

# CURRICULUM 2014 – 2019

Bachelor Degree Program in Information Systems

Jurusan Sistem Informasi  
Institut Teknologi Sepuluh Nopember



# FACULTY OF INFORMATION TECHNOLOGY

Programme	Information Systems
Degree	Bachelor Degree (BSc)

## I. Learning Outcomes for the IS BSc Programme

Our graduate profile covers 4 (four) career paths: a) IS Developer; b) Consultant & System Integrator; c) Database Specialist; d) IS Academician. Learning outcomes of the Information Systems programme form the foundation for becoming competent academician and professionals aforementioned in the profile. The learning outcomes for the IS programme is described within the four aspects, i.e.: knowledge aspect; working skill aspect; managerial skill aspect; and attitude and values aspect. The rest of this part will discuss about the learning outcomes.

### 1. KNOWLEDGE Aspect

<b>KNOWLEDGE ASPECT</b>	<p>P.1. <i>Understand the concepts of organization and business management</i></p> <p>Memahami konsep-konsep Manajemen Organisasi &amp; Bisnis</p> <p>P.1.1</p>	
	<p><i>Understand the general concepts of <b>Process, Function, and management of business and organization</b> (including organizational behaviour, business model, business function, business strategy)</i></p> <p>Memahami konsep-konsep umum <b>Proses, Fungsi, &amp; Manajemen organisasi &amp; bisnis</b> (termasuk perilaku</p>	

			organisasi, model bisnis, fungsi-fungsi bisnis, strategi bisnis)
		P.1.2	<i>Understand concepts and methods of business process analysis, and business process model efficiently and effectively<sup>2</sup></i>
			Memahami <b>konsep &amp; metode analisis &amp; perancangan proses bisnis</b> yang lebih efektif & efisien <sup>2</sup>
	P.1.3	<i>Understand methods for evaluating organization performance (including individual performance, group performance, and business performance)</i>	
		Memahami <b>metode evaluasi unjuk-kerja organisasi/bisnis</b> (termasuk unjuk kerja individu, tim, maupun perusahaan)	
	P.2. Understand IT driven opportunities to improve business		
	Memahami <b>peluang-peluang yang dapat diciptakan oleh inovasi-inovasi teknologi terkini bagi kemajuan organisasi/bisnis</b>		
	P.2.1	<i>Understand trends in technology innovation</i>	
		Memahami perkembangan <b>inovasi teknologi-teknologi terkini</b>	
	P.2.2	<i>Possesing and having insights into global and national issues in business and IS/IT</i>	
	Memiliki <b>wawasan permasalahan bisnis &amp; SI/TI nasional &amp; global</b>		
P.2.3	<i>Understand aspects, issues, and business process supported by IT</i>		
	Memahami <b>aspek-aspek, permasalahan, proses organisasi &amp; bisnis</b> yang dapat ditingkatkan/diselesaikan dengan bantuan TI		

	<p>P.2.4</p>	<p><i>Understand <b>information requirements</b> in business/organization and the related documentations.</i></p> <p>Memahami <b>kebutuhan informasi</b> organisasi/bisnis dan <b>dokumentasinya</b></p>
	<p>P.3. <i>Understand IS/IT Enterprise Architecture and management</i></p> <p>Memahami <b>arsitektur SI/TI</b> perusahaan &amp; <b>manajemen pengelolaannya</b></p> <p>P.3.1</p>	<p><i>Understand <b>the concepts of IS/IT Enterprise Architecture in organization</b> (networks, data centers, etc.)</i></p> <p>Memahami konsep-konsep <b>arsitektur &amp; infrastruktur SI/TI perusahaan</b> (jaringan komputer, data centers, dll)</p>
	<p>P.4. <i>Understand IS/IT solutions and acquisitions</i></p> <p>Memahami <b>alternatif solusi dan pengadaan SI/TI</b> organisasi</p> <p>P.4.1</p> <p>P.4.2</p> <p>P.4.3</p>	<p><i>Well understand the concepts of <b>IS/IT Strategy and Acquisition Management</b></i><sup>2</sup></p> <p>Menguasai konsep <b>Strategi &amp; Manajemen Pengadaan SI</b><sup>2</sup></p> <p><i>Understand <b>various technology and their compatibilities</b></i></p> <p>Memahami <b>variasi teknologi</b> dan <b>kompatibilitas/integritas</b> antar teknologi tersebut</p> <p><i>Well understand the <b>basic concepts of Information Systems</b></i><sup>2</sup></p> <p>Menguasai <b>konsep-konsep dasar &amp; jenis Sistem Informasi</b><sup>2</sup></p>

