COURSE LEARNING PLAN OF APTEKTRANSIDI

NAMA UNIVERSITAS **NAMA FAKULTAS** **NAMA DEPARTEMEN** **NAMA PRODI: S1 /**					
COURSES	**CODE**	**Rumpun MK**	**BOBOT (sks)**	**SEMESTER**	**Date of derafting**
AUTOMATIC CONTROL SYSTEM	**Kode MK** UG. 184916	**SPKB**	**3 SKS**	**6 dan 7**	**Tgl revisi / penyusunan RPS**
AUTHORIZATION	**RP Developer**		**RMK Coordinator**	**Ka PRODI**	
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Learning Outcome

CPL-PRODI

CPL	Description Learning outcomes
S6	Able to cooperate and have social sensitivity, as well as concern for the community and the environment
KU1	Able to apply logical, critical, systematic, and innovative thinking in the context of the development or implementation of science and technology that pays attention to and applies humanities values in accordance with their field of expertise
KU3	Able to use Technology Applications for the development or implementation of science and technology based on scientific rules, procedures and ethics in order to produce solutions, and ideas
KU4	Able to compile a final report / Proposal or research / innovation project / Student Creativity Program (PKM).

CP MK

CP MK	Description CPMK
CPMK 1	Students understand the outline of the lecture from beginning to end, are able to understand the Knowledge and Concepts of Digital Literacy by thinking systematically in solving general problems properly and correctly
CPMK 2	Students able to utilize research centers both locally and nationally with technological applications and innovative products that are competitive
CPMK 3	Able to have conservation insights into natural and human resources in applying science and technology for the benefit of Sustainable Development with SDG's Theories and Concepts.
CPMK 4	Able to complete the making of Student Creativity Program Proposals (PKM) and similar programs in preparing project-based innovations along with PKM Proposal Outputs (Articles, Posters and Videos)

Brief description of the course	The Technology Application and Digital Transformation Courses (APTEKTRANSIDI) is one of the Institute's content courses that must be taken. This course is an ITS character, which will inspire students in developing insights into science, technology and innovative products that are competitive and the form of application in society and the environment. Students will receive material 1) Digital Literacy Knowledge and Concepts; 2) Systems Theory and Systemic Thinking; 3) Knowledge of the National Research Roadmap and ITS; 4) Introduction to Science Technopark (STP); 5) Knowledge and Concepts of Sustainable Development Goals (SDGs); 6)Opensource Mobile Application Technology, E Comerce; 7) Creative and Innovative Knowledge; and 8) Making Proposals for Student Creativity Programs (PKM) and similar programs in preparing project-based innovations along with PKM Proposal Outputs (Articles and Videos). At the end of the lecture, students are able to compile a Student Creativity Program Proposal (PKM) based on the knowledge that has been given in this lecture. The benefits of learning the APTEKTRANSIDI Course are: Students are able to explain, explain and implement problems in society and the environment with a Technology Application approach and expertise in their fields in accordance with the principles in the APTEKTRANSIDI teaching material.
Subject Matter / Study Material	The material of the Technology Application and Digital Transformation course is 1. Digital Literacy Knowledge and Concepts 2. Theory of Systems Thinking and Information Transformation 3. Introduction and Knowledge of Science Technopark (STP) 4. Knowledge of ITS and National Research Roadmaps 5. The concept of SDGs (Sustainable Development Goals) 6. Open Source Technology and IT Ethics 7. Student Creative Program Proposal Concept (PKM)
Bibliography	**Main:** 1. Digital Literacy : Tools and Methodologies for Information Society. Pier Casera Rivoltella, Universitas Cottolica del Sacro Cuore, Italy 2. Akhmad Hidayatno, "BERPIKIR SISTEM", Pola Pikir Untuk Pemahaman Masalah Yang Lebih baik. 2016. Universitay of Indonesia. 3. Gerakan Literasi Nasional, Kementrian Pendidikan dan Kebudayaan Jakarta, 2017 4. Buku Tim Pengembang Mata Kuliah Wawasan Teknologi dan Komunikasi Ilmiah , "Wawasan Teknologi & Komunikasi Ilmiah", ITS Press, Surabaya, 2015. 5. Alfred Watkins and Michel Ehst, "Science, Technology and Innovation: Capacity Building for Sustainable Growth and Poverty Reduction", The International Bank for Reconstruction and Development, Washington DC, 2008. 6. Frieder Meyer Krahmer, "Innovation and Sustainable Development-Lesson for Innovation Policies, " A Springer-Verlag Company, Heidelberg, 1998.

