44	UKM E-Sport	M. Ihsan Alfani Putera S. Tr. Kom., M.Kom.
45	UKM MAPALA	Riyan Benny Sukmara, ST., MT.
46	UKM Robotika	Kharis Sugiarto, SST., M.T.
47	UKM SRE	Happy Aprillia, S.ST., M.T., M.Eng., Ph.D
48	UKM Teater Ragam Warna	Diniar M. Kurniawati, S.T., M.T.

VII.2. Students Activity

Student activities are fully supported by the campus to help achieve ITK's vision and mission. The campus facilitates student activities through student organizations at the institute and study program levels. The student organization hopes that it can help students develop soft-skills and hard-skills according to their interests and talents. Student activities recognized by ITK can support the achievement of SK2PM graduation requirements. Student activities may include character

development, reasoning and scholarly, interests and talents, organization and leadership, entrepreneurship, and recognition.

A. Student Organization at ITK level

ITK Student Family or abbreviated KM ITK, is an association of all ITK students managed by the ITK student family cabinet. The ITK Student Representative Council or abbreviated as DPM ITK, serves as a transmitter of student aspirations from each study program to support activities carried out by KM ITK. Information on recruitment of students who are interested in participating in ITK KM and DPM activities can be seen on Instagram @km_itk.

Student activity units are organizations that accommodate student interests and talents, including the fields of arts and culture, sports, and reasoning. UKM supports students to develop soft-skills and hard-skills according to their interests, and hopes that they can bring achievements. Recruitment information for each SME can be seen on Instagram or can be asked via email.

Religious organizations are organizations that accommodate spiritual activities according to their respective beliefs. Currently ITK has 5 religious organizations, consisting of Islam, Christianity, Catholicism, Buddhism, and Confucianism. Recruitment information for religious organizations can be viewed on Instagram or can be inquired via email.

B. Student Organization at Study program level

The Study Program Student Association or abbreviated as HMP, is a means of developing reasoning, science, entrepreneurship, interests and talents, developing student welfare and community service in accordance with the scientific field of each study program. Recognized HMP activities can be submitted as a requirement for SK2PM graduation. The Study Program Student Representative Council, which is abbreviated as DPMP, serves as a messenger for student aspirations to support activities to be carried out by HMP. Students can only enter the HMP in accordance with the study program taken. Recruitment information for HMP and DPMP ITK can be seen on social media itk.hmte and dpmtc_itk and website <https://ee.itk.ac.id/>,

VII.3. Funding for Students Activity

ITK provides funds proportionally from the total ITK budget in the current year to support student activities. Funding for student activities is distributed proportionally to student organizations at both the institute and study program levels. Ormawa funding can be sourced from:

- a. Student development fund and Member fees;
- b. The organization's business carried out legally in accordance with applicable regulations;
- c. Other valid and legal funds in accordance with applicable regulations

The use of funds in student activities must be accountable. Each student organization is required to make a written report after the implementation of the activity. The activities that are held must be known and approved by the lecturers who foster student organizations before they are carried out according to the level of each student organization.



VIII. EMPLOYABILITY

STUDENT HANDBOOK
ELECTRICAL ENGINEERING

VIII. Employability

VIII.1. Career Center

ITK Career Development Division is under the Center for Student and Alumni Development which functions as a liaison between students or graduates with labor users (companies). The development of the Career Center is aimed at creating a career center system at ITK that can be used to determine the absorption, process, and position of students and graduates in the job market; prepare students and graduates in accordance with the competencies required in the job market; and assisting government programs in mapping and aligning the needs of the job market and higher education.

The programs managed by the Career Development Division of ITK consist of student internship programs, career preparation and training, counseling services, student assessment and evaluation and career fairs.

Student internship programs are divided into three types with different management systems, namely Internship and Certified Independent Study (MSIB), Certified Student Internship Program (PMMB), and Independent Internship Initiated Study Program (MMIP). MSIB is an internship program that embodies the Merdeka Campus program initiated by the Ministry of Education. PMMB is a program launched by the Indonesian Human Capital Forum (FHCI) which consists of state-owned companies in Indonesia.