	P.4.4	<i>Understand <b>concepts and methods of IS/IT Project Management</b></i> <sup>5</sup>
		Memahami konsep & metode <b>Manajemen Proyek SI/TI</b> <sup>5</sup>
	P.4.5	<i>Understand concepts and methods of <b>outsourcing</b></i> <sup>5</sup>
		Memahami konsep & metode <b>Outsourcing</b> <sup>5</sup>
	P.4.6	<i>Well understand the concepts and methods for implementing an <b>Enterprise System</b> that aims at improving quality and integrity of business process and functions, or solving problems</i> <sup>2&amp;3</sup>
		Menguasai konsep-konsep & metode implementasi <b>Enterprise Systems</b> untuk menyelesaikan permasalahan atau meningkatkan kualitas & integritas proses bisnis & fungsi-fungsi perusahaan <sup>2&amp;3</sup>
	P.5. <i>Understand concepts and methods in designing, developing,, implementing, and evaluating IS application</i>	
	Memahami konsep & metode <b>perancangan, pembangunan, implementasi, dan evaluasi aplikasi SI</b>	
	P.5.1	<i>Understand concepts and methods in <b>designing</b> a software/information system</i> <sup>2</sup>
		Menguasai konsep & metode <b>Perancangan Perangkat Lunak / Sistem Informasi</b> <sup>2</sup>
	P.5.2	<i>Understand concepts and methods in <b>developing</b> a software/information system</i> <sup>2</sup>
		Menguasai konsep & metode <b>Pembangunan/Pengembangan</b> Perangkat Lunak / Sistem Informasi <sup>2</sup>
	P.5.3	<i>Understand concepts and methods in <b>implementing</b> a software/information system (integrating software)</i> <sup>5</sup>

	P.5.4	Menguasai konsep & metode <b>Implementasi Sistem Informasi (Integrasi aplikasi ke dalam proses bisnis)</b> <sup>5</sup>	
		<i>Well understand concepts and methods in <b>evaluating</b> a software/information system</i>	
	<p>P.6. <i>Understand the concepts of mathematics and mathematical logic as a basis to computer programming and information analysis</i></p> <p>Memahami konsep-konsep <b>konsep-konsep logika &amp; matematika</b> untuk dasar pemrograman komputer dan analisis informasi</p>	P.6.1	<i>Understand the concept of <b>Discrete Mathematics</b></i>
			P.6.2
		<i>Understand the concept of <b>Statistics</b></i>	
		Memahami konsep-konsep <b>Statistika</b>	
		<p>P.7. <i>Understand the concepts of IS/IT Risk Management, data security, and IS/IT infrastructure</i></p> <p>Memahami konsep-konsep <b>manajemen resiko TI, pengamanan data &amp; infrastruktur SI/TI</b></p>	P.7.1
	P.7.2		
			<i>Understand <b>threats related to data security and IS/IT infrastructure</b></i>
	Memahami potensi-potensi <b>ancaman data &amp; infrastruktur SI/TI</b>		

