



Magister Informatika
Fakultas Sains dan Teknologi

KURIKULUM MAGISTER INFORMATIKA

2024

IDENTITAS PROGRAM STUDI

- 1 Nama Perguruan Tinggi : UIN Maulana Malik Ibrahim Malang
- 2 Fakultas : Sains dan Teknologi
- 3 Program Studi : Informatika
- 4 Ijin Penyelenggaraan Prodi : [96/M/2020](#)
- 5 Peringkat Akreditasi : Baik (260)
- 6 Jenjang Pendidikan : S2 (Magister)
- 7 Gelar Lulusan : M.Kom.
- 8 Jenis Pendidikan : Akademik
- 9 Masa Studi Program Sarjana : Maximum 4 (four) academic years
- 10 Visi Keilmuan Program Studi : Being an internationally reputable knowledge on intelligent system inspired by Al-Quran and Hadits
- 11 Misi Program Studi :
 - 1) Conducting research on intelligent system and its applications inspired by Al-Quran and Hadits;
 - 2) Creating scientific publication and intellectual property right

1. Profil Lulusan

No	Kode PL	Deskripsi Profil Lulusan (PL)	Unsur	Keterangan	Profesi
1	PL-01	Devotion to Allah SWT and upholding the spirit of Pancasila.	S	KKNI SIKAP	1) IT Project Manager (Deputy Manager ICT Project Management); 2) Data Scientist; 3) IT Consultancy and Advisory (IT Consultant, Digital Entrepreneur Deputy Manager); 4) Researcher and Academician
2	PL-02	Thinking critically, collaboratively, and professionally	KU	KKNI KU	
3	PL-03	Able to develop the application of intelligent system to solve global issue through academic approach inspired by Al Quran and Hadits	KK+P	KKNI KK + P	

2. CPL Acuan S2

Permenristekdikti Nomor 44 tahun 2015 tentang Standar Nasional Pendidikan Tinggi dan Perpres RI Nomor 8 Tahun 2012 tentang KKNi, UU PT

No	CPL KKNi APTIKOM	Deskripsi
A SIKAP (S)		
1	CPLS-A01	Bertakwa kepada Tuhan Yang Maha Esa dan mampu menunjukkan sikap religius;
2	CPLS-A02	Menjunjung tinggi nilai kemanusiaan dalam menjalankan tugas berdasarkan agama, moral dan etika;
3	CPLS-A03	Dapat berperan sebagai warga negara yang bangga dan cinta tanah air, memiliki nasionalisme serta rasa tanggungjawab pada negara dan bangsa;
4	CPLS-A04	Dapat berkontribusi dalam peningkatan mutu kehidupan bermasyarakat, berbangsa, dan bernegara berdasarkan Pancasila;
5	CPLS-A05	Dapat bekerja sama dan memiliki kepekaan sosial serta kepedulian terhadap masyarakat dan lingkungan;
6	CPLS-A06	Dapat menghargai keanekaragaman budaya, pandangan, agama, dan kepercayaan, serta pendapat atau temuan orisinal orang lain;
7	CPLS-A07	Taat hukum dan disiplin dalam kehidupan bermasyarakat dan bernegara;
8	CPLS-A08	Menunjukkan sikap bertanggungjawab atas pekerjaan di bidang keahliannya secara mandiri;
9	CPLS-A09	Menginternalisasi nilai, norma, dan etika akademik;
10	CPLS-A010	Menginternalisasi semangat kemandirian, kejuangan, dan kewirausahaan.
B KETERAMPILAN UMUM (KU)		
1	CPLKU-B01	Mampu mengembangkan pemikiran logis, kritis, sistematis, dan kreatif melalui penelitian ilmiah, penciptaan desain atau karya seni dalam bidang ilmu pengetahuan dan teknologi yang memperhatikan dan menerapkan nilai humaniora sesuai dengan bidang keahliannya, menyusun konsepsi ilmiah dan hasil kajiannya berdasarkan kaidah, tata cara, dan etika ilmiah dalam bentuk tesis, dan memublikasikan tulisan dalam jurnal ilmiah terakreditasi tingkat nasional dan mendapa tkan pengakuan internasional berbentuk presentasi
2	CPLKU-B02	Mampu melakukan validasi akademik atau kajian sesuai bidang keahliannya dalam menyelesaikan masalah di masyarakat atau industri yang relevan melalui pengembangan pengetahuan dan keahliannya;
3	CPLKU-B03	Mampu menyusun ide, hasil pemikiran, dan argumen saintifik secara bertanggung jawab dan berdasarkan etika akademik, serta mengkomunikasikannya melalui media kepada masyarakat akademik dan masyarakat luas;
4	CPLKU-B04	Mampu mengidentifikasi bidang keilmuan yang menjadi obyek penelitiannya dan memposisikan ke dalam suatu peta penelitian yang dikembangkan me lalui pendekatan interdisiplin atau multidisiplin;
5	CPLKU-B05	Mampu mengambil keputusan dalam konteks menyelesaikan masalah pengembangan ilmu pengetahuan dan teknologi yang memperhatikan dan menerapkan nilai humaniora berdasarkan kajian analisis atau eksperimental terhadap informasi dan data;
6	CPLKU-B06	Mampu mengelola, mengembangkan dan memelihara jaringan kerja dengan kolega, sejawat di dalam lembaga dan komunitas penelitian yang lebih luas;
7	CPLKU-B07	Mampu meningkatkan kapasitas pembelajaran secara mandiri;
8	CPLKU-B08	Mampu mendokumentasikan, menyimpan, mengamankan, dan menemukan kembali data hasil penelitian dalam rangka menjamin kesahihan dan mencegah plagiasi.
C KETERAMPILAN KHUSUS (KK)		
1	CPLKK-B09	Mampu mengembangkan metode kecerdasan buatan.
2	CPLKK-B10	Mampu mengevaluasi penerapan kecerdasan buatan pada aplikasi dan sistem komputer.
3	CPLKK-B11	Mampu mengembangkan desain penelitian, publikasi ilmiah, dan penciptaan hak kekayaan intelektual berbasis kecerdasan buatan yang terinspirasi dari Al-Qur'an dan Hadits untuk menyelesaikan masalah global.