Career preparation and training is a series of activities aimed at preparing ITK alumni to face the world of work. The Career Guidance Division holds various types of activities by inviting practitioners in the field of soft skills development and representatives of the Human Resources Department from various companies. There are three activities that are part of the career preparation and training program, namely, graduation briefing, career series webinars, and soft skills and career development fair. Graduation debriefing is carried out before the graduation in each period. In this activity, graduates are provided with provisions regarding preparation for the job market, besides that they are also given instructions regarding filling out tracer studies. The webinar career series is a series of company meetings that are preparing an employee training and recruitment program with a management trainee scheme. In this activity, students can meet and discuss directly with representatives of recruiters from companies. Meanwhile, the soft skills and career development fair is a program of mentoring and training students in the soft skills field to provide added value when competing in the job market.

Counseling services are carried out every Friday at ULT at 08.00 – 16.00 WITA. Counseling services include student academic guidance, non-academic, career plans, or consultation during the lecture period.

Student assessment and evaluation is a service provided by the career guidance field to all students who have just entered the college level and students who will graduate from ITK. The purpose of this assessment and evaluation is an effort to be able to map interests and abilities in the early days of lectures. So that students can find out their abilities, direct college choices and career preparation

based on interests, and find out other potentials they have. At the end of the lecture period, students will also get the same assessment, in order to find out the progress of students after taking the lecture period while at ITK.

VIII.2. Employability Supports

The career fair is one part of the services provided by the ITK career guidance field. This activity aims to accommodate the company as a provider of employment opportunities for students and alumni. The career fair also facilitates the needs of students and alumni for available jobs. The implementation of the first career exchange activities will only be held in October 2022.

All activities under the Career Guidance at ITK can be obtained and accessed through the Instagram page with the [@itkcareercenter](https://www.instagram.com/itkcareercenter) account or can send an email to careercenter@itk.ac.id

ITK Career Centre Gallery



Figure 10. Career center activities

VIII.3. Technological Business Incubator

The Technological Business Incubator (IBT) ITK was officially established in February 2019 which was stipulated in the Decree of the Rector of the Institut Teknologi Kalimantan Number: 239/IT10.R/OT.07/2019. In the contents of the decision, IBT ITK has the function of carrying out the incubation process for technology-based novice entrepreneurs. IBT ITK is institutionally under the Institute for Research and Community Service (LPPM) ITK. The vision of IBT ITK is to become a leading food technology business incubator center in Kalimantan that plays an active role in encouraging the

development of technology-based startup companies by 2025. The specific purpose of establishing IBT ITK is to develop the commercialization potential of higher education research both from the ITK academic community, and to increase startups in the field of education. Food with technology is the result of innovation from the research of the ITK academic community, developing networks between tenants and related stakeholders. IBT ITK's work program includes incubation of tenants who have been registered at IBT ITK and providing services in the form of training and mentoring to ITK students who are conducting competitions. This activity was carried out in collaboration with the ITK Student Entrepreneurship Supervisor.



Figure 11. IBT ITK

The IBT ITK tenant incubation process has stages, namely Pre-Incubation, Incubation and Post-Incubation. The Pre-Incubation Stage is a tenant selection process. The selection process is carried out with administrative selection stages, interviews, pitch decks and site visits (for outwall tenants). IBT tenant registration is opened annually in August-September by filling out the form recorded in IBT ITK's email, namely ibt@itk.ac.id.

Registration information can be seen on IBT ITK's social media accounts, namely https://www.instagram.com/p/CTQ_MGOJZ2b/ and the website column at <https://itk.ac.id/ibt/> and <https://lppm.itk.ac.id/detail-page/incubator-business-technology>.

In addition to conducting incubation and training programs, IBT ITK also collaborates with Student Entrepreneurship in developing an entrepreneurial ecosystem at ITK so that it can be in line with the Independent Campus Learning Program (MBKM) and the achievement of IKU. work on the campus of the Institut Teknologi Kalimantan. Currently, the fields that play a role in developing student entrepreneurial skills are Student Guidance for Entrepreneurship and the Technological Business Incubator.

ITK student entrepreneurship activities are divided into 4 stages which include: Motivation, initiation, implementation, and development. Stages-All IBT ITK activities are carried out in Building E, room E 106, 1st floor of the ITK Campus.

VIII.4. Entrepreneurship Program

A good entrepreneurial ecosystem always involves various institutions and organizations, such as: ITK Student Family (KM), Study Program Student Association (HMP), Student and Alumni Center Team (TPKA), and Technological Business Incubator (IBT). To support the continuity of activities, these institutions and organizations also cooperate with the Student Cooperative (KOPMA) and ITK employee cooperatives.

