Universitas Alma Ata The Globe Inspiring University	**ALMA ATA UNIVERSITY FACULTY OF COMPUTER AND ENGINEERING BACHELOR OF INFORMATICS ENGINEERING STUDY PROGRAM**	

SEMESTER LEARNING PLAN

COURSE (MK)	CODE	Study Material (BK)	WEIGHT (credits)		SEMESTER	Date of Preparation
Interpersonal Communication	FKOM002	Social Issues and Professional Practice; Self Development;	T [Theory] = 2	P[Practice] = 0	(1) One	22 August 2023

	Semester Learning Plan Lecturer	Study Material Coordinator	Head of study programme
RESPONSE	Dhina Puspasari Wijaya, S.Kom., M.Kom	Dita Danianti, S.Kom., M.Kom	Dhina Puspasari Wijaya, S.Kom., M.Kom

Learning Outcomes	**SLOs that are imposed on MKs**	
	CPL06	Team management and team work skills, self-management, good oral and written communication and presentation skills.
	CPL12	Implementing the values of Islamic teachings that are rahmatan lil'alamiin.
	Course Learning Outcomes (CPMK)	
	CPMK061	Able to manage teams, communicate and collaborate in information technology projects
	CPMK122	Able to demonstrate entrepreneurial spirit, independence, and leadership based on values, norms, and ethics as well as professionalism and responsibility.
	End ability of each learning stage (Sub-CPMK)	

Correlation of CPMK to Sub-CPMK	

Course Learning Outcomes		Supported SLOs
CPMK Code	**Description of CPMK**	
CPMK061	Able to manage teams, communicate and collaborate in information technology projects	CPL06
CPMK122	Able to demonstrate entrepreneurial spirit, independence, and leadership based on values, norms, and ethics as well as professionalism and responsibility.	CPL12

Brief description of the course	This course provides students with an understanding that interpersonal communication is a science that aims to maintain, foster and create good relationships between individuals and individuals and individuals and organisations by using the ability to speak or fill content both verbally and nonverbally using all available means effectively and efficiently.	
Study Material: Learning Materials	1. Communication Strategy 2. Interpersonal Relationships	
Library	**Main:**	
	1. Interpersonal communication theory with examples of practical phenomena. N.p., Prenada Media, 2020.	
	Supporters:	
	2. DeVito, Joseph A.. The Interpersonal Communication Book. United Kingdom, Pearson, 2014. 3. DeVito, Joseph A. Interpersonal Communication Book, The, Global Edition. United Kingdom, Pearson Education, 2018. 4. West, Richard, and Turner, Lynn H. Interpersonal Communication. United States, SAGE Publications, 2018. 5. Gamble, Teri Kwal, and Gamble, Michael W.. The Interpersonal Communication Playbook. United States, SAGE Publications, 2018.	
Lecturer	Dhina Puspasari Wijaya, S.Kom., M.Kom	
Prerequisite Courses	-	

Week 1	End ability of each learning stage (Sub-CPMK)	Indicators	Criteria and Techniques	Form of Learning; Learning Methods; Student Assignments; [Time Estimation]		Learning Materials [Library]	Assessment Weight (%)
(1)	(2)	(3)	(4)	Offline (5)	Online (6)	(7)	(8)
1	Sub-CPMK0611 - Ability to manage teams, communication and collaboration in software project management	students are able to recognise the concept of communication	Quality of Presentation; Observation (Practical/Assignment)	Student Centre Learning	Asyncronous	1,2,3,4,5	5
2	Sub-CPMK0611 - Ability to manage teams, communication and collaboration in software project management	students are able to recognise the concept of communication	Accuracy of Answer; Observation (Practice/Task)	Student Centre Learning	Asyncronous	1,2,3,4,5	5
3	Sub-CPMK0611 - Ability to manage teams, communication and collaboration in software project management	students are able to recognise the concept of communication	Accuracy of UTS Answers; Written Test (UTS)	Student Centre Learning	Asyncronous	1,2,3,4,5	5
4	Sub-CPMK0611 - Ability to manage teams, communication and collaboration in software project management	students are able to recognise the concept of communication	Accuracy of UTS Answers; Written Test (UTS)	Student Centre Learning	Asyncronous	1,2,3,4,5	5
5	Sub-CPMK0611 - Ability to manage teams, communication and collaboration in software project management	Students are able to explain effective communication in Islamic perspective	Accuracy of UTS Answers; Written Test (UTS)	Student Centre Learning	Asyncronous	1,2,3,4,5	10
6	Sub-CPMK0611 - Ability to manage teams, communication and collaboration in software project management	Students can know and understand language and thoughts to be a means of communication so that interaction is established	Accuracy of UTS Answers; Written Test (UTS)	Student Centre Learning	Asyncronous	1,2,3,4,5	10
7	Sub-CPMK0611 - Ability to manage teams, communication and collaboration in software project management	Students can know and understand language and thoughts to be a means of communication so that interaction is established	Accuracy of UTS Answers; Written Test (UTS)	Student Centre Learning	Asyncronous	1,2,3,4,5	10
8	Sub-CPMK1221 - Able to demonstrate entrepreneurial spirit, independence, and leadership	Students are able to understand the concept of team building	Presentation Quality; Performance	Student Centre Learning	Asyncronous	1,2,3,4,5	5
9	Sub-CPMK1221 - Able to demonstrate entrepreneurial spirit, independence, and leadership	Students are able to understand the concept of team building	Accuracy of UAS Answers; Written Test (UAS)	Student Centre Learning	Asyncronous	1,2,3,4,5	5
10	Sub-CPMK1221 - Able to demonstrate entrepreneurial spirit, independence, and leadership	students are able to understand the basic skills for public speaking	Accuracy of UAS Answers; Written Test (UAS)	Student Centre Learning	Asyncronous	1,2,3,4,5	10
11	Sub-CPMK1221 - Able to demonstrate entrepreneurial spirit, independence, and leadership	students are able to understand the basic skills for public speaking	Accuracy of UAS Answers; Written Test (UAS)	Student Centre Learning	Asyncronous	1,2,3,4,5	5