	7. Book : ARAHAN Pelaksanaan Tujuan Pembangunan Berkelanjutan/SDGsTeam Leader Sekretariat SDGs Kementerian PPN/Bappenas, 1 Februari 2018, Alamat Kontak: Website : sdgs.bappenas.go.id **Supporting :** 1. .. 2.							
Learning Media	**Software:**			**Hardware:**				
Team Teaching								
Subject								
Week-	**Final ability at each stage of learning (Sub-CP-MK)**	**Evaluation**		**Forms of Learning, Learning Methods and Assignments Students**		**Learning Materials**	**Bobot Penilaian (%)**	**Lecturer**
		assessment indicators	**Criteria & Forms of Assessment**	**Daring (online)**	**Luring (offline)**			
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	
1	**CPMK1 :** Students understand the outline of the lecture from beginning to end, are able to understand the Knowledge and Concepts of Digital Literacy by thinking systematically in solving general problems properly and correctly Students are able : • Understand the outline of lectures • Able to explain	**Digital Literacy Knowledge and Concepts :** Students able to analyze the concept of digital literacy Students able to analyze the concept of Social Networking, Transliteracy, Cyber-crime, Digital identity	**Criterion:** Able to find Examples the problem that can be resolved with Digital Literacy Knowledge **Bentuk penilaian** :	**My ITS Classroom** **TM = 3x50 menit** **PT = 1 x 60”** **BM = 1x60”** Learning methods: Lectures small Group Disscussion Frequently Asked Questions 2x 50 minutes : Lectures/Lectures 1x50 minutes : Dskusi		Digital Literacy Knowledge and Concepts	0%	Class lecturers

	Digital Literacy Knowledge and Concepts						
2	**CPMK1 :** Students understand the outline of the lecture from beginning to end, are able to understand the Knowledge and Concepts of Digital Literacy by thinking systematically in solving general problems properly and correctlybaik dan benar • Students are able to explain the concept of systematic thinking in solving common problems	Being able to find examples the problem can be resolved with the concept of the system	**Kriteria :** Mampu menemukan contoh-contoh permasalah yang dapat diselesaikan dengan konsep,system **Bentuk penilaian** :	**My ITS Classroom** **TM = 3x50 menit** **PT = 1 x 60"** **BM = 1x60"** Learning methods: Lectures small Group Disscussion Frequently Asked Questions 2x 50 minutes : Lectures/Lectures 1x50 minutes : Dskusi	Systems Theory and Think Systemic	**5%**	Class lecturers
3	**CPMK2:** Students able to utilize research centers both locally and nationally with	Able to discuss with groups problems that it's in the Centres Good research National as well as research at ITS	**Kriteria :** Mampu menemukan permasalahan yang ada di Pusat-Pusat Penelitian baik Nasional maupun	**My ITS Classroom** **TM = 3x50 menit** **PT = 1 x 60"** **BM = 1x60"**	Knowledge Roadmap National Research and ITS	**0%**	DRPM Lecturer

	technological applications and innovative products that are competitive Students Able to utilize Research Centers at ITS and National		penelitian di ITS **Bentuk penilaian**	Learning methods: Lectures small Group Disscussion Frequently Asked Questions 2x 50 minutes : Lectures/Lectures 1x50 minutes : Dskusi			
4	**CPMK2:** Students able to utilize research centers both locally and nationally with technological applications and innovative products that are competitive Students understand the problems in their environment with the Technology Application approach	Conducting group discussions to analyze Science Technopark (STP) Knowledge)	**Kriteria :** Able to find Examples the problem that can be resolved with the concept of Knowledge Science Techno Park (STP) **Bentuk penilaian**	**My ITS Classroom** **TM = 3x50 menit** **PT = 1 x 60"** **BM = 1x60"** Learning methods: Lectures small Group Disscussion Frequently Asked Questions 2x 50 minutes : Lectures/Lectures 1x50 minutes : Dskusi		Introduction to Science Technopark (STP)		Class Lecturer
5	**CPMK 3 :** Able to have	Conduct discussions with groups to find problems	**Kriteria :** Able to find each example	**My ITS Classroom**		Theory and Concept of Sustainable	**5%**	Class Lecturer