D	PENGETAHUAN (P)	
1	CPLP-C01	Mampu mengelaborasi ranah pengembangan dan penerapan kecerdasan buatan pada topik tertentu
2	CPLP-C02	Mampu menjelaskan lingkungan tempat penerapan kecerdasan buatan secara komprehensif
3	CPLP-C03	Mampu menjelaskan tatacara evaluasi kinerja kecerdasan buatan dan penerapannya pada topik tertentu
4	CPLP-C04	Mampu menjelaskan metodologi penelitian, publikasi ilmiah, hak kekayaan intelektual, dan inspirasi nilai-nilai Al-Qur'an dan Hadits dalam menyelesaikan masalah global.

3. CPL Prodi

No	Kode CPL	Deskripsi CPL	Unsur	Kode CPL Acuan
1	CPL-01	Able to critically evaluate the performance of artificial intelligent methods	S	CPLKU-B01 to CPLKU-B08; CPLKK-B09 to CPLKK-B11;CPLP-C01 to CPLP-C04
2	CPL-02	Able to evaluate the application of artificial intelligent collaboratively and profesionally	KU	CPLKU-B01 to CPLKU-B08; CPLKK-B09 to CPLKK-B11; CPLP-C01 to CPLP-C04
3	CPL-03	Able to develop the application of intelligent system to solve the global issue through the academic approach that is inspired by Al Quran and Hadits	KK+P	CPLS-A01 to CPLS-A010; CPLKK-B09 to CPLKK-B11; CPLP-C01 to CPLP-C04

4. CPL SNDikti - CPL Prodi

N o	CPL SNDIKTI	CPL PRODI		
		CPL-01	CPL-02	CPL-03
SIKAP (S)				
1	CPLS-A01			V
2	CPLS-A02			V
3	CPLS-A03			V
4	CPLS-A04			V
5	CPLS-A05			V
6	CPLS-A06			V
7	CPLS-A07			V
8	CPLS-A08			V
9	CPLS-A09			V
10	CPLS-A010			V
KETERAMPILAN UMUM (KU)				
11	CPLKU-B01	V	V	
12	CPLKU-B02	V	V	
13	CPLKU-B03	V	V	
14	CPLKU-B04	V	V	
15	CPLKU-B05	V	V	
16	CPLKU-B06	V	V	
17	CPLKU-B07	V	V	
18	CPLKU-B08	V	V	
KETERAMPILAN KHUSUS (KK)				
19	CPLKK-B09	V	V	V
20	CPLKK-B10	V	V	V
21	CPLKK-B11	V	V	V
22	CPLKK-B12	V	V	V
PENGETAHUAN (P)				
23	CPLP-C01	V	V	V
24	CPLP-C02	V	V	V
25	CPLP-C03	V	V	V
26	CPLP-C04	V	V	V

5. CPL-PL

No	Kode CPL	Profil Lulusan (PL)		
		PL-01	PL-02	PL-03
1	CPL-01		V	V
2	CPL-02		V	V
3	CPL-03	V		V

6. Bahan Kajian

Bahan Kajian merujuk pada ACM/IEEE Computer Science Curricula 2023 dan Bahan Kajian Internal UIN Maulana Malik Ibrahim Malang

No	Kode BK	Bahan Kajian
1	BK-01	Algorithms and Complexity (AL)
2	BK-02	Architecture and Organization (AR)
3	BK-03	Artificial Intelligence (AI)
4	BK-04	Data Management (DM)
5	BK-05	Graphics and Interactive Techniques (GIT)
6	BK-06	Human-Computer Interaction (HCI)
7	BK-07	Mathematical and Statistical Foundations (MSF)
8	BK-08	Networking and Communication (NC)
9	BK-09	Operating Systems (OS)
10	BK-10	Parallel and Distributed Computing (PDC)
11	BK-11	Security (SEC)
12	BK-12	Society, Ethics and Professionalism (SEP)
13	BK-13	Software Engineering (SE)
14	BK-14	Specialized Platform Development (SPD)
15	BK-15	Research Methodology
16	BK-16	University subject

Algorithmic Foundations (AL)
Data Structures and Algorithms
Algorithmic Strategies
Complexity Analysis
Computational Models
Algorithms and Society

Architecture and Organization (AR)
Digital Logic and Digital Systems
Machine-Level Data Representation
Assembly Level Machine Organization
Memory Hierarchy
Interfacing and Communication
Functional Organization
Performance and Energy Efficiency
Heterogeneous Architectures
Quantum Architectures

Program Studi **ILMU KOMPUTER** menekankan pada kemampuan individu dalam merancang dan mengembangkan ragam algoritma komputasi.

Variasi Nama
Teknik Informatika, Ilmu Komputer, Ilmu Komputasi, Informatika, Ilmu Informatika, Matematika Komputasi, dan lain sebagainya.

- Spektrumnya sangat beragam dari yang sangat teoritis dan algoritmis, hingga yang bersifat sangat terapan seperti pengembangan robotika dan sistem cerdas.
- Terbagi menjadi tiga bagian utama:
 - Fokus pada teori maupun algoritma yang dipergunakan dalam proses perancangan dan implementasi perangkat lunak.
 - Fokus pada teori maupun algoritma yang dipergunakan dalam proses dan perancangan sistem perangkat keras serta komponennya.
 - Fokus pada teori maupun algoritma yang dipergunakan sebagai model matematis dalam menyelesaikan permasalahan tertentu.
- Kurikulumnya akan sangat kental dengan ilmu pengetahuan terkait dengan logika matematika, komputasi, dan algoritma - yang dalam model terapannya dinyatakan dalam pengembangan program komputer.

Terdapat 7 (tujuh) tantangan utama dalam menyusun Kurikulum Rumpun Ilmu Informatika yang relevan, berkualitas, dan adaptif.