12	Sub-CLO1222 - Able to demonstrate an attitude based on the values of norms, and ethics as well as professionalism and responsibility	Students are able to understand good presentation techniques	Presentation Quality; Performance	Student Centre Learning	Asyncronous	1,2,3,4,5	5
13	Sub-CLO1222 - Able to demonstrate an attitude based on the values of norms, and ethics as well as professionalism and responsibility	students are able to understand good presentation techniques	Presentation Quality; Performance	Student Centre Learning	Asyncronous	1,2,3,4,5	10
14	Sub-CLO1222 - Able to demonstrate an attitude based on the values of norms, and ethics as well as professionalism and responsibility	Students are able to understand how to manage effective meetings	Presentation Quality; Performance	Student Centre Learning	Asyncronous	1,2,3,4,5	10

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SEMESTER LEARNING PLAN

COURSE (MK)	CODE	Study Material (BK)	WEIGHT (credits)		SEMESTER	Date of Preparation
Introduction to Medical and Health Informatics	INF003	Social Issues and Professional Practice; Data and Information Management; Security Technology and Implementation;	T [Theory] = 2	P[Practice] = 0	(1) One	23 August 2023

	Semester Learning Plan Lecturer	Study Material Coordinator	Head of study programme
RESPONSE	Wahit Desta Prastowo, S.Kom, M.Kom	Dita Danianti, S.Kom., M.Kom	Dhina Puspasari Wijaya, S.Kom., M.Kom

Learning Outcomes	**SLOs that are imposed on MKs**	
	CPL06	Team management and team work skills, self-management, good oral and written communication and presentation skills.
	CPL11	Able to identify problems and formulate computational solutions for problems in the health and medical fields.
	Course Learning Outcomes (CPMK)	
	CPMK061	Able to manage teams, communicate and collaborate in information technology projects
	CPMK111	Able to identify various computational problems in the field of medical health
	CPMK112	Able to formulate computational solutions in the health and medical fields
	End ability of each learning stage (Sub-CPMK)	

Correlation of CPMK to Sub-CPMK	

Course Learning Outcomes		Supported SLOs
CPMK Code	**Description of CPMK**	
CPMK061	Able to manage teams, communicate and collaborate in information technology projects	CPL06
CPMK111	Able to identify various computational problems in the field of medical health	CPL11
CPMK112	Able to formulate computational solutions in the health and medical fields	CPL11

Brief description of the course	This Introduction to Health and Medical Informatics course aims to equip students with the principles of informatics knowledge so that they can understand and apply the basic concepts of health and medical computing.	
Study Material: Learning Materials	BK01 Social Issues and Professional Practice, BK06 Data and Information Management, BK09 Security Technology and Implementation.	
Library	**Main:**	
	Mccaffrey, Peter. An Introduction to Healthcare Informatics: Building Data-Driven Tools. Netherlands, Elsevier Science, 2020. Khan, Javed Iqbal, et al. Introduction to Computational Health Informatics. United States, CRC Press, 2020. Morr, Christo El. Introduction to Health Informatics: A Canadian Perspective. Canada, Canadian Scholars, 2018.	
	Supporters:	
	Coiera, Enrico. Guide to Health Informatics. United States, CRC Press, 2015. Lubliner, David J.. Biomedical Informatics: An Introduction to Information Systems and Software in Medicine and Health. United States, CRC Press, 2015.	
Lecturer	Wahit Desta Prastowo, S.Kom, M.Kom	
Prerequisite Courses	-	