In the first stage, new students are required to attend the Basic Level Entrepreneurial Student Skills Training (LKMW TD). This activity contains the introduction and motivation of entrepreneurship organized by the ITK Student Family. This activity is expected to provide insight to students regarding various types of entrepreneurial activity programs that are carried out and followed by students. In addition, at this stage students are also motivated to become entrepreneurs. At this stage, students are required to create business models such as business model canvas and business proposals. This business model is then compiled into a business proposal to be included in various business competitions such as: Indonesian Student Entrepreneurship Activities (KBMI), Indonesian Student Startup Acceleration (ASMI), and other entrepreneurial competitions.

For the last few years since 2017, ITK students have won many championships or funding (funding) from various parties, especially from the Ministry of Education, Culture, Research and Technology (KEMDIKBUDRISTEK).

Some examples of list of student participants who received grants can be seen at the following link: <https://sim-pkmi.kemdikbud.go.id/portal/blog-2/>

In the second stage, students have started to think about the creation and development of their products so that they can be produced in a sustainable and quality manner. To support this, students who have participated in LKMW TD and or already have a business, are encouraged to take part in the Advanced Entrepreneurial Student Skills Training (LKMW TL). An example of an announcement of a TL LKMW activity can be seen at the link <https://www.instagram.com/p/CcPMepRvscl/>.

In addition, to raise the spirit of entrepreneurship in accordance with the professionalism of each study program, each Study Program Student Association is required to have a department or division in the field of entrepreneurship. This department or division will coordinate with the ministry of entrepreneurship, KM ITK, to run various work programs related to entrepreneurship in each study program.

In the third stage, students start running their business by considering various aspects. Some of these aspects are target market, marketing strategy, financial management, and resource management (raw materials, supporting tools and student resources). At this stage, analytical skills in solving complex problems in the field of entrepreneurship are needed. So it is hoped that leadership, communication, and other soft skills are also expected to develop. To help solve various problems

encountered in running their business, regular and continuous coaching is provided from business practitioners and entrepreneurship supervisors. Coaching is carried out thematically by raising topics according to the problems faced by entrepreneurial students.

In the last stage, businesses that have been run by students can be developed in the Technology Business Incubator (IBT). In this IBT, entrepreneurs are assisted and mentored with the aim of increasing production and expanding marketing. Through IBT, it is hoped that a business will have added value so that investors are interested in investing in the business. Mentoring at IBT can continue even after students have completed their education at ITK. Some IBT activities can be found at the link <https://itk.ac.id/category/ibt/>.

In practice, the entrepreneurship curriculum at ITK is based on real activities/activities in the field. All of these activities are managed by PKA and IBT ITK. Furthermore, in accordance with the spirit of Merdeka Learning Merdeka Campus (MBKM), student entrepreneurial activities can be recognized as part of the implementation of education which can be converted into Semester Credit Units (SKS). With this program, it is hoped that students will be more enthusiastic and motivated to become entrepreneurs so that they can contribute to solving the problem of the lack of job vacancies in Indonesia.

VIII.5. Certifications

Certification in the electrical field is very diverse such as engineer certification, electric power certification, and other things. Certification is needed when students want to enter the industrial world, both as engineers and as consultants. Students can have discussions with guardian lecturers and students in the study program to get more information related to certifications related to study programs and which can help students in the future.

VIII.6. Collaboration with Professionals

The Electrical Engineering study program has collaborated with various industries, both through the field of ITK collaboration and independently. Study program collaborations with various industries, such as

a. Teaching Field

Some courses of study programs such as PLC Programming Basics, and others have implemented collaboration with the industry. Students will receive teaching materials not only from lecturers on campus but also delivered by the industry as guest lecturers or practicing lecturers.

b. Research Field

The teaching staff in the Electrical Engineering study program collaborate with the industry in carrying out joint research. Study program students can participate in this activity as a lecturer's research assistant. Students can gain more knowledge and experience in collaborating with industry.

c. Community Service

Academics such as lecturers and students can participate in solving problems that exist in the industry. One of the participations that can be done is doing troubleshooting or problem analysis. This is very helpful for the industry in solving the problems obtained. This activity can be carried out as a form of community service activity to the industry.