	P.7.3	<i>Understand <b>solution</b> to secure data and IS/IT infrastructure</i>
		Memahami <b>alternatif solusi</b> melindungi data & infrastruktur SI/TI
	P.7.4	<i>Understand <b>IS/IT risk management</b> (including security, disaster recovery, etc)</i>
		Memahami <b>manajemen resiko SI/TI</b> (termasuk keamanan, disaster recovery, dll)
	<p><i>P.8. Understand how massive data is gathered by a modern organization aiming at analyzing, re-designing, and improving business processes and organization competitive advantage</i></p> <p>Memahami bagaimana <b>data</b> dalam jumlah yang sangat besar <b>dikumpulkan</b> oleh organisasi modern <b>dapat digunakan</b> untuk mengevaluasi, mendesain kembali, dan meningkatkan proses-proses &amp; keunggulan bisnis/organisasi</p>	
	P.8.1	<i>Understand <b>concepts of data, information, knowledge and wisdom</b><sup>5</sup></i>
		Memahami <b>konsep umum data, informasi, pengetahuan, dan kebijaksanaan</b> <sup>5</sup>
	P.8.2	<i>Well understand <b>the concepts of basis data and data management, i.e. designing, developing, managing, and administering data basis</b><sup>2&amp;3</sup></i>
		Menguasai konsep-konsep <b>basis data</b> dan metode <b>perancangan, pembangunan, manajemen, &amp;</b>

	P.8.3	<b>administrasi Basis Data</b> <sup>2&amp;3</sup>
		<i>Understand concepts and methods to <b>analyze data and information</b></i>  Memahami konsep & metode <b>analisis data/informasi</b> <sup>5</sup>
	P.9. <i>Well understand the concepts and methods of IS/IT Management and Governance</i>  Menguasai konsep-konsep & metode <b>Tata-Kelola &amp; Manajemen SI/TI</b>	
	P.9.1	<i>Understand concepts and methods to <b>align IT strategy with business strategy</b></i>  Memahami konsep & metode <b>penyelarasan strategi TI dan strategi organisasi</b>
	P.9.2	<i>Understand <b>IT governance framework</b>, e.g. COBIT and ITIL</i>  Memahami <b>kerangka-kerja (frameworks) manajemen &amp; kontrol TI</b> (seperti COBIT & ITIL)
	P.9.3	<i>Understand concepts and methods to <b>evaluate IS and manage IS/IT</b></i>  Memahami konsep & metode <b>evaluasi SI &amp; manajemen SI/TI</b>
	P.10. <i>Understand scientific methods and writings</i>  Memahami <b>metode ilmiah &amp; penulisan ilmiah</b>	
	P.10.1	<i>Understand <b>scientific methods and writings</b> for research report and performance report</i>  Memahami <b>metode penulisan ilmiah</b> untuk laporan penelitian dan laporan kerja



	P.10.2	<i>Understand principles of <b>scientific methods</b></i>
		Memahami prinsip-prinsip <b>metode ilmiah</b>
<p><i>Well understand theoretical concepts in general and in specific, and be able to find solution for procedural problems.</i></p> <p>Menguasai konsep teoritis di bidangnya secara umum dan konsep teoritis bagian khusus secara mendalam, serta mampu menyelesaikan masalah prosedural</p>		<p><i>This knowledge aspect taken from ITS has been covered within learning outcomes number P.1-P.</i></p> <p>Pengetahuan <b>amanat ITS</b> ini telah dicover di LO nomor P.1-P.</p>

## 2. WORKING SKILL Aspect

WORKING SKILL ASPECT	<p><i>K.1. Improve effectiveness and efficiency of business / organizational process</i></p> <p>Mampu <b>meningkatkan efektifitas &amp; efisiensi proses organisasi &amp; bisnis</b></p>	
	K.1.1	<p><b>Analyze existing business/organizational process</b> by applying data gathering methods, e.g. interview, field and desk observation, and other related methods</p> <p>Mampu <b>menganalisis proses-proses bisnis/organisasi yang ada</b> dengan metode <b>wawancara, pengamatan (observasi), analisis dokumen</b>, dan metode-metode sejenis</p>
	K.1.2	<p>Identify dan summarize <b>important findings from data analysis</b></p> <p>Mampu <b>mengidentifikasi &amp; menangkap poin-poin temuan penting</b> dari sumber <b>data yang sangat besar</b></p>