Week 1	End ability of each learning stage (Sub-CPMK)	Indicators	Criteria and Techniq ues	Form of Learning; Learning Methods; Student Assignments; [Time Estimation]		Learning Materials [Library]	Assessmen t Weight (%)
(1)	(2)	(3)	(4)	Offline (5)	Online (6)	(7)	(8)
1	Students are able to master, understand Computing disciplne APTIKOM and ACM	Introduction to Health and Medical Informatics	Practical Results; Observation (Practical/Assig nment)	Lecture; Discovery Learning, group discussion. (2x(2x50 minute)	Assign ment: Materi als /Tasks on eLearning.	Mccaffrey, Peter. An Introduction to Healthcare Informatics: Building Data-Driven Tools. Netherlands, Elsevier Science, 2020.	5
2	Students are able to master, understand the field of Health Informatics and medical science.	Introduction to Health Informatics	Practical Results; Observation (Practical/Assig nment)	Lecture; Discovery Learning, group discussion. (2x(2x50 minute)	Assign ment: Materi als /Tasks on eLearning.	Mccaffrey, Peter. An Introduction to Healthcare Informatics: Building Data-Driven Tools. Netherlands, Elsevier Science, 2020.	5
3	Students are able to master, understand the professional career of Informatics with a health perspective.	Introduction to Health Informatics	Practical Results; Observation (Practical/Assig nment)	Lecture; Discovery Learning, group discussion. (2x(2x50 minutes).	Assign ment: Materi als /Tasks on eLearning.	Mccaffrey, Peter. An Introduction to Healthcare Informatics: Building Data-Driven Tools. Netherlands, Elsevier Science, 2020.	10
4	Students are able to understand the history of computer evolution	Basic concepts of Hardware and Software	Practical Results; Observation (Practical/Assig nment)	Lecture; Discovery Learning, group discussion. (2x(2x50 minute)	Assign ment: Materi als /Tasks on eLearning.	Mccaffrey, Peter. An Introduction to Healthcare Informatics: Building Data-Driven Tools. Netherlands, Elsevier Science, 2020	5
5	Students are able to understand the concept of computer organisation and hardware.	Basic concepts of Hardware and Software.	Practical Results; Observation (Practical/Assig nment)	Lecture; Discovery Learning, group discussion. (2x(2x50 minutes).	Assign ment: Materi als /Tasks on eLearning.	Mccaffrey, Peter. An Introduction to Healthcare Informatics: Building Data-Driven Tools. Netherlands, Elsevier Science, 2020	5
6	Students are able to understand and implement basic binary kosenp.	Basic concepts of Hardware and Software.	Practical Results; Observation (Practical/Assig nment)	Lecture; Discovery Learning, group discussion. (2x(2x50 minutes).	Assign ment: Materi als /Tasks on eLearning.	Mccaffrey, Peter. An Introduction to Healthcare Informatics: Building Data-Driven Tools. Netherlands, Elsevier Science, 2020	10
7	Students are able to understand the concept of computer systems.	Basic concepts of Hardware and Software	Accuracy of UTS Answers; Written Test (UTS)	Lecture; Discovery Learning, group discussion. (2x(2x50 minutes).	Assign ment: Materi als /Tasks on eLearning.	Mccaffrey, Peter. An Introduction to Healthcare Informatics: Building Data-Driven Tools. Netherlands, Elsevier Science, 2020.	10
8	Students are able to understand and implement the concept of Regular Expressions, Processes and Services	Basic concepts of Hardware and Software	Practical Results; Observation (Practical/Assig nment)	Lecture; Discovery Learning, group discussion. (2x(2x50 minute)	Assign ment: Materi als /Tasks on eLearning.	Mccaffrey, Peter. An Introduction to Healthcare Informatics: Building Data-Driven Tools. Netherlands, Elsevier Science, 2020.	5
9	able to understand and implement the basic concepts of Software, Programming, Information	Basic concepts of Hardware and Software	Practical Results; Observation (Practical/Assig nment)	Lecture; Discovery Learning, group discussion. (2x(2x50 minute)	Assign ment: Materi als /Tasks on eLearning.	Mccaffrey, Peter. An Introduction to Healthcare Informatics: Building Data-Driven Tools. Netherlands, Elsevier Science, 2020.	10

10	Students are able to understand and implement basic concepts in informatics.	Basic concepts of health informatics	Practical Results; Observation (Practical/Assignment)	Lecture; Discovery Learning, group discussion. (2x(2x50 minutes).	Assignment: Materials /Tasks on eLearning.	Mccaffrey, Peter. An Introduction to Healthcare Informatics: Building Data-Driven Tools. Netherlands, Elsevier Science, 2020.	10
11	able to understand and implement informatics skills	Basic concepts of health informatics	Practical Results; Observation (Practical/Assignment)	Lecture; Discovery Learning, group discussion. (2x(2x50 minutes).	Assignment: Materials /Tasks on eLearning.	Mccaffrey, Peter. An Introduction to Healthcare Informatics: Building Data-Driven Tools. Netherlands, Elsevier Science, 2020.	5
12	Students are able to understand and implement basic internet concepts.	Basic concepts of the internet, securities and communications.	Practical Results; Observation (Practical/Assignment)	Lecture; Discovery Learning, group discussion. (2x(2x50 minutes).	Assignment: Materials /Tasks on eLearning.	Mccaffrey, Peter. An Introduction to Healthcare Informatics: Building Data-Driven Tools. Netherlands, Elsevier Science, 2020.	5
13	Students are able to understand and implement Communication and Networking Technology	internet basics, securities and communications	Practical Results; Observation (Practical/Assignment)	Lecture; Discovery Learning, group discussion. (2x(2x50 minute)	Assignment: Materials /Tasks on eLearning.	Mccaffrey, Peter. An Introduction to Healthcare Informatics: Building Data-Driven Tools. Netherlands, Elsevier Science, 2020.	10
14	Students are able to understand and implement Computer and Communication Security	Basic concepts of the internet, securities and communications	Accuracy of UAS Answers; Written Test (UAS)	Lecture; Discovery Learning, group discussion. (2x(2x50 minute)	Assignment: Materials /Tasks on eLearning.	Mccaffrey, Peter. An Introduction to Healthcare Informatics: Building Data-Driven Tools. Netherlands, Elsevier Science, 2020.	10

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SEMESTER LEARNING PLAN

COURSE (MK)	CODE	Study Material (BK)	WEIGHT (credits)		SEMESTER	Date of Preparation
Informatics Logic	INF004	Data Structures, Algorithms and Complexity ; Intelligent Systems ;	T [Theory] = 3	P[Practice] = 0	(1) One	23 August 2023

	Semester Learning Plan Lecturer	Study Material Coordinator	Head of study programme
RESPONSE	Dhina Puspasari Wijaya, S.Kom., M.Kom	Dita Danianti, S.Kom., M.Kom	Dhina Puspasari Wijaya, S.Kom., M.Kom