d. Guest Lecture/ Seminar

To assist students in knowing developments in the industry with the latest topics, guest lectures or seminars are held. This activity can be initiated by student associations or study programs. Guest lectures and seminars are carried out by inviting industry parties to convey information that can add insight to students.

e. Practical Work Program

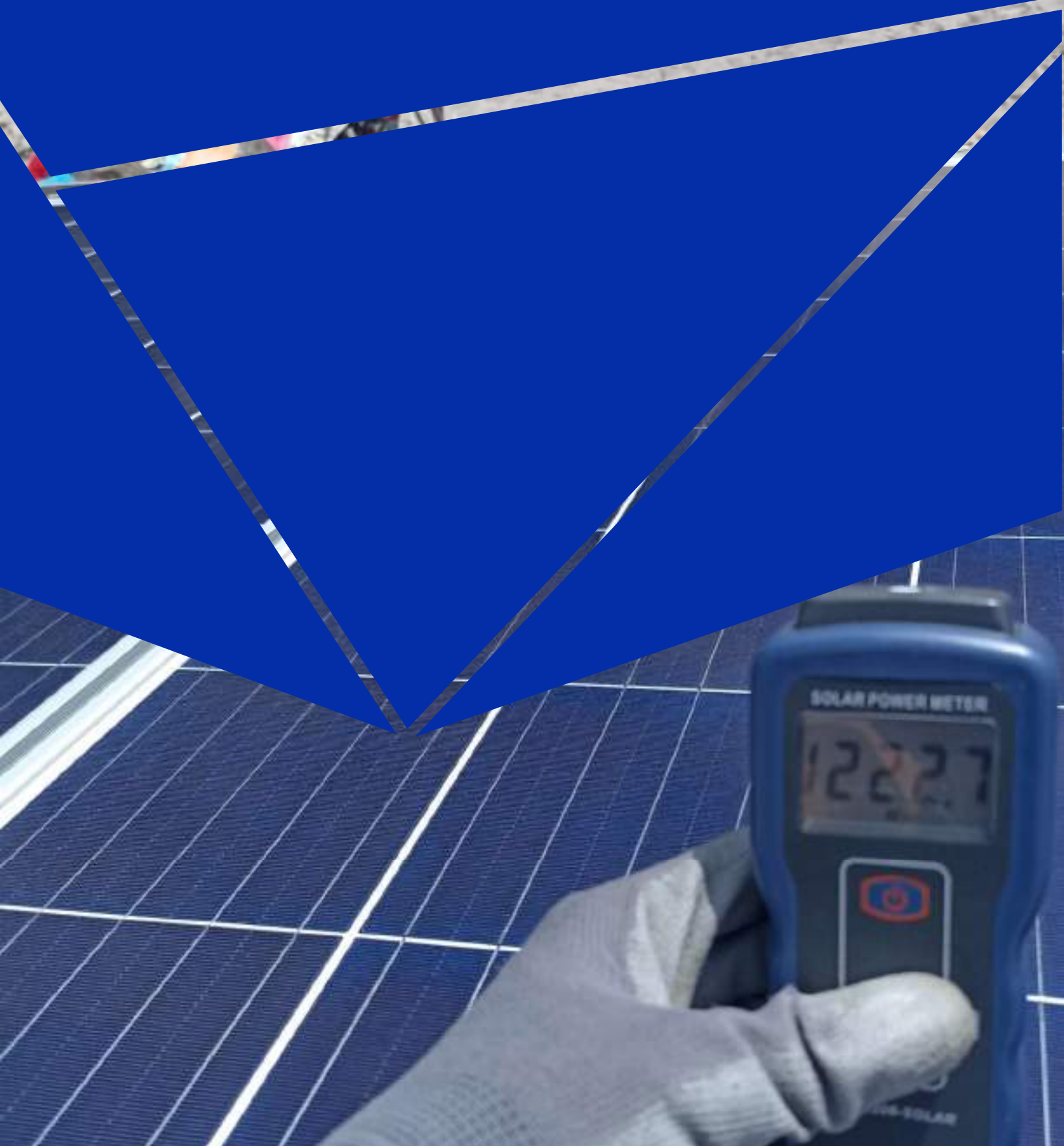
Practical work is one of the compulsory subjects carried out by students of the Electrical Engineering study program. Students do practical work in existing industries both in Balikpapan and outside Balikpapan. Students can gain experience working in the industry with a duration usually of 1 – 2 months.

f. Internship Program

The internship program, which is one of MBKM's activities, can help students gain experience working in the industrial world with a maximum duration of 6 months.

g. Thesis

Students also get the opportunity to work on a final project in the industry. Students can raise the topic of the final project of the problems that exist in the industry. To collaborate on this activity, students must first discuss with the guardian lecturer and the final project supervisor.