1. Karena perubahan kebutuhan dan teknologi yang terjadi sangatlah cepat, maka model kurikulum yang dikembangkan haruslah **adaptif**;
2. Karena kondisi Indonesia yang sangat **heterogen**, maka perlu disusun model kurikulum yang kaya dan **bervariasi** dalam memenuhi beraneka ragam kebutuhan tersebut;
3. Karena masing-masing perguruan tinggi memiliki **ciri khas** dan **potensi kekuatan** yang berbeda-beda, maka model penyelenggaraan pendidikan yang dilakukan harus dapat mengembangkan potensi yang dimaksud;
4. Karena sebagai sebuah unsur penyelenggara pendidikan tinggi perlu diperhatikan strategi manajemen agar terjadi proses kerja yang **berkesinambungan** dan **kontinu** dari masa ke masa (baca: **sustainable**), maka program yang dikembangkan haruslah menarik calon peserta didik;
5. Karena setiap perguruan tinggi bercita-cita untuk selalu **mengembangkan** institusi pendidikannya (baca: **scalable**), maka model kurikulum yang ada haruslah mudah direplikasi;
6. Karena unsur **kualitas** harus tetap menjadi aspek yang diperhatikan secara sungguh-sungguh, maka pendekatan pembuatan kurikulum juga perlu memperhatikan kaidah-kaidah pedagogis yang dapat dipertahankan (baca: **defensible**); dan
7. Karena era globalisasi ini terjadi persaingan yang ketat berbasis lintas negara, maka kurikulum yang dikembangkan harus mampu menghasilkan lulusan yang siap berpartisipasi dalam lingkungan kerja **internasional**.

Artificial Intelligence (AI)
Search
Knowledge Representation and Reasoning
Machine Learning
Applications and Societal Impact
Probabilistic Representation and Reasoning
Planning
Logical Representation and Reasoning
Agents
Natural Language Processing
Robotics
Perception and Computer Vision

Data Management (DM)
The Role of Data
Core Database Systems Concepts
Data Modeling
Relational Databases
Query Construction
Query Processing
DBMS Internals
NoSQL Systems
Data Security & Privacy
Data Analytics
Distributed Databases/Cloud Computing
Semi-structured and Unstructured Databases

Graphics and Interactive Techniques (GIT)
Rendering
Geometric Modeling
Advanced Shading
Computer Animation
Visualization
Immersion
Interaction
Image Processing
Tangible/Physical Computing
Simulation

Human-Computer Interaction (HCI)
Understanding the User
Accountability and Responsibility in Design
Accessibility and Inclusive Design
Evaluating the Design
System Design

Mathematical and Statistical Foundations (MSF)
Sets, Relations, and Functions
Logic
Proof Techniques
Counting
Graphs and Trees
Discrete Probability
Calculus
Linear Algebra
Statistics

Networking and Communication (NC)
Networked Applications
Reliability Support
Routing And Forwarding
Single-Hop Communication
Mobility Support
Network Security
Emerging Topics

Software Engineering (SE)
Teamwork
Tools and Environments
Product Requirements
Software Design
Software Construction
Software Verification and Validation
Refactoring and Code Evolution
Software Reliability
Formal Methods

Operating Systems (OS)
Concurrency
Scheduling
Process Model
Memory Management
Protection and Safety
Device Management
File Systems API and Implementation
Virtualization
Real-time and Embedded Systems
Fault Tolerance

Parallel and Distributed Computing (PDC)
Programs and Execution
Communication
Coordination
Algorithms and Application Domains

Security (SEC)
Security
Algorithms and Society
Data Structures and Algorithms
Cryptography
Data and Database Security
Animation and Immersion
Accountability and Responsibility in Design
Cryptography
Network Security
Protection and Safety
Communication
Privacy and Civil Liberties
Security Policies, Laws and Computer Crimes
Product Requirements
Software Design
Software Construction
Software Verification and Validation
Systems Security

Society, Ethics and Professionalism (SEP)
Social Context
Methods for Ethical Analysis
Professional Ethics
Intellectual Property
Privacy and Civil Liberties
Professional Communication
Sustainability
History
Economies of Computing
Security Policies, Laws and Computer Crimes
Equity, Diversity and Inclusion

Specialized Platform Development (SPD)
Web Foundations
Mobile Foundations
Common Aspects
Web Platforms
Mobile Platforms
Robot Platforms
Embedded Platforms
Game Platforms
Interactive Computing Platforms

7. CPL-BK

BK	Capaian Pembelajaran Lulusan (CPL)		
	CPL-01	CPL-02	CPL-03
BK-01	V	V	V
BK-02		V	V
BK-03	V	V	V
BK-04		V	V
BK-05		V	V
BK-06		V	V
BK-07	V	V	V
BK-08		V	V
BK-09		V	V
BK-10		V	V
BK-11		V	V
BK-12		V	V
BK-13		V	V
BK-14		V	V
BK-15			V
BK-16			V

8. BK-MK

[illegible]

[illegible]

9. CPL-MK

No	MK	Capaian Pembelajaran Lulusan (CPL)		
		CPL-01	CPL-02	CPL-03
1	MK-01			V
2	MK-02			V
3	MK-03			V
4	MK-04	V	V	V
5	MK-05		V	
6	MK-06		V	
7	MK-07		V	
8	MK-08	V	V	V
9	MK-09	V	V	V
10	MK -10	V	V	V
11	MK-11	V	V	
12	MK -12	V	V	
13	MK -13	V	V	
14	MK -14	V	V	

10. CPL-BK-MK

	CPL-01	CPL-02	CPL-03
BK-01	MK-04, MK-11, MK-12, MK-13, MK-14	MK-04, MK-11, MK-12, MK-13, MK-14	MK-04
BK-02	MK-11, MK-12, MK-13, MK-14	MK-07, MK-11, MK-12, MK-13, MK-14	
BK-03	MK-04, MK-11, MK-12, MK-13, MK-14	MK-04, MK-11, MK-12, MK-13, MK-14	MK-04
BK-04	MK-11, MK-12, MK-13, MK-14	MK-05, MK-11, MK-12, MK-13, MK-14	
BK-05	MK-11, MK-12, MK-13, MK-14	MK-06, MK-11, MK-12, MK-13, MK-14	
BK-06	MK-11, MK-12, MK-13, MK-14	MK-06, MK-11, MK-12, MK-13, MK-14	
BK-07	MK-04, MK-11, MK-12, MK-13, MK-14	MK-04, MK-11, MK-12, MK-13, MK-14	MK-04
BK-08	MK-11, MK-12, MK-13, MK-14	MK-07, MK-11, MK-12, MK-13, MK-14	
BK-09	MK-11, MK-12, MK-13, MK-14	MK-07, MK-11, MK-12, MK-13, MK-14	
BK-10	MK-11, MK-12, MK-13, MK-14	MK-07, MK-11, MK-12, MK-13, MK-14	
BK-11	MK-11, MK-12, MK-13, MK-14	MK-07, MK-11, MK-12, MK-13, MK-14	
BK-12	MK-08, MK-09, MK-10	MK-08, MK-09, MK-10	MK-03, MK-08, MK-09, MK-10
BK-13	MK-11, MK-12, MK-13, MK-14	MK-05, MK-11, MK-12, MK-13, MK-14	
BK-14	MK-11, MK-12, MK-13, MK-14	MK-06, MK-11, MK-12, MK-13, MK-14	
BK-15	MK-08, MK-09, MK-10	MK-08, MK-09, MK-10	MK-03, MK-08, MK-09, MK-10
BK-16	MK-08, MK-09, MK-10	MK-08, MK-09, MK-10	MK-01, MK-02, MK-08, MK-09, MK-10