		sebagai hasil proses analisis
	K.1.3	<i>Conduct research and apply reference model in industries and best practice in order to improve business process design</i>
		Mampu meneliti dan mengaplikasikan <b>model-model referensi industri &amp; best practice</b> untuk meningkatkan desain-desain proses
	K.1.4	<i>Use <b>results from data analysis</b> as a <b>basis to design process improvement</b> in an organization.</i>
		Mampu <b>menggunakan hasil analisis</b> sebagai <b>dasar mendesain perbaikan proses</b> bisnis/organisasi berdasarkan pemahaman terhadap organisasi maupun IT
	K.1.5	<i>Apply <b>business process simulation</b> and improve the business process accordingly</i>
	Mampu melakukan <b>simulasi proses bisnis/organisasi</b> yang diusulkan dan memperbaikinya jika diperlukan	
K.1.6	<i><b>Modify and customize</b> process according to local context, and customs</i>	
	Mampu <b>memodifikasi/mengkustomisasi proses menyesuaikan kebutuhan budaya &amp; konteks lokal</b>	
	<i>K.2. Realise information requirements in an organization and how to meet them</i>	
	Mampu <b>mengenal dan memenuhi kebutuhan-kebutuhan informasi</b> organisasi & bisnis	
K.2.1	<i>Analyze <b>information requirements</b> from individu, staff, unit, and organization</i>	
	Mampu <b>menganalisis kebutuhan informasi</b> individu staf, unit organisasi, atau organisasi.	

	<p>K.2.2</p>	<p><b>Consolidate data</b> with different types and formats from various organization</p> <p>Mampu <b>memanfaatkan &amp; mengintegrasikan data</b> yang dihasilkan oleh jenis organisasi dengan tipe dan format data yang berbeda</p>
	<p>K.2.3</p>	<p>Analyze <b>massive data/information</b><sup>5</sup></p> <p>Mampu <b>menganalisis data/informasi</b> dengan jumlah yang besar<sup>5</sup></p>
	<p>K.3. Identify and evaluate IS/IT solutions and acquisition (profits and trade-offs analysis) in an organization</p> <p>Mampu <b>mengidentifikasi &amp; mengevaluasi</b> (termasuk analisis keuntungan-kerugian/trade-offs) <b>alternatif solusi dan pengadaan SI/TI</b> organisasi</p>	<p>K.3.1 <b>Analyze organizational issues</b> and provide with IT based solutions</p> <p>Mampu <b>menganalisis masalah</b> organisasi/bisnis dan <b>merancang alternatif-alternatif solusi TI</b></p> <p>K.3.2 <b>Identify and understand business limitations from various aspects</b>, i.e. technology, budgets, and organizational capability</p> <p>Mampu <b>mengidentifikasi &amp; memahami batasan-batasan yang dapat dicapai</b> dengan teknologi, keuangan, &amp; kemampuan organisasi yang ada</p> <p>K.3.3 Identify, evaluate, and conduct <b>procurement of IT and the related resources</b></p> <p>Mampu Mengidentifikasi, mengevaluasi, dan melakukan <b>pengadaan pilihan-pilihan solusi TI dan sumber-daya pendukungnya</b></p>