IX. HEALTH AND SAFETY

IX. Health and Safety

IX.1. Health Facility

ITK has collaborated with the Balikpapan City Health Office under the Balikpapan City Government in providing health facilities for students. The nearest health facility for students is at the Karang Joang Health Center which is located at Jl. Soekarno Hatta No.23, Karang Joang. Karang Joang Health Center is a level 1 health facility that handles the Karang Joang sub-district, North Balikpapan. Students who study at ITK and already have BPJS health Insurance will automatically be registered at the Karang Joang Public Health Center Facility.

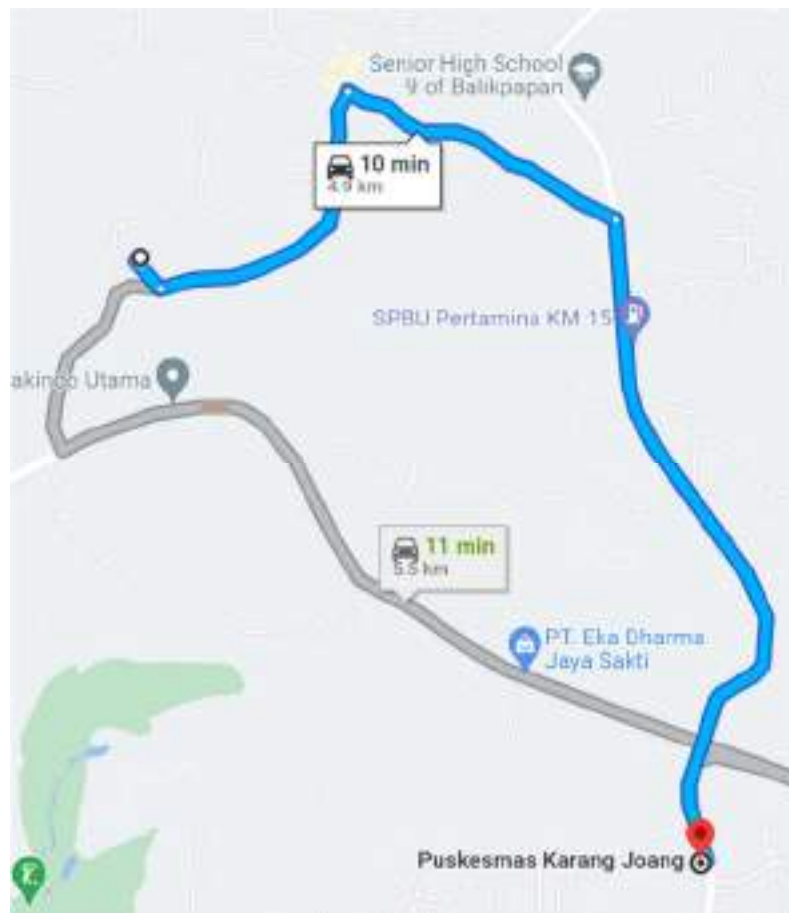


Figure 12. Karang Joang Public Health Center route from ITK

Health services available at Karang Joang Health Center include:

1. Vaccination
2. Rapid Test COVID-19
3. Emergency Unit
4. Mild Symptom Treatment

ITK collaborates with Pertamina Hospital Balikpapan (RSPB) which is located on Jl. Jenderal Sudirman No.1, Prapatan, Kec. Balikpapan City, Balikpapan City, East Kalimantan 76111. Students can get inpatient services with an upgrade service system for treatment class 1 level above the health insurance facility they have. Students can also get special rates when doing medical check-ups, RT-PCR, and RT-Antigen. In addition to health services, ITK and RSPB also collaborate in the fields of education and training, research, community service, apprenticeship, and health training or education.