Learning Outcomes	**SLOs that are imposed on MKs**	
	CPL03	Have adequate knowledge of how computer systems work and be able to apply/use various algorithms/methods to solve problems in an organisation.
	CPL08	Ability to implement computing requirements by considering various appropriate methods/algorithms.
	Course Learning Outcomes (CPMK)	
	CPMK031	Able to understand how computer systems work
	CPMK083	Able to evaluate efficient computing requirements as needed.
	End ability of each learning stage (Sub-CPMK)	

Correlation of CPMK to Sub-CPMK	

Course Learning Outcomes		Supported SLOs
CPMK Code	**Description of CPMK**	
CPMK031	Able to understand how computer systems work	CPL03
CPMK083	Able to evaluate efficient computing requirements as needed.	CPL08

Brief description of the course	This course discusses the basic concepts of solving informatics logic problems that are the basis for logic. programming. In making a programme to solve certain problems, an informatics logic is needed. so that the programme can be created with a structured model and can be used to solve existing problems.	
Study Material: Learning Materials	1. Introduction to Logic 2. Propositional Logic 3. Tautology and contradiction 4. the laws of logic 5. logical inference 6. boolean algebra 7. de morgan theorem 8. application of boolean algebra 9. logic circuit simplification method	
Library	**Main:**	
	Munir, Rinaldi, Discrete Mathematics, Informatics Publisher, Bandung, 2010	
	Supporters:	
	Retno Hendrowati; Bambang Hariyanto, Informatics Logic, Informatics Publisher, Bandung, 2000. Setiadji, Informatics Logic, Graha Ilmu, Jakarta, 2007. F. Soesianto, Djoni Dwijono, Mathematical Logic for Computer Science, ANDI Publisher, Yogyakarta, 2010.	
Lecturer	Dhina Puspasari Wijaya, S.Kom., M.Kom	
Prerequisite Courses	-	

Week 1	End ability of each learning stage (Sub-CPMK)	Indicators	Criteria and Techniques	Form of Learning; Learning Methods; Student Assignments; [Time Estimation]		Learning Materials [Library]	Assessment Weight (%)
(1)	(2)	(3)	(4)	Offline (5)	Online (6)	(7)	(8)
1	Sub-CPMK0311 - Ability to understand how computer systems work	understand how computer systems work Students are capable: - explain the concept of informatics logic - solve problems with classical and modern logic	Practical Results; Observation (Practical/Assignment)	Student Centre Learning	asyncronus	Munir, Rinaldi, Discrete Mathematics, Informatics Publisher, Bandung, 2010	5
2	Sub-CPMK0311 - Ability to understand how computer systems work	understand how computer systems work Students are able to: solve problems with logic of proportion	Practical Results; Observation (Practical/Assignment)	Student Centre Learning	asyncronus	Munir, Rinaldi, Discrete Mathematics, Informatics Publisher, Bandung, 2010	5
3	Sub-CPMK0311 - Ability to understand how computer systems work	Students are able to: apply truth table rules	Practical Results; Observation (Practical/Assignment)	Student Centre Learning	asyncronus	Munir, Rinaldi, Discrete Mathematics, Informatics Publisher, Bandung, 2010	10
4	Sub-CPMK0311 - Ability to understand how computer systems work	Students are capable: - explain the meaning of compound proposition - outline the benefits of the scheme	Accuracy of Test Answers; Test Writing (UTS)	Lecture; Discovery Learning, group discussion. (2x(2x50 minute)	Assignment: Materials /Tasks on eLearning. Logic: Compound Propositions -Introduction	Munir, Rinaldi, Discrete Mathematics, Informatics Publisher, Bandung, 2010	5
5	Sub-CPMK0311 - Ability to understand how computer systems work	Students are able to: understand and have insight into tautology and evaluation of argument validity	Accuracy of Test Answers; Test Writing (UTS)	Lecture; Discovery Learning, group discussion. (2x(2x50 minute)	Assignment: Materials /Tasks on eLearning.	Munir, Rinaldi, Discrete Mathematics, Informatics Publisher, Bandung, 2010	5
6	Sub-CPMK0311 - Ability to understand how computer systems work	Students have: insight into logical equivalence, the laws of logic and the properties of commutative associative	Accuracy of Test Answers; Test Writing (UTS)	Lecture; Discovery Learning, group discussion. (2x(2x50 minute)	Assignment: Materials /Tasks on eLearning. Logic: Logical equivalence -Introduction -Logical equivalence	Munir, Rinaldi, Discrete Mathematics, Informatics Publisher, Bandung, 2010	10
7	Sub-CPMK0311 - Ability to understand how computer systems work	Students are able to: understand simplification methods for solving problems in logical expressions	Accuracy of Test Answers; Test Writing (UTS)	Lecture; Discovery Learning, group discussion. (2x(2x50 minute)	Assignment: Materials /Tasks on eLearning.	Munir, Rinaldi, Discrete Mathematics, Informatics Publisher, Bandung, 2010	10
8	Sub-CPMK0831 - Ability to evaluate solutions for efficient software projects as required.	Students are able to: explain the concept of Boolean algebra	Practical Results; Observation (Practical/Assignment)	Lecture; Discovery Learning, group discussion. (2x(2x50 minute)	Assignment: Materials /Tasks on eLearning.	Munir, Rinaldi, Discrete Mathematics, Informatics Publisher, Bandung, 2010	10
9	Sub-CPMK0831 - Ability to evaluate solutions for efficient software projects as required.	Students are able to: apply the principles of Boolean algebra Attendance, Activeness	Practical Results; Observation (Practical/Assignment)	Lecture; Discovery Learning, group discussion. (2x(2x50 minutes)	Assignment: Materials /Tasks on eLearning.	Munir, Rinaldi, Discrete Mathematics, Informatics Publisher, Bandung, 2010	5