	K.3.4	<p><i>Design <b>high-level IT solution</b> to meet organization's need</i></p> <p>Mampu <b>membuat desain tingkat-tinggi solusi TI</b> untuk memenuhi kebutuhan bisnis/organisasi</p>
	K.3.5	<p>Analysis <b>feasibility of IT solutions</b> considering operational, financial, technical aspects.</p> <p>Mampu <b>mengalisis kelayakan/feasibility pilihan-pilihan solusi TI</b> berdasarkan pertimbangan operasional, keuangan, &amp; teknis</p>
	K.3.6	<p><i>Compare IT solutions by applying <b>multiple decision criteria</b></i></p> <p>Mampu membandingkan pilihan-pilihan solusi TI menggunakan <b>multiple decision criteria</b></p>
	K.3.7	<p><i>Provide <b>a financial justification</b> when choosing IT solutions</i></p> <p>Mampu membuat <b>justifikasi finansial</b> untuk memilih alternatif solusi TI,</p>
	K.3.8	<p><i>Conduct evaluation of cultural and local context, and laws for each IT solutions</i></p> <p>Mampu melakukan <b>evaluasi konteks budaya, hukum, &amp; konteks lokal</b> terhadap masing-masing pilihan solusi TI</p>
	<p>K.4. <i>Design, build, implement, and evaluate IS/IT solutions</i></p> <p><b>Mampu merancang, Membangun, mengimplementasikan, &amp; mengevaluasi</b> solusi-solusi SI/TI:</p>	
	K.4.1	<p><i>Design <b>IS/IT Architecture</b> in an organization</i></p> <p>Mampu <b>merancang arsitektur SI/TI</b> perusahaan</p>
	K.4.2	<p><i>Design system and <b>secured data infrastructure</b></i></p> <p>Mampu <b>merancang sistem dan infrastruktur data yang aman</b></p>

	K.4.3	<b>Design IS software application</b> Mampu merancang aplikasi SI
	K.4.4	<b>Design and build basis data model</b> Mampu merancang dan membangun model-model basis data
	K.4.5	<b>Build/develop IS software application</b> Mampu membangun/mengembangkan aplikasi SI
	K.4.6	<b>Manage process of developing and acquiring IS</b> Mampu mengelola proses pengembangan SI dan pengadaan SI
	K.4.7	<b>Manage IS/IT project</b> Mampu mengelola proyek SI/TI
	K.4.8	<b>Perform testing for IS software application</b> Mampu melakukan pengujian aplikasi SI
	K.4.9	<b>Design, configure, operate an ERP system in order to integrate processes and functions in business/organization<sup>3</sup></b> Mampu merancang, mengkonfigurasi, dan mengoperasikan ERP dalam rangka mengintegrasikan proses-proses & fungsi-fungsi bisnis/perusahaan <sup>3</sup>
	K.5. <i>Manage IS/IT operational and implement IT Governance</i>  Mampu mengelola operasional SI/TI & mengimplementasikan tata-kelola TI	
	K.5.1	<b>Build IS/IT strategy and plan</b> Mampu membuat strategi & perencanaan SI/TI
	K.5.2	<b>Implement IT Governance frameworks/best practices</b> Mampu mengimplementasikan kerangka-kerja (frameworks)/best practices manajemen & kontrol TI
K.5.3	<b>Manage and administer basis data</b>	

			Mampu <b>mengelola dan administrasi basis data</b>
		K.5.4	<i>Evaluate <b>IS performance and IS/IT services</b></i>
			Mampu <b>mengevaluasi unjuk-kerja SI dan layanan SI/TI</b>
		K.5.5	<i>Manage <b>relationship</b> between suppliers of IT services and users, and vendors</i>
			Mampu <b>mengelola hubungan antara penyedia layanan TI dengan pelanggan dan rekanan</b>
		K.5.6	<i>Secure <b>data and system infrastructure</b></i>
			Mampu <b>mengamankan data dan infrastruktur sistem</b>
		K.6.6.	<i>Ensure <b>business continuity</b></i>
			Mampu <b>memastikan keberlangsungan bisnis</b>
			<i>K.6. Provide scientific reports, documentation, and other related reports</i>
	Mampu <b>menghasilkan karya ilmiah, dokumentasi, &amp; pelaporan</b>		
	K.6..1	<i>Provide <b>documentation/report</b> for each phase of business process and IS development</i>	
		Mampu melakukan <b>dokumentasi/laporan setiap tahapan/proses bisnis dan pengembangan SI</b>	
	K.6.2	<i>Establish <b>scientific works, and publications</b></i>	
		Mampu <b>membuat karya ilmiah &amp; mempublikasikannya</b>	