ITK has also collaborated with RSUD Dr. Kanujoso Djatiwibowo in the scope of education and training, research, community service, and the development of science and technology. Dr. Kanujoso Djatiwibowo Hospital is also a referral hospital if health services at the Karang Joang Health Center cannot handle it.

Insurance for Students

Health facilities received by students are facilitated by BPJS health Insurance. Students who will do KP or Internship need to have health insurance. ITK provides support in the form of special BPJS financing for a certain time when doing Internship. The procedure for applying for a certain time BPJS is as follows:

1. Students communicate with their advisors when they are going to do Internship
2. If students do not have BPJS health Insurance, the advisor will communicate to the study program coordinator.
3. The study program coordinator will collectively collect information on students who do not have BPJS Insurance which will then be proposed.
4. If approved, students can register at the local BPJS office which can then be used for a certain time.

COVID-19 Vaccination

In order to support learning activities, every academic community must get the COVID-19 vaccination. The Indonesian government facilitates the COVID-19 vaccination, which consists of several types of vaccines, namely:

1. SINOVAC
2. AstraZeneca
3. Pfizer
4. Moderna

Vaccination is carried out simultaneously, which will be coordinated by the vaccine committee. Every academic community is required to carry out vaccinations at least until the second stage. If students have not received vaccinations or who have comorbid diseases so they cannot vaccinate, students can contact the ITK COVID-19 officer unit. The ITK COVID-19 Task Force provides vaccination services, positive reporting, or symptom complaints.

ITK dormitories are also used as a facility for self-isolation if there are students who are indicated or confirmed positive. In addition, it also provides support to students in the context of preventing and handling COVID-19. To contact the ITK COVID-19 Task Force, you can open the link <https://s.itk.ac.id/satgascovid19itk>.

IX.2. Student Safety

1. Safety guidelines

Every student's academic and non-academic activities must pay attention to occupational health and safety (K3). Losses caused by negligence in OSH may have an impact on individuals, other people, or the surrounding environment.

As an effort to realize work safety in the campus environment, ITK is committed to implementing occupational health and safety (K3) standards in accordance with ISO 45001:2018 regarding the occupational health and safety management system (SMK3) which includes the provision of safety facilities, emergency response systems, to risk management. This commitment can be implemented by providing emergency response facilities in the event of a potential hazard in each building, such as the availability of light fire extinguishers (APAR) in accordance with Permenaker No. 4/MEN/1994, hydrants, fire alarm systems according to SNI 03-3985-2000, evacuation route signs, emergency gathering points in accordance with PUPR Ministerial Regulation No. 14 of 2017, and first aid kits in accordance with RI Ministerial Regulation No. Per-15/Men/VIII/2008

Campus facilities are facilities that are shared, so the use of facilities must be in accordance with procedures. Students are required to pay attention to and study the SOP for the use of equipment and materials that have potential hazards so that harm does not occur. Equipment and materials, especially those in the laboratory, have various potential hazards and can cause certain impacts. Students are expected to understand the potential hazards and K3 procedures before working in certain laboratories. The ITK integrated laboratory provides K3 facilities, including:

1. First Aid Box

The contents of the first aid kit consist of wrapped sterile gauze, bandages, rolled plaster, quick plaster, cotton wool, scissors, disposable gloves, povidone iodine, and 70% alcohol. The first aid kit is also equipped with a logbook to monitor the availability of the contents of each box.

2. Personal protective equipment

Provision of personal protective equipment is adjusted to the needs and potential health hazards in the laboratory.

3. Safety sign (safety sign)

Hazard symbols are given according to the potential hazards that exist in each laboratory. Evacuation routes and assembly points have also been prepared to minimize the impact on everyone in the event of an accident or emergency.

4. Fire safety equipment

Consists of a light fire extinguisher (APAR), a hydrant, and a fire alarm.

For more details, students can download the manual for the use of laboratory facilities on the <https://labterpadu.itk.ac.id>. If there is still something that is not understood regarding the K3 procedure, students can send an email to the address labterpadu@itk.ac.id.

In addition to work safety in the campus environment, students are also expected to pay attention to work safety when carrying out activities outside the campus such as during field lectures, KKN, internships, practical work, or final projects according to the area where they work. The supervisor, main supervisor or field advisor will provide further direction regarding K3 procedures for each activity that will be undertaken.