11. Susunan Mata Kuliah

No	Kode MK	Nama Mata Kuliah	SKS	1	2	3	4
		Mata Kuliah Penciri Utama Prodi					
1	MK-01	Studi Alquran dan Hadist Tematik	2	2			
2	MK-02	Filsafat Sains dan Islam	2	2			
3	MK-03	Research Methodology	3	3			
4	MK-04	Intelligent System	3	3			
5	MK-05	Software Engineering and Information System	3	3			
6	MK-06	Platform Based Development	3	3			
7	MK-07	Computer System and Network	3	3			
8	MK-08	Research Proposal	6		6		
9	MK-09	Scientific Publication	6			6	
10	MK -10	Thesis	12				12
11	MK-11	Optional Subject 1	3		3		
12	MK -12	Optional Subject 2	3		3		
13	MK -13	Optional Subject 3	3		3		
14	MK -14	Optional Subject 4	3		3		
			55	19	18	6	12
		Mata Kuliah Penciri Pedukung (MK Pilihan)					
1	MKP-01	Applied Artificial Intelligence in Social Research	3		3		
2	MKP-02	Bioinformatics	3		3		
3	MKP-03	Business Intelligence	3		3		
4	MKP-04	Advanced Modeling and Simulation	3		3		
5	MKP-05	Advanced Machine Learning	3		3		
6	MKP-06	Deep Learning	3		3		
7	MKP-07	Regression Analysis	3		3		
8	MKP-08	Information Visualization	3		3		
9	MKP-09	Big Data Analytics	3		3		
10	MKP-10	Applied Artificial Intelligence in Data Security	3		3		
11	MKP-11	Metaverse Technology	3		3		
12	MKP-12	Applied Artificial Intelligence in Game	3		3		

13	MKP-13	Applied Artificial Intelligence in Database Systems	3		3		
14	MKP-14	Applied Artificial Intelligence in Software Quality Assurance	3		3		
15	MKP-15	Applied Artificial Intelligence in UI/UX	3		3		
16	MKP-16	Applied Artificial Intelligence in Projects Management	3		3		
17	MKP-17	Applied Artificial Intelligence in Information Systems	3		3		
18	MKP-18	Applied Artificial Intelligence in Education	3		3		
19	MKP-19	Immersive Environment Scenario	3		3		
20	MKP-20	Applied Artificial Intelligence in Medical Data	3		3		

12. Organisasi Mata Kuliah

[illegible]

12a. Peta Pemenuhan CPL

CPL	Semester			
	1	2	3	4
CPL-01	MK-04	MK-08, MK-11, MK-12, MK-13, MK-14	MK-09	MK-10
CPL-02	MK-04, MK-05, MK-06, MK-07	MK-08, MK-11, MK-12, MK-13, MK-14	MK-09	MK-10
CPL-03	MK-01, MK-02, MK-03, MK-04	MK-08	MK-09	MK-10

13. Pemetaan CPL-CPMK-MK

No	CPL	Deskripsi CPL	Kode CPMK	CPMK	MK
1	CPL-01	Able to critically evaluate the performance of artificial intelligent methods	CPMK-01	Able to critically evaluate the performance of artificial intelligent methods	MK-04, MK-08, MK-09, MK-10, MK-11, MK-12, MK-13, MK-14
2	CPL-02	Able to evaluate the application of artificial intelligent collaboratively and profesionally	CPMK-02	Able to evaluate the application of artificial intelligent collaboratively and profesionally	MK-04, MK-05, MK-06, MK-07, MK-08, MK-09, MK-10, MK-11, MK-12, MK-13, MK-14
3	CPL-03	Able to develop the application of intelligent system to solve the global issue through the academic approach that is inspired by Al Quran and Hadits	CPMK-03	Able to apply the Islamic values and uphold the spirit of Pancasila	MK-01, MK-02
			CPMK-04	Able to develop the intelligent system that is inspired by Al Quran and Hadits to solve global issues based on the academic approach	MK-03, MK-04, MK-08, MK-09, MK-10

14. Pemetaan CPL-MK-CPMK

MK	Nama MK	Capaian Pembelajaran Lulusan (CPL)		
		CPL-01	CPL-02	CPL-03
MK-01	Studi Alquran dan Hadist Tematik	-	-	CPMK-03
MK-02	Filsafat Sains dan Islam	-	-	CPMK-03
MK-03	Research Methodology	-	-	CPMK-04
MK-04	Intelligent System	CPMK-01	CPMK-02	CPMK-04
MK-05	Software Engineering and Information System	-	CPMK-02	-
MK-06	Platform Based Development	-	CPMK-02	-
MK-07	Computer System and Network	-	CPMK-02	-
MK-08	Research Proposal	CPMK-01	CPMK-02	CPMK-04
MK-09	Scientific Publication	CPMK-01	CPMK-02	CPMK-04
MK -10	Thesis	CPMK-01	CPMK-02	CPMK-04
MK-11	Optional Subject 1	CPMK-01	CPMK-02	-
MK -12	Optional Subject 2	CPMK-01	CPMK-02	-
MK -13	Optional Subject 3	CPMK-01	CPMK-02	-
MK -14	Optional Subject 4	CPMK-01	CPMK-02	-