	conservation insights into natural and human resources in applying science and technology for the benefit of Sustainable Development with SDG's Theories and Concepts. -Students can explain problems in the environment with the Sustainable Development Approach	according to aspects of the SDG's.	existing problems as per the aspects in SDG's **Bentuk penilaian**	**TM = 3x50 menit** **PT = 1 x 60"** **BM = 1x60"** Learning methods: Lectures small Group Disscussion Frequently Asked Questions 2x 50 minutes : Lectures/Lectures 1x50 minutes : Dskusi	Development Goals (SDGs)		
6	**CPMK 3:** Able to have conservation insights into natural and human resources in applying science and technology for the benefit of Sustainable Development with SDG's Theories and Concepts. Students Able to utilize opensource technology and	Able to discuss with groups in Using WordPress CMS to create, Videos, websites / web blogs, as well as E. Comerce Mobile Applications	**Criterion:** Able to use Opensource Technology And Ecommerce mobile app to finish problems in society and the environment **Bentuk penilaian**	**My ITS Classroom** **TM = 3x50 menit** **PT = 1 x 60"** **BM = 1x60"** Learning methods: Lectures small Group Disscussion Frequently Asked Questions 2x 50 minutes : Lectures/Lectures	Opensource Technology Mobile Applications, E Comerce	**0%**	Class Lecturer

	simple mobile applications			1x50 minutes : Dskusi			
7	**CPMK2:** Students able to utilize research centers both locally and nationally with technological applications and innovative products that are competitive Students Able to utilize Research Centers at ITS and National	Conduct discussions with groups to find research problems according to the selected aspects	**Criterion:** Able to find research results both nationally, ITS, and internationally with Innovation approach **Bentuk penilaian**	**My ITS Classroom** **TM = 3x50 menit** **PT = 1 x 60"** **BM = 1x60"** Learning methods: Lectures small Group Disscussion Frequently Asked Questions 2x 50 minutes : Lectures/Lectures 1x50 minutes : Dskusi	Knowledge of Roadmap National Research and ITS	**0%**	DRPM Lecturer
8	**CPMK2:** Students able to utilize research centers both locally and nationally with technological applications and	Conduct discussions in solving problems with innovative creative approaches.	**Criterion:** Able to find each example of existing problems according to creativity and innovative aspects **Bentuk penilaian**	**My ITS Classroom** **TM = 3x50 menit** **PT = 1 x 60"** **BM = 1x60"** Learning methods: Lectures small Group	Creative and Innovative Knowledge	**0%**	STP Lecturer

	innovative products that are competitive Able to make creative, innovative thinking concepts based on science technology			Disscussion Frequently Asked Questions 2x 50 minutes : Lectures/Lectures 1x50 minutes : Dskusi				
9	**Students Able to do the Midterm Exam well and on time**	**Doing the Midterm Exam questions (UTS)**	**Able to work Middle Exam questions Semester (UTS) well and On time**		**3 x 50 minutes**	**Midterm**	**25%**	Class Lecturer
10	**CPMK 4:** Able to complete the making of Student Creativity Program Proposals (PKM) and similar programs in preparing project-based innovations along with PKM Proposal Outputs (Articles, Posters and Videos).	Conduct discussions with groups to find PKM Proposal Topics	**Kriteria :** Able to conduct group discussions in class to produce PKM Proposal Topics **Bentuk penilaian**	**My ITS Classroom** **TM = 3x50 menit** **PT = 1 x 60"** **BM = 1x60"** Learning methods: Lectures small Group Disscussion Frequently Asked Questions 2x 50 minutes : Lectures/Lectures 1x50 minutes : Dskusi	3 x 50 minute : Discussion of PKM proposals	Discussion on Pkm Proposal Guidance	0%	Class Lecturer