10	Sub-CPMK0831 - Ability to evaluate solutions for efficient software projects as required.	Students are able to: understand the application of Boolean algebra.	Practical Results; Observation (Practical/Assignment)	Munir, Rinaldi, Discrete Mathematics, Informatics Publisher, Bandung, 2010	Assignment: Materials /Tasks on eLearning.	Munir, Rinaldi, Discrete Mathematics, Informatics Publisher, Bandung, 2010	5
11	Sub-CPMK0831 - Ability to evaluate solutions for efficient software projects as required.	Students are able to: understand the application of Boolean algebra.	Accuracy of UAS Answers; Test Writing (UAS)	Lecture; Discovery Learning, group discussion. (2x(2x50 minutes)	Assignment: Materials /Tasks on eLearning.	Munir, Rinaldi, Discrete Mathematics, Informatics Publisher, Bandung, 2010	5
12	Sub-CPMK0831 - Ability to evaluate solutions for efficient software projects as required.	Students are able to: describe and simplify the use of Boolean algebra.	Accuracy of UAS Answers; Test Writing (UAS)	Lecture; Discovery Learning, group discussion. (2x(2x50 minutes)	Assignment: Materials /Tasks on eLearning.	Munir, Rinaldi, Discrete Mathematics, Informatics Publisher, Bandung, 2010	10
13	Sub-CPMK0831 - Ability to evaluate solutions for efficient software projects as required.	Students are able to: describe and simplify the use of Boolean algebra.	Accuracy of UAS Answers; Test Writing (UAS)	Lecture; Discovery Learning, group discussion. (2x(2x50 minutes)	Assignment: Materials /Tasks on eLearning.	Munir, Rinaldi, Discrete Mathematics, Informatics Publisher, Bandung, 2010	5
14	Sub-CPMK0831 - Ability to evaluate solutions for efficient software projects as required.	Students are able to: simplification for problem solving in complex logic	Accuracy of UAS Answers; Test Writing (UAS)	Lecture; Discovery Learning, group discussion. (2x(2x50 minutes)	Assignment: Materials /Tasks on eLearning.	Munir, Rinaldi, Discrete Mathematics, Informatics Publisher, Bandung, 2010	10

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SEMESTER LEARNING PLAN

COURSE (MK)	CODE	Study Material (BK)	WEIGHT (credits)		SEMESTER	Date of Preparation
Algorithms and Programming	INF005	Data Structures, Algorithms and Complexity ; Programming Languages ; Programming Fundamentals;	T [Theory] = 2	P [Practice] = 1	(1) One	22 August 2023

	Semester Learning Plan Lecturer	Study Material Coordinator	Head of study programme
RESPONSE	Dita Danianti, S.Kom., M.Kom	Dita Danianti, S.Kom., M.Kom	Dhina Puspasari Wijaya, S.Kom., M.Kom

Learning Outcomes	**SLOs that are imposed on MKs**	
	CPL03	Have adequate knowledge of how computer systems work and be able to apply/use various algorithms/methods to solve problems in an organisation.
	CPL04	Have the competence to analyse complex computing problems to identify solutions for technology project management in the field of informatics/computer science by considering the insights of transdisciplinary science development.
	Course Learning Outcomes (CPMK)	
	CPMK032	Able to apply/use various methods/algorithms in solving problems in an organisation
	CPMK041	Able to identify complex computing problems
	End ability of each learning stage (Sub-CPMK)	

Correlation of CPMK to Sub-CPMK	

Course Learning Outcomes		Supported SLOs
CPMK Code	**Description of CPMK**	
CPMK032	Able to apply/use various methods/algorithms in solving problems in an organisation	CPL03
CPMK041	Able to identify complex computing problems	CPL04

Brief description of the course	This Algorithms and Programming course provides students with an understanding and mastery of the basics of programming. After studying this course, students are expected to be able to understand the basics of programming logic and then realise this understanding in the form of simple applications.	
Study Material: Learning Materials	Algorithm concept, data type, input output, branching, looping. array, function, recursion, sorting, searching	
Library	**Main:**	
	1. Guttag, V. J., 2016, Introduction to Computation and Programming Using Python: With Application to Understanding Data (The MIT Press), second edition, The MIT Press, United State of America.	
	Supporters:	
	2. L. Sitorus, Algorithms and Programming, Yogyakarta, 2015. 3. Kadir, Abdul. (2019). Python Programming Logic. Jakarta: Elex Media Komputindo. 3. Raharjo, Budi. (2019). Collection of Python Programming Solutions Revised Edition. Bandung: Informatics.	
Lecturer	Dita Danianti, S.Kom., M.Kom	
Prerequisite Courses	-	