15. Pemetaan MK-CPMK-SubCPMK

MK	Nama MK	CPL	CPMK	Deskripsi CPMK	SUB-CPMK	Uraian SUB-CPMK
MK-01	Studi Alquran dan Hadist Tematik	CPL-03	CPMK-03	Able to apply the Islamic values and uphold the spirit of Pancasila	SUB-CPMK-03-A	Able to apply the Islamic values based on Al-Quran and Hadist and uphold the spirit of Pancasila
MK-02	Filsafat Sains dan Islam	CPL-03	CPMK-03	Able to apply the Islamic values and uphold the spirit of Pancasila	SUB-CPMK-03-B	Able to apply the Islamic values based on Islamic civilization and uphold the spirit of Pancasila
MK-03	Research Methodology	CPL-03	CPMK-04	Able to develop the intelligent system that is inspired by Al Quran and Hadits to solve global issues based on the academic approach	SUB-CPMK-04-A	Able to develop the academic approach to conduct research on intelligent system
MK-04	Intelligent System	CPL-01	CPMK-01	Able to critically evaluate the performance of artificial intelligent methods	SUB-CPMK-01-A	Able to evaluate the intelligent methods
		CPL-02	CPMK-02	Able to evaluate the application of artificial intelligent collaboratively and profesionally	SUB-CPMK-02-A	Able to evaluate the performance of intelligent system
		CPL-03	CPMK-04	Able to develop the intelligent system that is inspired by Al Quran and Hadits to solve global issues based on the academic approach	SUB-CPMK-04-B	Able to develop the intelligent system to solve global issues
MK-05	Software Engineering and Information System	CPL-02	CPMK-02	Able to evaluate the application of artificial intelligent collaboratively and profesionally	SUB-CPMK-02-B	Able to evaluate the application of intelligent system in software engineering and information system
MK-06	Platform Based Development	CPL-02	CPMK-02	Able to evaluate the application of artificial intelligent collaboratively and profesionally	SUB-CPMK-02-C	Able to evaluate the application of intelligent system in platform-based development
MK-07	Computer System and Network	CPL-02	CPMK-02	Able to evaluate the application of artificial intelligent collaboratively and profesionally	SUB-CPMK-02-D	Able to evaluate the application of intelligent system in computer system and network
MK-08	Research Proposal	CPL-01	CPMK-01	Able to critically evaluate the performance of artificial intelligent methods	SUB-CPMK-01-B	Able to design an intelligent method to solve the research problem
		CPL-02	CPMK-02	Able to evaluate the application of artificial intelligent collaboratively and profesionally	SUB-CPMK-02-E	Able to design the performance measurement of intelligent system to solve the research problem
		CPL-03	CMPK-04	Able to develop the intelligent system that is inspired by Al Quran and Hadits to solve global issues based on the academic approach	SUB-CPMK-04-C	Able to design the intelligent system to solve global issues inspired by Al Quran and Hadist based on academic approach
		CPL-01	CPMK-01	Able to critically evaluate the performance of artificial intelligent methods	SUB-CPMK-01-C	Able to demonstrate the development of an intelligent method to solve the research problem

MK-09	Scientific Publication	CPL-02	CPMK-02	Able to evaluate the application of artificial intelligent collaboratively and profesionally	SUB-CPMK-02-F	Able to demonstrate the performance measurement of intelligent system to solve the research problem
		CPL-03	CPMK-04	Able to develop the intelligent system that is inspired by Al Quran and Hadits to solve global issues based on the academic approach	SUB-CPMK-04-D	Able to demonstrate the development of intelligent system to solve global issues inspired by Al Quran and Hadist based on academic approach
MK -10	Thesis	CPL-01	CPMK-01	Able to critically evaluate the performance of artificial intelligent methods	SUB-CPMK-01-D	Able to develop the intelligent methods to solve the research problem
		CPL-02	CPMK-02	Able to evaluate the application of artificial intelligent collaboratively and profesionally	SUB-CPMK-02-G	Able to develop the performance measurement of intelligent system to solve the research problem
		CPL-03	CPMK-04	Able to develop the intelligent system that is inspired by Al Quran and Hadits to solve global issues based on the academic approach	SUB-CPMK-04-E	Able to develop the intelligent system to solve global issues inspired by Al Quran and Hadist based on academic approach
MK-11	Optional Subject 1	CPL-01	CPMK-01	Able to critically evaluate the performance of artificial intelligent methods	SUB-CPMK-01-E	Able to develop an intelligent method for specific topic
		CPL-02	CPMK-02	Able to evaluate the application of artificial intelligent collaboratively and profesionally	SUB-CPMK-02-H	Able to develop the performance measurement of intelligent system for specific topic
MK -12	Optional Subject 2	CPL-01	CPMK-01	Able to critically evaluate the performance of artificial intelligent methods	SUB-CPMK-01-E	Able to develop an intelligent method for specific topic
		CPL-02	CPMK-02	Able to evaluate the application of artificial intelligent collaboratively and profesionally	SUB-CPMK-02-H	Able to develop the performance measurement of intelligent system for specific topic
MK -13	Optional Subject 3	CPL-01	CPMK-01	Able to critically evaluate the performance of artificial intelligent methods	SUB-CPMK-01-E	Able to develop an intelligent method for specific topic
		CPL-02	CPMK-02	Able to evaluate the application of artificial intelligent collaboratively and profesionally	SUB-CPMK-02-H	Able to develop the performance measurement of intelligent system for specific topic
MK -14	Optional Subject 4	CPL-01	CPMK-01	Able to critically evaluate the performance of artificial intelligent	SUB-CPMK-01-E	Able to develop an intelligent method for specific topic
		CPL-02	CPMK-02	Able to evaluate the application of artificial intelligent collaboratively and profesionally	SUB-CPMK-02-H	Able to develop the performance measurement of intelligent system for specific topic