<p><i>Apply skills and make use of IPTEKS in their field study to help in solving problems in environment, household residents, maritim, energy, information technology and communication, with continuous improvement and creating job opportunities in mind<sup>1</sup></i></p> <p>Mampu menerapkan bidang keahliannya dan memanfaatkan IPTEKS pada bidangnya untuk menyelesaikan masalah lingkungan dan pemukiman, kelautan, energi, teknologi informasi dan komunikasi dengan konsep pembangunan berkelanjutan dan mendorong penciptaan lapangan kerja sesuai bidang keahliannya.<sup>1</sup></p>	<p><i>This knowledge aspect taken from ITS has been covered within learning outcomes number K1 - K5</i></p> <p>Kemampuan <b>Amanat ITS</b> ini telah dicover di LO nomor K1 - K5</p>
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### 3. MANAGERIAL SKILL Aspect

<b>MANAGERIAL SKILL</b>	Ability to develop:	
	<b>M.1. Leadership and team-work skill</b>	
	<b>Kepemimpinan &amp; kerja-sama tim:</b>	
	M.1.1	<i>Develop abilities to be <b>a leader in a team representing organizational functions</b> that work at global level</i>
M.1.2	<i>Develop abilities to be <b>a leader in implementing new business process</b></i>	Mampu <b>memimpin implementasi proses bisnis baru</b>
M.1.3	<i>Manage <b>projects at global/international level</b></i>	

		<p><b>Mengelola proyek-proyek pada tingkat global/internasional</b></p>
M.1.4		<p><i>Work together effectively in teams</i><sup>3</sup></p>
M.1.5		<p><b>Bekerja sama efektif dalam tim-tim yang berbeda</b><sup>3</sup></p> <p>Design <b>effectiv</b>e organizational structure</p>
M.1.6		<p><b>Membangun struktur organisasi</b> yang efektif.</p> <p><i>Make <b>effective decisions</b> based on information analysis and data analysis considering continuous development in business/organization in various aspects, e.g. environment and household residents, maritim, energy, information technology and communication, and ultimately social aspect</i><sup>1</sup></p>
M.1.7		<p>Mampu <b>mengambil keputusan yang tepat</b> berdasar pada <b>analisa informasi dan data</b> dengan berbekal wawasan pembangunan berkelanjutan yang mencakup aspek lingkungan dan pemukiman, kelautan, energi, teknologi informasi dan komunikasi serta mengedepankan keperdulian sosial<sup>1</sup></p> <p><i>Provide IT solutions equipped with leadership, creativity, and communication skills, and self-responsibility skills in order to achieve performance targets in organization</i><sup>1</sup></p> <p><b>Mampu memberikan alternatif solusi</b> berbekal sikap <b>kepemimpinan, kreatifitas</b> dan kemampuan <b>komunikasi</b> serta <b>bertanggung jawab pada pekerjaan sendiri</b> dan dapat diberi <b>tanggung jawab</b> atas pencapaian hasil kerja organisasi<sup>1</sup></p>
	M.2. <b>Communcation skill</b>	
	<b>Communicate</b>	
M.2.1		<p><i>Listen, search for, interview, and analyze various sources of information</i></p> <p><b>Mendengar, menyelami, mewawancarai, dan menganalisis</b> berbagai sumber informasi</p>
M.2.2		<p><i>Write a memo, report, and document</i></p> <p><b>Menulis memo, laporan, dan dokumen</b></p>