Week 1	End ability of each learning stage (Sub-CPMK)	Indicators	Criteria and Techniques	Form of Learning; Learning Methods; Student Assignments; [Time Estimation]		Learning Materials [Library]	Assessment Weight (%)
(1)	(2)	(3)	(4)	Offline (5)	Online (6)	(7)	(8)
1	CPMK0321 - Ability to apply / use various methods/algorithms in solving problems in organisations	Understand exactly the meaning / concept of algorithms, understand the terms in algorithms, Students are able to explain exactly the function of algorithms	Presentation Quality; Performance	Student centred learning	Asynchronous	1,2,3	9
2	CPMK0321 - Ability to apply / use various methods/algorithms in solving problems in organisations	Students understand: data types and identifiers, operators, expressions in algorithms.	Accuracy of Answer; Observation (Practice/Task)	Student centred learning	Asynchronous	1,2,3	8
3	CPMK0321 - Ability to apply / use various methods/algorithms in solving problems in organisations	Students are able to explain: the concept of input and output, the application of input and output	Accuracy of UTS Answers; Written Test (UTS)	Student centred learning	Asynchronous	1,2,3	8
4	CPMK0321 - Ability to apply / use various methods/algorithms in solving problems in organisations	Explain correctly the concept of branching Explain correctly the application of one-condition, two-condition and more than two-condition branching	Accuracy of Answer; Observation (Practice/Task)	Student centred learning	Asynchronous	1,2,3	9
5	CPMK0321 - Ability to apply / use various methods/algorithms in solving problems in organisations	Explain correctly the concept of switch case branching, Explain correctly application of switch case branching programme	Presentation Quality; Performance	Student centred learning	Asynchronous	1,2,3	8
6	CPMK0321 - Ability to apply / use various methods/algorithms in solving problems in organisations	Able to explain the concept of Uncounted Loop, Able to apply Uncounted Loop.	Accuracy of UTS Answers; Written Test (UTS)	Student centred learning	Asynchronous	1,2,3	4
7	CPMK0321 - Ability to apply / use various methods/algorithms in solving problems in organisations	Able to explain the concept of one-dimensional array, the application of one-dimensional array.	Accuracy of UTS Answers; Written Test (UTS)	Student centred learning	Asynchronous	1,2,3	4
8	CPMK0411 - Ability to analyse complex computing problems	Able to explain the concept of multi arrays Able to apply multi-dimensional arrays.	Accuracy of Answer; Observation (Practice/Task)	Student centred learning	Asynchronous	1,2,3	9
9	CPMK0411 - Ability to analyse complex computing problems	Able to explain the concept of function in procedural programming, able to apply function in procedural programming.	Presentation Quality; Performance	Student centred learning	Asynchronous	1,2,3	8
10	CPMK0411 - Ability to analyse complex computing problems	Able to explain the concept of recursion in modular programmes, Able to apply recursion in modular programmes.	Accuracy of UAS Answers; Written Test (UAS)	Student centred learning	Asynchronous	1,2,3	5
11	CPMK0411 - Ability to analyse complex computing problems	Able to explain the concept of iteration in modular programmes, able to apply iteration in modular programmes	Accuracy of UAS Answers; Written Test (UAS)	Student centred learning	Asynchronous	1,2,3	5

12	CPMK0411 - Ability to analyse complex computing problems	Able to explain the concept of searching in modular programmes, able to apply searching in modular programmes.	Accuracy of Answer; Observation (Practice/Task)	Student centred learning	Asynchronous	1,2,3	5
13	CPMK0411 - Ability to analyse complex computing problems	Able to explain the concept of sorting in modular programmes, able to implement sorting in modular programmes.	Accuracy of Answer; Observation (Practice/Task)	Student centred learning	Asynchronous	1,2,3	10
14	CPMK0411 - Ability to analyse complex computing problems	Accuracy in applying concepts and creating algorithms to comprehensively solve large task cases, Presentation skills and concept understanding	Presentation Quality; Performance	Student centred learning	Asynchronous	1,2,3	10

Universitas Alma Ata The Globe Inspiring University	**ALMA ATA UNIVERSITY FACULTY OF COMPUTER AND ENGINEERING BACHELOR OF INFORMATICS ENGINEERING STUDY PROGRAM**	

SEMESTER LEARNING PLAN

COURSE (MK)	CODE	Study Material (BK)	WEIGHT (credits)		SEMESTER	Date of Preparation
Computer Organisation and Architecture	INF009	Parallel and Distributed Computing ; Computing Systems Fundamentals ; Architecture and Organisation ;	T [Theory] = 2	P[Practice] = 0	(1) One	31 December 2023

RESPONSE	Semester Learning Plan Lecturer	Study Material Coordinator	Head of study programme
	Andri Pramuntadi, S.Kom., M.Kom	Andri Pramuntadi, S.Kom., M.Kom	Dhina Puspasari Wijaya, S.Kom., M.Kom

Learning Outcomes	**SLOs that are imposed on MKs**	
	CPL03	Have adequate knowledge of how computer systems work and be able to apply/use various algorithms/methods to solve problems in an organisation.
	CPL04	Have the competence to analyse complex computing problems to identify solutions for technology project management in the field of informatics/computer science by considering the insights of transdisciplinary science development.
	Course Learning Outcomes (CPMK)	
	CPMK031	Able to understand how computer systems work
	CPMK042	Able to analyse technology project management solutions in the field of informatics/computer science by considering the insights of transdisciplinary science development.
	End ability of each learning stage (Sub-CPMK)	

Correlation of CPMK to Sub-CPMK	

Course Learning Outcomes		Supported SLOs
CPMK Code	**Description of CPMK**	
CPMK031	Able to understand how computer systems work	CPL03
CPMK042	Able to analyse technology project management solutions in the field of informatics/computer science by considering the insights of transdisciplinary science development.	CPL04

Brief description of the course	This course will discuss the concept of information systems, especially the organisation of computer systems which includes the organisation between each of its main components, namely processors, memory, input-output systems and interconnection networks (buses). In this course, computer arithmetic is also learnt.	
Study Material: Learning Materials	computer organisation and architecture CPU structure and function	
Library	**Main:**	
	Stalling, W., Computer Organisation and Architecture, 10th Edition, Pearson, 2016	
	Supporters:	
	Abdurohman, M., Computer Organisation & Architecture, Informatics Publisher, 2014	
Lecturer	Andri Pramuntadi, S.Kom., M.Kom	
Prerequisite Courses	-	