16. Teknik Penilaian CPMK

CPL	MK	CPMK	SUB CPMK	Partisipasi (Kehadiran / Quiz)	Observasi (Praktek / Tugas)	Unjuk Kerja (Presentasi)	Tes Tulis (UTS)	Tes Tulis (UAS)	Tugas Kelompok
CPL-03	MK-01	CPMK-03	SUB-CPMK-03-A	5	20	15	20	20	20
CPL-03	MK-02	CPMK-03	SUB-CPMK-03-B	5	20	15	20	20	20
CPL-03	MK-03	CPMK-04	SUB-CPMK-04-A	5	30	25	20	20	0
CPL-01	MK-04	CPMK-01	SUB-CPMK-01-A	0	10	15	15	15	0
CPL-02		CPMK-02	SUB-CPMK-02-A	0	5	5	5	5	5
CPL-03		CPMK-04	SUB-CPMK-04-B	0	5	5	5	5	0
CPL-02	MK-05	CPMK-02	SUB-CPMK-02-B	5	20	15	20	20	20
CPL-02	MK-06	CPMK-02	SUB-CPMK-02-C	5	20	15	20	20	20
CPL-02	MK-07	CPMK-02	SUB-CPMK-02-D	5	20	15	20	20	20
CPL-01	MK-08	CPMK-01	SUB-CPMK-01-B	0	10	10	0	0	0
CPL-02		CPMK-02	SUB-CPMK-02-E	0	10	10	0	0	0
CPL-03		CPMK-04	SUB-CPMK-04-C	0	30	30	0	0	0
CPL-01	MK-09	CPMK-01	SUB-CPMK-01-C	0	10	10	0	0	0
CPL-02		CPMK-02	SUB-CPMK-02-F	0	10	10	0	0	0
CPL-03		CPMK-04	SUB-CPMK-04-D	0	30	30	0	0	0
CPL-01	MK -10	CPMK-01	SUB-CPMK-01-D	0	10	10	0	0	0
CPL-02		CPMK-02	SUB-CPMK-02-G	0	10	10	0	0	0
CPL-03		CPMK-04	SUB-CPMK-04-E	0	30	30	0	0	0
CPL-01	MK-11	CPMK-01	SUB-CPMK-01-E	5	10	10	10	10	0
CPL-02		CPMK-02	SUB-CPMK-02-H	5	10	10	10	10	10
CPL-01	MK -12	CPMK-01	SUB-CPMK-01-E	5	10	10	10	10	0
CPL-02		CPMK-02	SUB-CPMK-02-H	5	10	10	10	10	10
CPL-01	MK -13	CPMK-01	SUB-CPMK-01-E	5	10	10	10	10	0
CPL-02		CPMK-02	SUB-CPMK-02-H	5	10	10	10	10	10
CPL-01	MK -14	CPMK-01	SUB-CPMK-01-E	5	10	10	10	10	0
CPL-02		CPMK-02	SUB-CPMK-02-H	5	10	10	10	10	10

17. Tahap dan Mekanisme Penilai

[illegible]

18. Bobot Penilaian

CPL	MK	NAMA MK	CPMK	SUB CPMK	Partisipasi (Kehadiran / Quiz)	Observasi (Praktek / Tugas)	Unjuk Kerja (Presentasi)	Tes Tulis (UTS)	Tes Tulis (UAS)	Tes Lisan (Tugas Kelompok)	Total
CPL-03	MK-01	Studi Alquran dan Hadist Tematik	CPMK-03	SUB-CPMK-03-A	5	20	15	20	20	20	100
CPL-03	MK-02	Filsafat Sains dan Islam	CPMK-03	SUB-CPMK-03-B	5	20	15	20	20	20	100
CPL-03	MK-03	Research Methodology	CPMK-04	SUB-CPMK-04-A	5	30	25	20	20	0	100
CPL-01	MK-04	Intelligent System	CPMK-01	SUB-CPMK-01-A	0	10	15	15	15	0	55
CPL-02			CPMK-02	SUB-CPMK-02-A	0	5	5	5	5	5	25
CPL-03			CPMK-04	SUB-CPMK-04-B	0	5	5	5	5	0	20
CPL-02	MK-05	Software Engineering and Information System	CPMK-02	SUB-CPMK-02-B	5	20	15	20	20	20	100
CPL-02	MK-06	Platform Based Development	CPMK-02	SUB-CPMK-02-C	5	20	15	20	20	20	100
CPL-02	MK-07	Computer System and Network	CPMK-02	SUB-CPMK-02-D	5	20	15	20	20	20	100
CPL-01	MK-08	Research Proposal	CPMK-01	SUB-CPMK-01-B	0	10	10	0	0	0	20
CPL-02			CPMK-02	SUB-CPMK-02-E	0	10	10	0	0	0	20
CPL-03			CPMK-04	SUB-CPMK-04-C	0	30	30	0	0	0	60
CPL-01	MK-09	Scientific Publication	CPMK-01	SUB-CPMK-01-C	0	10	10	0	0	0	20
CPL-02			CPMK-02	SUB-CPMK-02-F	0	10	10	0	0	0	20
CPL-03			CPMK-04	SUB-CPMK-04-D	0	30	30	0	0	0	60
CPL-01	MK -10	Thesis	CPMK-01	SUB-CPMK-01-D	0	10	10	0	0	0	20
CPL-02			CPMK-02	SUB-CPMK-02-G	0	10	10	0	0	0	20
CPL-03			CPMK-04	SUB-CPMK-04-E	0	30	30	0	0	0	60
CPL-01	MK-11	Optional Subject 1	CPMK-01	SUB-CPMK-01-E	5	10	10	10	10	0	45
CPL-02			CPMK-02	SUB-CPMK-02-H	5	10	10	10	10	10	55
CPL-01	MK -12	Optional Subject 2	CPMK-01	SUB-CPMK-01-E	5	10	10	10	10	0	45
CPL-02			CPMK-02	SUB-CPMK-02-H	5	10	10	10	10	10	55
CPL-01	MK -13	Optional Subject 3	CPMK-01	SUB-CPMK-01-E	5	10	10	10	10	0	45
CPL-02			CPMK-02	SUB-CPMK-02-H	5	10	10	10	10	10	55
CPL-01	MK -14	Optional Subject 4	CPMK-01	SUB-CPMK-01-E	5	10	10	10	10	0	45
CPL-02			CPMK-02	SUB-CPMK-02-H	5	10	10	10	10	10	55