	Students know the problem real in the surrounding environment						
11	**CPMK 4:** Able to complete the making of Student Creativity Program Proposals (PKM) and similar programs in preparing project-based innovations along with PKM Proposal Outputs (Articles, Posters and Videos). Able to complete the making of Student Creativity Program (PKM) Proposals and similar programs in preparing innovation-based projects along with PKM Proposal Outputs (Articles, Posters and Videos)	Conducting discussions with the group Of work results of making PKM Proposals with PPT	**Kriteria :** Able to present group work results with good coordination, and on time. **Bentuk penilaian**	**My ITS Classroom** **TM = 3x50 menit** **PT = 1 x 60"** **BM = 1x60"** Learning methods: Lectures small Group Disscussion Frequently Asked Questions 2x 50 minutes : Lectures/Lectures 1x50 minutes : Dskusi	Presentation of pkm proposal group work in ppt form	**10%**	Class Lecturer

12	**CPMK 4:** Able to complete the making of Student Creativity Program Proposals (PKM) and similar programs in preparing project-based innovations along with PKM Proposal Outputs (Articles, Posters and Videos). Able to complete the making of Student Creativity Program (PKM) Proposals and similar programs in preparing innovation-based projects along with PKM Proposal Outputs (Articles, Posters and Videos).	Conducting discussions with the group Of work results of making PKM Proposals with PPT	**Kriteria :** Able to present group work results with good coordination, and on time **Bentuk penilaian**	**My ITS Classroom** **TM = 3x50 menit** **PT = 1 x 60"** **BM = 1x60"** Learning methods: Lectures small Group Disscussion Frequently Asked Questions 2x 50 minutes : Lectures/Lectures 1x50 minutes : Dskusi		Presentation of pkm proposal group work in ppt form	10%	Class Lecturer
13	**CPMK 4:** Able to complete the making of Student Creativity Program	Conducting discussions with the group Of work results of making PKM Proposals with PPT	**Kriteria :** Able to present group work results with good coordination, and on time. **Bentuk penilaian**	**My ITS Classroom** **TM = 3x50 menit** **PT = 1 x 60"** **BM = 1x60"**		Presentation of pkm proposal group work in Power Point	**10%**	Class Lecturer

	Proposals (PKM) and similar programs in preparing project-based innovations along with PKM Proposal Outputs (Articles, Posters and Videos). Able to complete the making of Student Creativity Program (PKM) Proposals and similar programs in preparing innovation-based projects along with PKM Proposal Outputs (Articles, Posters and Videos).			Learning methods: Lectures small Group Disscussion Frequently Asked Questions 2x 50 minutes : Lectures/Lectures 1x50 minutes : Dskusi				
14	Able to complete the making of	Conducting discussions with groups for the	**Kriteria :** Able to complete	**My ITS Classroom**		Guidance on Making Articles and	**20%**	Class Lecturer

	Student Creativity Program (PKM) Proposals and similar programs in preparing innovation-based projects along with PKM Proposal Outputs (Articles, Posters).	creation of PKM Articles and Proposal Posters	results of group work in the form of Articles and Posters **Bentuk penilaian**	**TM = 3x50 menit** **PT = 1 x 60"** **BM = 1x60"** Learning methods: Lectures small Group Disscussion Frequently Asked Questions 2x 50 minutes : Lectures/Lectures 1x50 minutes : Dskusi	Posters from PKM Proposals		
15	**CPMK 4:** Able to complete the making of Student Creativity Program Proposals (PKM) and similar programs in preparing project-based innovations along with PKM Proposal Outputs (Articles, Posters and Videos). -Able to complete the making of Student Creativity Program (PKM) Proposals and	Conducting discussions with the group to discuss the results of the work of making a PKM Proposal video	**Kriteria :** Able to complete results of group work in the form of Articles and Posters **Bentuk penilaian**	**My ITS Classroom** **TM = 3x50 menit** **PT = 1 x 60"** **BM = 1x60"** Learning methods: Lectures small Group Disscussion Frequently Asked Questions 2x 50 minutes : Lectures/Lectures 1x50 minutes : Dskusi	Guidance on Making Videos from PKM Proposals and Collecting Final Proposals, Artikrl, Posters and Videos from PKM	**15%**	Class Lecturer

	similar programs in preparing innovation-based projects along with PKM Proposal Outputs (Videos).						
16	**CPMK 4** : Able to complete the making of Student Creativity Program Proposals (PKM) and similar programs in preparing project-based innovations along with PKM Proposal Outputs (Articles, Posters and Videos). Able to complete the making of Student Creativity Program (PKM) Proposals and similar programs in preparing innovation-based projects along with PKM	Conducting discussions with groups for the collection of assignments2 aptektransidi courses	Proposal Evaluation	**My ITS Classroom** s **TM = 3x50 menit** **PT = 1 x 60"** **BM = 1x60"** Learning methods: Lectures small Group Disscussion Frequently Asked Questions 2x 50 minutes : Lectures/Lectures 1x50 minutes : Dskusi	Final Proposals, Artikrl, Posters and Videos from PKM	**0%**	Class Lecturer