Week 1	End ability of each learning stage (Sub-CPMK)	Indicators	Criteria and Techniques	Form of Learning; Learning Methods; Student Assignments; [Time Estimation]		Learning Materials [Library]	Assessment Weight (%)
(1)	(2)	(3)	(4)	Offline (5)	Online (6)	(7)	(8)
1	Sub-CPMK0311 - Students are able to describe the architecture and organisation of the processor (CPU) in a computer	Able to explain about computer organisation and architecture	Accuracy of UTS Answers; Written Test (UTS)	Lecture / Discovery Learning Simulation	Quiz	Definition and introduction to Computer Organisation and Computer Architecture	10
2	Sub-CPMK0311 - Students are able to describe the architecture and organisation of the processor (CPU) in a computer	Able to describe the CPU organisation along with the functions and types of registers on the CPU	Accuracy of Answers; Written Test (UTS)	Lecture / Discovery Learning Simulation	Elearning	Processor Organisation	6
3	Sub-CPMK0312 - Students are able to describe the architecture and organisation of computer systems	able to describe the instruction cycles on the CPU	Accuracy of UTS Answers; Written Test (UTS)	Lecture/ Discovery Learning Simulation	Elearning Quiz	Instruction Cycle Register Organisation	6
4	Sub-CPMK0312 - Students are able to describe the architecture and organisation of computer systems	Understand the structure and functions of CPU i.e. Instruction Fech, Instruction Interpreter, Data Fech, Execution, and Store Back.	Accuracy of Answers; Written Test (UTS)	Lecture / Discovery Learning Simulation	Elearning Quiz	Processor Function and Structure	6
5	Sub-CPMK0312 - Students are able to describe the architecture and organisation of computer systems	Students are able to: working principle of internal memory.	Accuracy of Answers; Written Test (UTS)	Lecture / Discovery Learning Simulation	Elearning	Internal Memory	6
6	Sub-CPMK0311 - Students are able to describe the architecture and organisation of the processor (CPU) in a computer	Able to know and understand the function of about External memory.	Accuracy of Answers; Written Test (UTS)	Lecture / Discovery Learning Simulation	Elearning	External Memory	6
7	Sub-CPMK0312 - Students are able to describe the architecture and organisation of computer systems	Able to explain the function and structure of I/O modules	Accuracy of Answers; Written Test (UTS)	Lecture	Elearning	Types of I/O devices and modules I/O channels and processors	5
8	Sub-CPMK0312 - Students are able to describe the architecture and organisation of computer systems	Able to explain the functions and workings of the interconnection system on a computer	Accuracy of Answer; Written Test (UAS)	Lecture	Elearning	Bus interconnection structure	5
9	Sub-CPMK0312 - Students are able to describe the architecture and organisation of computer systems	Able to explain the functions and workings of the interconnection system on a computer	Accuracy of Answer; Written Test (UAS)	Lecture	Elearning	Types and characteristics of Bus Systems	5
10	Internal and addressing systems	Able to explain Internal and addressing system (addressing)	Accuracy of Answer; Written Test (UAS)	Lecture	Elearning	I/O devices and modules	5
11	Instruction set	Able to explain Instruction Set definition and operation types	Accuracy of Answer; Participation (Attendance/Quiz)	Lecture / Discovery Learning Simulation	Elearning Quiz	Machine Instruction Characteristics Operand types	6

12	Instruction set	Able to explain Instruction Set definition and operation types	Accuracy of Answer; Written Test (UAS)	Lecture / Discovery Learning Simulation	Quiz / Elearning	Types of Addressing operations	6
13	Instruction Set	Able to describe the instruction set addressing mechanism	Accuracy of Answer; Written Test (UAS)	Lecture / Discovery Learning Simulation	Quiz / Elearning	Instruction Format	6
14	software systems and operating systems on computer systems	Able to explain about the role of software systems and operating systems on computer systems	Accuracy of Answer; Written Test (UAS)	Lecture / Discovery Learning Simulation	Quiz / Elearning	Software System Operating System	10

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SEMESTER LEARNING PLAN

COURSE (MK)	CODE	Study Material (BK)	WEIGHT (credits)		SEMESTER	Date of Preparation
Human and Computer Interaction (HCI)	INF012	User Experience Design; Human-Computer Interaction;	T [Theory] = 3	P[Practice] = 0	(1) One	26 July 2023

RESPONSE	Semester Learning Plan Lecturer	Study Material Coordinator	Head of study programme
	Deden Hardan Gutama, S.Kom., M.Kom	Dita Danianti, S.Kom., M.Kom	Dhina Puspasari Wijaya, S.Kom., M.Kom

Learning Outcomes		
	SLOs that are imposed on MKs	
	CPL09	Ability to analyse, design create and evaluate user interfaces and interactive applications by considering user needs and transdisciplinary science developments.
	CPL10	Ability to design, implement and evaluate multi-platform computing-based solutions that meet the computing needs of an organisation.
	CPL11	Able to identify problems and formulate computational solutions for problems in the health and medical fields.
	Course Learning Outcomes (CPMK)	
	CPMK091	Able to analyse and design user interfaces and interactive applications by considering user needs and the development of transdisciplinary science.
	CPMK111	Able to identify various computational problems in the field of medical health
	CPMK092	Able to create user interfaces and interactive applications
	End ability of each learning stage (Sub-CPMK)	