19. Rumusan Akhir MK

MK	CPL	CPMK	SUB CPMK	Skor Maks	Total
MK-01	CPL-03	CPMK-03	SUB-CPMK-03-A	100	100
MK-02	CPL-03	CPMK-03	SUB-CPMK-03-B	100	100
MK-03	CPL-03	CPMK-04	SUB-CPMK-04-A	100	100
MK-04	CPL-01	CPMK-01	SUB-CPMK-01-A	55	100
	CPL-02	CPMK-02	SUB-CPMK-02-A	25	
	CPL-03	CPMK-04	SUB-CPMK-04-B	20	
MK-05	CPL-02	CPMK-02	SUB-CPMK-02-B	100	100
MK-06	CPL-02	CPMK-02	SUB-CPMK-02-C	100	100
MK-07	CPL-02	CPMK-02	SUB-CPMK-02-D	100	100
MK-08	CPL-01	CPMK-01	SUB-CPMK-01-B	20	100
	CPL-02	CPMK-02	SUB-CPMK-02-E	20	
	CPL-03	CPMK-04	SUB-CPMK-04-C	60	
MK-09	CPL-01	CPMK-01	SUB-CPMK-01-C	20	100
	CPL-02	CPMK-02	SUB-CPMK-02-F	20	
	CPL-03	CPMK-04	SUB-CPMK-04-D	60	
MK -10	CPL-01	CPMK-01	SUB-CPMK-01-D	20	100
	CPL-02	CPMK-02	SUB-CPMK-02-G	20	
	CPL-03	CPMK-04	SUB-CPMK-04-E	60	
MK-11	CPL-01	CPMK-01	SUB-CPMK-01-E	45	100
	CPL-02	CPMK-02	SUB-CPMK-02-H	55	
MK -12	CPL-01	CPMK-01	SUB-CPMK-01-E	45	100
	CPL-02	CPMK-02	SUB-CPMK-02-H	55	
MK -13	CPL-01	CPMK-01	SUB-CPMK-01-E	45	100
	CPL-02	CPMK-02	SUB-CPMK-02-H	55	
MK -14	CPL-01	CPMK-01	SUB-CPMK-01-E	45	100
	CPL-02	CPMK-02	SUB-CPMK-02-H	55	

20. Rumusan Akhir CPL

CPL	MK	CPMK	SUB CPMK	Skor Maks	Total	Normalisasi (%)
CPL-01	MK-04	CPMK-01	SUB-CPMK-01-A	55	295	21,07
	MK-08	CPMK-01	SUB-CPMK-01-B	20		
	MK-09	CPMK-01	SUB-CPMK-01-C	20		
	MK-10	CPMK-01	SUB-CPMK-01-D	20		
	MK-11	CPMK-01	SUB-CPMK-01-E	45		
	MK-12	CPMK-01	SUB-CPMK-01-E	45		
	MK-13	CPMK-01	SUB-CPMK-01-E	45		
	MK-14	CPMK-01	SUB-CPMK-01-E	45		
CPL-02	MK-04	CPMK-02	SUB-CPMK-02-A	25	605	43,21
	MK-05	CPMK-02	SUB-CPMK-02-B	100		
	MK-06	CPMK-02	SUB-CPMK-02-C	100		
	MK-07	CPMK-02	SUB-CPMK-02-D	100		
	MK-08	CPMK-02	SUB-CPMK-02-E	20		
	MK-09	CPMK-02	SUB-CPMK-02-F	20		
	MK-10	CPMK-02	SUB-CPMK-02-G	20		
	MK-11	CPMK-02	SUB-CPMK-02-H	55		
	MK-12	CPMK-02	SUB-CPMK-02-H	55		
	MK-13	CPMK-02	SUB-CPMK-02-H	55		
	MK-14	CPMK-02	SUB-CPMK-02-H	55		
CPL-03	MK-01	CPMK-03	SUB-CPMK-03-A	100	500	35,71
	MK-02	CPMK-03	SUB-CPMK-03-B	100		
	MK-03	CPMK-04	SUB-CPMK-04-A	100		
	MK-04	CPMK-04	SUB-CPMK-04-B	20		
	MK-08	CPMK-04	SUB-CPMK-04-C	60		
	MK-09	CPMK-04	SUB-CPMK-04-D	60		
	MK-10	CPMK-04	SUB-CPMK-04-E	60		

21. Distribusi Matakuliah

Semester I

No	Kode Matakuliah	Matakuliah	Sks	Prasyarat
1	24060521G01	Studi Alquran dan Hadist Tematik	2	-
2	24060521G02	Filsafat Sains dan Islam	2	-
3	24060521H01	Research Methodology	3	-
4	24060521H02	Intelligent System	3	-
5	24060521H03	Software Engineering and Information System	3	-
6	24060521H04	Platform Based Development	3	-
7	24060521H05	Computer System and Network	3	-
Total			19	

Semester II

No	Kode Matakuliah	Matakuliah	Sks	Prasyarat
1	24060521K01	Research Proposal	6	-
2	Sesuai Kode MK Pilihan	Optional Subject 1	3	-
3	Sesuai Kode MK Pilihan	Optional Subject 2	3	-
4	Sesuai Kode MK Pilihan	Optional Subject 3	3	-
5	Sesuai Kode MK Pilihan	Optional Subject 4	3	-
Total			18	

Semester III

No	Kode Matakuliah	Matakuliah	Sks	Prasyarat
1	24060521K02	Scientific Publication	6	-
Total			6	

Semester IV

No	Kode Matakuliah	Matakuliah	Sks	Prasyarat
1	24060521K03	Thesis	12	-
Total			12	

List Optional Subjects

Kode Matakuliah	Matakuliah	Sks
24060522J01	Applied Artificial Intelligence in Social Research	3
24060522J02	Bioinformatics	3
24060522J03	Business Intelligence	3
24060522J04	Advanced Modeling and Simulation	3
24060522J05	Advanced Machine Learning	3
24060522J06	Deep Learning	3
24060522J07	Regression Analysis	3
24060522J08	Information Visualization	3
24060522J09	Big Data Analytics	3
24060522J10	Applied Artificial Intelligence in Data Security	3
24060522J11	Metaverse Technology	3
24060522J12	Applied Artificial Intelligence in Game	3
24060522J13	Applied Artificial Intelligence in Database Systems	3
24060522J14	Applied Artificial Intelligence in Software Quality Assurance	3
24060522J15	Applied Artificial Intelligence in UI/UX	3
24060522J16	Applied Artificial Intelligence in Projects Management	3
24060522J17	Applied Artificial Intelligence in Information Systems	3
24060522J18	Applied Artificial Intelligence in Education	3
24060522J19	Immersive Environment Scenario	3
24060522J20	Applied Artificial Intelligence in Medical Data	3

A. Struktur Kurikulum Magister Informatika

DESCRIPTION	Semester 1 (19 SKS)	Semester 2 (18 SKS)	Semester 3 (6 SKS)	Semester 4 (12 SKS)
UNIVERSITY SUBJECTS	Studi Alquran dan Hadist Tematik (2) Filsafat Sains dan Islam (2)		-	-
CORE KNOWLEDGE	Research Methodology (3) Intelligent System (3) Software Engineering and Information System (3) Platform Based Development (3) Computer System and Network (3)	Research Proposal (6) MK Pilihan 1 (3) MK Pilihan 2 (3) MK Pilihan 3 (3) MK Pilihan 4 (3)	Scientific Publication (6)	Thesis (12)

Keterangan:

- 1. Mahasiswa wajib mengambil 12 sks (4 matakuliah) pilihan.
- 2. Total sks yang harus ditempuh oleh mahasiswa adalah 55 sks yang terdiri atas 4 sks matakuliah wajib universitas, 39 sks matakuliah wajib program studi, dan 12 sks matakuliah pilihan.