	Proposal Outputs (Videos).						
Total						100%	

Notes :

1. **Learning Outcomes** of STUDY PROGRAM Graduates (CPL-PRODI) are abilities possessed by each STUDY PROGRAM graduate which is an internalization of attitudes, mastery of knowledge and skills in accordance with the level of their study program obtained through the learning process.

2.**CPL** charged in the course are some of the learning outcomes of study program graduates (CPL-PRODI) which are used for the formation / development of a course consisting of aspects of attitude, general skills, special skills and knowledge.

3. **Course CP (CPMK)** is the ability specifically described from the CPL imposed on the course, and is specific to the study material or learning material of the course.

4. **Sub-CP Course (Sub-CPMK)** is a specific described ability of CPMK that can be measured or observed and is the final ability planned at each stage of learning, and is specific to the learning material of the course.

5. Indicators of ability assessment in the process and student learning outcomes are specific and measurable statements that identify the ability or performance of student learning outcomes accompanied by evidence.

6. **Assessment Criteria** is a benchmark used as a measure or benchmark for the achievement of learning in assessment based on predetermined indicators. Assessment creteria is a guideline for appraisers so that assessments are consistent and unbiased. Creteria can be quantitative or qualitative.

7. **Forms of assessment**: test and non-test.

8. **Forms of learning**: Lectures, Responsi, Tutorials, Seminars or equivalent, Practicum, Studio Practice, Workshop Practice, Field Practice, Research, Community Service and/or other equivalent forms of learning.

9. **Learning Methods**: Small Group Discussion, Role-Play & Simulation, Discovery Learning, Self-Directed Learning, Cooperative Learning, Collaborative Learning, Contextual Learning, Project Based Learning, and other equivalent methods.

10. **Learning Material** is a detail or description of the study material that can be presented in the form of several points and sub-subjects.

11. **The assessment** weight shall be the percentage of the assessment of each achievement of the sub-CPMK which is of proportional magnitude with the difficulty of achieving the sub-CPMK, and the total is 100%.

12. **TM=**Face-to-Face, PT=Structured assignment, BM=Self-study.

Assessment Weight:

1. Evaluation 1: 10% (Individual tasks)
2. Evaluation 2: 25% (UTS)
3. Evaluation 3: 30% (PKM Proposal Making)
4. Evaluation 4: 10% (PKM Article Creation)
5. Evaluation 5: 10% (PKM Poster Making)
6. Evaluation 5: 15% (PKM Video Creation)

Bibliography :

1. Digital Literacy : Tools and Methodologies for Information Society. Pier Casera Rivoltella, Universitas Cottolica del Sacro Cuore, Italy
2. Akhmad Hidayatno, "BERPIKIR SISTEM", Pola Pikir Untuk Pemahaman Masalah YangLebih baik. 2016. Universitay of Indonesia.
3. Gerakan Literasi Nasional, Kementrian Pendidikan dan Kebudayaan Jakarta, 2017
4. Buku Tim Pengembang Mata Kuliah Wawasan Teknologi dan Komunikasi Ilmiah , "Wawasan Teknologi & Komunikasi Ilmiah", ITS Press, Surabaya, 2015.
5. Alfred Watkins and Michel Ehst, "Science, Technology and Innovation: Capacity Building for Sustainable Growth and Poverty Reduction", The International Bank for Reconstruction and Development, Washington DC, 2008.
6. Frieder Meyer Krahmer, "Innovation and Sustainable Development-Lesson for Innovation Policies, " A Springer-Verlag Company, Heidelberg, 1998.
7. Buku : ARAHAN Pelaksanaan Tujuan Pembangunan Berkelanjutan/SDGsTeam Leader Sekretariat SDGs Kementerian PPN/Bappenas, 1 Februari 2018, Alamat Kontak: Website : sdgs.bappenas.go.id