Correlation of CPMK to Sub-CPMK	

Course Learning Outcomes		Supported SLOs
CPMK Code	**Description of CPMK**	
CPMK091	Able to analyse and design user interfaces and interactive applications by considering user needs and the development of transdisciplinary science.	CPL09
CPMK111	Able to identify various computational problems in the field of medical health	CPL11
CPMK092	Able to create user interfaces and interactive applications	CPL10

Brief description of the course	Human and Computer Interaction course is a fundamental material in Informatics. Human and Computer Interaction is a course that teaches students about how Human Computer Interaction and its role in realising software that is appropriate and useful for its users.	
Study Material: Learning Materials	User Experience Design, and Human-Computer Interaction	
Library	**Main:**	
	1. Valverde R, 2011. Principles Of Human Computer Interaction, Lambert Academic Publishing. 2. Galitz, Wilbert O. 2007. The Essential Guide to UI Design. Third Edition. 3. Ballard, Barbara. 2007. Designing the Mobile User Experience. Little Springs Design, Inc. USA. 4. Kalbach, James. 2007. Designing Web Navigation. O'Reilly. 5. Jenny Preece, Yvonne Rogers, Helen Sharp. 2002. Interaction Design_beyond HumanComputer -Interaction, J. Wiley & Sons. 6. Heim, S. 2007, The Resonant Interface HCI Foundations for interaction design, Addison Wesley	
	Supporters:	
	1. Coninx, Karin, et al. 2006. Task Models and Diagrams for UI Design. Springer. 2. Fox, Brent. 2005. Game Interface Design. Thompson Course Technology. 3. Cohen, Michael H., et al. 2004. Voice UI Design. Addison Wesley	
Lecturer	Deden Hardan Gutama, S.Kom., M.Kom	
Prerequisite Courses	-	

Week 1	End ability of each learning stage (Sub-CPMK)	Indicators	Criteria and Techniques	Form of Learning; Learning Methods; Student Assignments; [Time Estimation]		Learning Materials [Library]	Assessment Weight (%)
(1)	(2)	(3)	(4)	Offline (5)	Online (6)	(7)	(8)
1	Sub-CPMK1111 - Ability to identify various computing problems	Able to explain the need to study Human and Computer Interaction and understand the characteristics of GUI and Web UI	Presentation Quality; Performance	Student-Learning Centre	Asynchronous	1,4	5
2	Sub-CPMK1112 - Ability to identify various computational problems in the health sector	Able to explain and implement methods in designing User Interface	Presentation Quality; Performance	Student-Learning Centre	Asynchronous	1,2,3	5
3	Sub-CPMK1111 - Ability to identify various computing problems	Able to define User Characteristics of computing systems	Presentation Quality; Performance	Student-Learning Centre	Asynchronous	1,5	5
4	Sub-CPMK1112 - Ability to identify various computational problems in the health sector	Able to apply UI principles	Presentation Quality; Written Test (UAS)	Student-Learning Centre	Asynchronous	1,3	10
5	Sub-CPMK1112 - Ability to identify various computational problems in the health sector	Able to design menu structure in the system health sector information	Practical Results; Performance	Problem-Learning Centre	Asynchronous	1,2,3,4	5
6	Sub-CPMK0911 - Ability to analyse and redesign user interfaces in interactive software applications	Understand usability evaluation assessment on information systems	Accuracy of Quiz Answers; Written Test (UTS)	Student-Learning Centre	Asynchronous	1,2,3,4	10
7	Sub-CPMK0911 - Ability to analyse and redesign user interfaces in interactive software applications	Understand information system success evaluation	Accuracy of Answer; Performance	Student-Learning Centre	Asynchronous	1,2,3,4	5
8	Sub-CPMK0921 - Ability to create user interfaces for interactive software applications using various methods	Able to apply and design interfaces according to the stages that have been learnt	Accuracy of Test Answers; Observation (Practice / Assignment)	Student-Learning Centre	Asynchronous	1,2,3,4,5,6	15
9	Sub-CPMK1112 - Ability to identify various computational problems in the health sector	Able to apply Graphics, Icons, Images & Colours that fit the needs	Accuracy of UAS Answers; Performance	Student-Learning Centre	Asynchronous	1,4,6	10
10	Sub-CPMK0911 - Ability to analyse and redesign user interfaces in interactive software applications	Able to design web-based and mobile device interfaces	Accuracy of UAS Answers; Performance	Problem-Learning Centre	Asynchronous	1,2,6	5
11	Sub-CPMK0921 - Ability to create user interfaces for interactive software applications using various methods	Students are able to understand the form of information system interface evaluation	Practical Results; Performance	Problem-Learning Centre	Asynchronous	1,2,3,4	10
12	Sub-CPMK0911 - Ability to analyse and redesign user interfaces in interactive software applications	Students are able to complete information system interface evaluation	Accuracy of Answer; Performance	Problem-Learning Centre	Asynchronous	1,2,3,4	10

13	Sub-CPMK0921 - Ability to create user interfaces for interactive software applications using various methods	Students are able to complete information system interface evaluation	Accuracy of UAS Answers; Observation (Practice / Assignment)	Problem-Learning Centre	Asynchronous	1,2,3,4	5
14	Sub-CPMK1112 - Ability to identify various computational problems in the health sector	Students are able to understand and evaluate interfaces	Accuracy of UAS Answers; Written Test (UAS)	Problem-Learning Centre	Asynchronous	1,2,3,4,5	5