**SURAT KEPUTUSAN DEKAN
FAKULTAS SAINS DAN TEKNOLOGI
UIN MAULANA MALIK IBRAHIM MALANG
Nomor : 2373/FST/07/2024**

Tentang

**KURIKULUM PROGRAM STUDI MAGISTER INFORMATIKA
TAHUN 2024**

**DEKAN FAKULTAS SAINS DAN TEKNOLOGI
UIN MAULANA MALIK IBRAHIM MALANG**

- Menimbang : a. Bahwa dengan adanya perubahan Kurikulum di Program Studi Magister Informatika Fakultas Sains dan Teknologi UIN Maulana Malik Ibrahim Malang, maka dipandang perlu untuk mengadakan perubahan, penyesuaian dan penataan akademik.
- b. Bahwa guna memperlancar proses penataan akademik tersebut pada poin a, maka perlu ditetapkan Kurikulum Program Studi Magister Informatika Fakultas Sains dan Teknologi UIN Maulana Malik Ibrahim Malang Tahun 2024.
- Mengingat : 1. Undang-undang Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional
2. Peraturan Presiden Republik Indonesia No. 8 Tahun 2012 Tentang Kerangka Kualifikasi Nasional Indonesia (KKNI)
3. Permenristekdikti No. 44 Tahun 2015 Tentang Standar Nasional Pendidikan Tinggi
4. Peraturan Menteri Pendidikan dan Kebudayaan Republik Indonesia Nomor 3 Tahun 2020 Tentang Standar Nasional Pendidikan Tinggi
5. Keputusan Menteri Agama Republik Indonesia Nomor 8 Tahun 2013 tentang organisasi dan tata kerja Universitas Islam Negeri (UIN) Malang
6. Surat Keputusan Rektor Nomor: 799 Tahun 2023 tentang Pedoman Pendidikan Universitas Islam Negeri Maulana Malik Ibrahim Malang Tahun 2023

MEMUTUSKAN

- Menetapkan : **KEPUTUSAN DEKAN FAKULTAS SAINS DAN TEKNOLOGI UIN MAULANA MALIK IBRAHIM MALANG TENTANG KURIKULUM PROGRAM STUDI MAGISTER INFORMATIKA TAHUN 2024**
- Pertama : Kurikulum yang tersebut dalam lampiran Surat Keputusan ini ditetapkan sebagai Kurikulum Program Studi Magister Informatika Fakultas Sains dan Teknologi UIN Maulana Malik Ibrahim Malang Tahun 2024
- Kedua : Keputusan ini berlaku sejak tanggal ditetapkan dan akan ditinjau kembali apabila terdapat kekeliruan.

Ketiga

: Surat keputusan ini disampaikan kepada yang bersangkutan untuk diketahui dan diindahkan sebagaimana mestinya.

Ditetapkan di : Malang

Pada tanggal : 23 Juli 2024

Dekan,



RI HARINI

Tembusan:

1. Yth. Rektor
2. Yth. Wakil Rektor Bidang Akademik
3. Yth. Kepala Biro AAKK
4. Yth. Wakil Dekan Bidang Akademik Fakultas Sains dan Teknologi
5. Yth. Ketua Program Studi Magister Informatika Fakultas Sains dan Teknologi
6. Yth. Kepala Bagian Akademik
7. Arsip

**KURIKULUM PROGRAM STUDI MAGISTER INFORMATIKA
FAKULTAS SAINS DAN TEKNOLOGI
UNIVERSITAS ISLAM NEGERI MAULANA MALIK IBRAHIM MALANG
TAHUN 2024**

No	Kode Matakuliah	Matakuliah	SKS
A. MATAKULIAH WAJIB			
1	24060521G01	Studi Alquran dan Hadist Tematik	2
2	24060521G02	Filsafat Sains dan Islam	2
3	24060521H01	Research Methodology	3
4	24060521H02	Intelligent System	3
5	24060521H03	Software Engineering and Information System	3
6	24060521H04	Platform Based Development	3
7	24060521H05	Computer System and Network	3
8	24060521K01	Research Proposal	6
9	24060521K02	Scientific Publication	6
10	24060521K03	Thesis	12
B. MATAKULIAH PILIHAN			
1	24060522J01	Applied Artificial Intelligence in Social Research	3
2	24060522J02	Bioinformatics	3
3	24060522J03	Business Intelligence	3
4	24060522J04	Advanced Modeling and Simulation	3
5	24060522J05	Advanced Machine Learning	3
6	24060522J06	Deep Learning	3
7	24060522J07	Regression Analysis	3
8	24060522J08	Information Visualization	3
9	24060522J09	Big Data Analytics	3
10	24060522J10	Applied Artificial Intelligence in Data Security	3
11	24060522J11	Metaverse Technology	3
12	24060522J12	Applied Artificial Intelligence in Game	3
13	24060522J13	Applied Artificial Intelligence in Database Systems	3
14	24060522J14	Applied Artificial Intelligence in Software Quality Assurance	3
15	24060522J15	Applied Artificial Intelligence in UI/UX	3
16	24060522J16	Applied Artificial Intelligence in Projects Management	3
17	24060522J17	Applied Artificial Intelligence in Information Systems	3
18	24060522J18	Applied Artificial Intelligence in Education	3
19	24060522J19	Immersive Environment Scenario	3
20	24060522J20	Applied Artificial Intelligence in Medical Data	3



Dekan

SRI HARINIA