2. Serious misconduct penalties

Deviant acts that can harm, injure, or harm other people or institutions need to be taken seriously. If a student finds an indication of a deviant act accompanied by evidence, the student can report it to the security. If the act violates the law, the perpetrator will be reported and handed over to the authorities.

IX.3. Emergency Situations

1. Emergency contacts

Address and Emergency Phone number:

a. Pusat Kesehatan Masyarakat Karang Joang (Buka 24 Jam)

Address: Jl. Soekarno Hatta No.23, Karang Joang, Kec. Balikpapan utara, Kota Balikpapan, Kalimantan Timur 76127
Phone: (0542) 861120

b. Markas PMI Balikpapan (Buka 24 Jam)

Address: Jl. Jenderal Sudirman No. 1, Klandasan Ulu, Balikpapan Kota, Kota Balikpapan, Kalimantan Timur
Phone: (0542) 873901

c. Rumah Sakit Terdekat (Buka 24 Jam)

Rumah Sakit Umum Daerah Dr. Kanujoso Djatiwibowo

Address: Jl. MT Haryono No. 656, Batu Ampar, Kec. Balikpapan Utara, Kota Balikpapan, Kalimantan Timur 76115
Phone: (0542) 873901

Rumah Sakit Hermina Balikpapan

Address: Jl. Sepinggan Baru No. 45, Sepinggan, Kec. Balikpapan Selatan, Kota Balikpapan, Kalimantan Timur 76114
Phone: (0542) 8532525

d. Kepolisian Resort Balikpapan

Address: Jl. Jenderal Sudirman No. 69, Balikpapan Selatan, Klandasan Ulu, Balikpapan Kota, Kota Balikpapan, Kalimantan Timur
Phone: (0542) 425000

e. Kepolisian Sektor Balikpapan Utara

Address: Jl. Soekarno Hatta KM 0,5, Muara Rapak, Balikpapan, Kota Balikpapan, Kalimantan Timur 76124
Phone: (0542) 422391

f. Pemadam Kebakaran UPT PBD Balikpapan Utara

Address: Jl. Soekarno Hatta KM 11, Karang Joang, Kec. Balikpapan Utara, Kota Balikpapan, Kalimantan Timur
Phone: (0542) 421113

2. Evacuation routes

The existence of an evacuation route is very important, this is because of its existence as a means when an emergency occurs. Examples of crisis conditions that can occur in the Kalimantan Institute of Technology (ITK) campus environment can be in the form of fires, hardware explosions, natural disaster events (earthquakes and landslides), B3 chemical spills, toxic gas leaks, and various hazards that can cause natural damage or loss of life. The benefits that can be felt from the existence of an evacuation route to connect all areas to a predetermined assembly point are in accordance with applicable regulations. So that this student handbook can provide direction to all students, lecturers, guests, staff, and all individuals who are in the Kalimantan Institute of Technology (ITK) Campus.

Accessibility of evacuation routes in the ITK campus environment has been provided, both from the central laboratory building, then buildings A, B, and C which function as directorate buildings and lecturer offices, while buildings E, F, G as classroom buildings (lectures). An example of an evacuation route in E building with a 3 story building height can be shown in Figures 13, 14, and 15.

EVACUATION ROUTE PLAN



**GEDUNG E
LANTAI 1**



Figure 13. Building E 1st floor

EVACUATION ROUTE PLAN



**GEDUNG E
LANTAI 2**



Figure 14. Building E 2nd floor

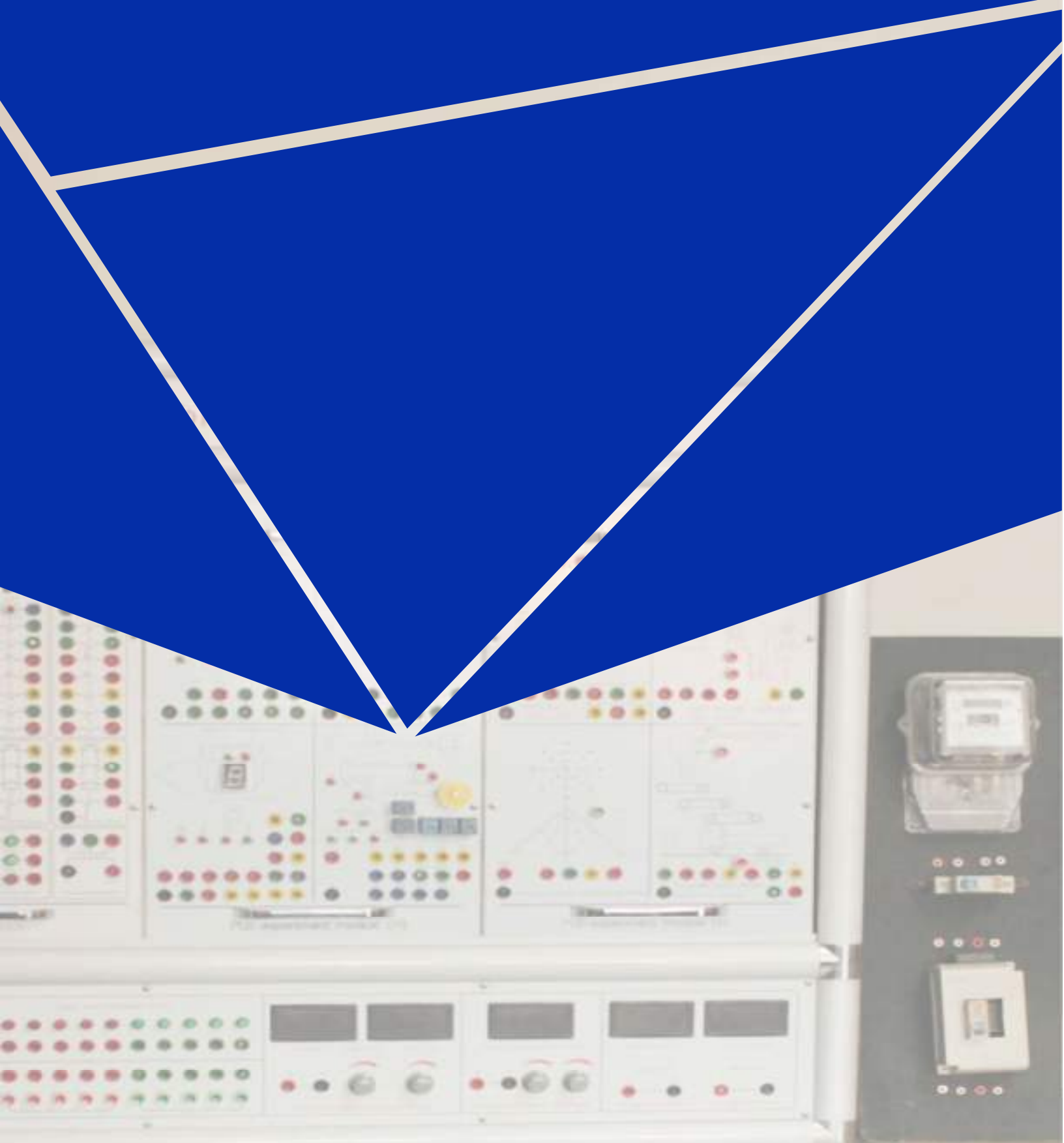
EVACUATION ROUTE PLAN



Figure 15. Building E 3rd floor

The three pictures above were taken from building E, so when anyone active in the building can follow these steps:

1. When you hear a long alarm sound, it indicates a danger that occurs.
2. Be careful not to panic and immediately stop every activity that is being done
3. When conducting lectures, the lecturer is obliged to lead the evacuation process. And if you are in a building on the 2nd or 3rd floor and the condition is in an emergency, do not jump from the building but still follow the evacuation instructions.
4. Bring enough important items (documents) and other items that are not large enough to hinder the evacuation process. It is also prohibited to put any items on the evacuation route.
5. Immediately leave the room by walking quickly (not running) and go to the nearest emergency exit.
6. Then follow the emergency route and immediately go to the nearest assembly point. Based on Figure 1, there are 2 Assembly points located 7 meters from the E building
7. When you are at the assembly point, then the ITK K3 officer will register and provide first aid if there are injured victims.
8. If a victim has been given first aid, immediately take him to the nearest clinic or health service center.
9. If the ITK K3 officer states that the conditions are safe, then everyone is asked to walk in an orderly manner to their respective places.



STUDENT HANDBOOK
ELECTRICAL ENGINEERING