	M.2.3	Use <b>online collaborative tools/software</b> , e.g. wiki, blog, google doc, etc.
		<b>Menggunakan tools/software kolaborasi online</b> seperti wiki, blog, google doc, dan lain-lain,
	M.2.4	Provide an <b>effective presentation</b>
		Melakukan <b>presentasi yang efektif</b>
	M.2.5	Be <b>fluent in English and abide by international etchis</b> <sup>3</sup>
		<b>Fasih berbahasa Inggris &amp; bermental &amp; faham etika internasional</b> <sup>3</sup>
	<b>M.3. Negotiation skill</b>	
	<b>Negosiasi</b>	
	M.3.1	<b>Negotiate with customers</b> with regard to financial, response time, staf availability, and IT service
		<b>Negosiasi dengan pelanggan</b> menyangkut keuangan, waktu, staf, dan <i>features</i> layanan TI,
	M.3.2	<b>Negotiate with IT service providers</b> with regard to standard quality of service, IT delivery performance
		<b>Negosiasi dengan penyedia layanan TI</b> terkait tingkat standar kualitas dan unjuk kerja penyampaian layanan TI.
	M.3.3	<b>Facilitate negotiations</b> between stakeholder internal in an organization
		Memfasilitasi <b>negosiasi antara pihak-pihak internal perusahaan (manajmen)</b> yang memiliki kepentingan.
	<b>M.4. Analytical, critical, creative thinking and ethical skill</b>	
	<b>Berpikir analitis dan kritis, kreatif dan etis</b>	
	M.4.1	Analyze <b>implications on legal and ethical practices</b> in complex situations
		Mampu <b>mengalisis implikasi hukum dan etika</b> situasi-situasi kompleks tertentu

	M.4.2	<i>Analyze <b>risks</b> in complex situations</i>
		Mampu <b>menganalisis resiko</b> menyangkut situasi-situasi kompleks tertentu
	M.4.3	<i>Solve <b>problems</b> in complex situations<sup>3</sup></i>
		Mampu <b>memecahkan masalah-masalah kompleks</b> (logika problem solving) <sup>3</sup>
	M.4.4	<i>Apply <b>quantitative analysis techniques</b> effectively</i>
		Mampu <b>menggunakan teknik-teknik analisis kuantitatif</b> dengan benar dan efektif
	M.4.5	<i>Think <b>critically, analytically, systematically, and logically</b></i>
		Mampu berfikir <b>kritis, analitis, sistematis dan logis</b>
	M.4.6	<i>Think <b>innovatively and creatively</b></i>
		Mampu berfikir <b>inovatif dan kreatif</b>

#### 4. ATTITUDE AND VALUES Aspect

ATTITUDE AND VALUES	1. <i>Abide by good principles of ethical practices</i>	
	Menerapkan prinsip-prinsip <b>etika yang baik</b> (IS 2010)	
	S.1.1	<i>Evaluate and response to <b>issues related to ethical practices</b> in the field of information systems</i>
		Mampu mengevaluasi dan bertindak terhadap permasalahan terkini menyangkut etika dalam bidang SI
	S.1.2	<i>Abide by professional standards of information systems</i>
		Menerapkan aturan-aturan profesional SI
S.1.3	<i>Be flexible</i>	
	Fleksibel	
S.1.4	<i>Possess learning skills</i>	

	S.1.5	Memiliki rasa ingin tahu yang tinggi <i>Be tolerant of others</i>
	S.1.6	Toleransi kepada orang lain Be honest <sup>3</sup> Jujur <sup>3</sup>
2. Possess entrepreneurial skill		
Memiliki jiwa Entrepreneur <sup>1</sup>		
	S.2.1	<i>Be willing to take risks</i> Berani mengambil resiko
	S.2.2	<i>Search for opportunities</i> Mampu melihat peluang
	S.2.3	<i>Be motivated and never give up</i> <sup>3</sup> Bersemangat & Pantang Menyerah <sup>3</sup>
	S.2.4	<i>Be creative</i> Kreatif <sup>3</sup>
	S.2.5	<i>Be diligent</i> Ulet/Tekun <sup>3</sup>
	S.2.6	<i>Take actions</i> <sup>3</sup> Inisiatif Bertindak <sup>3</sup>
	S.2.7	<i>Be solution oriented</i> Beorientasi solusi
	S.2.8	<i>Adapt to environment</i> <sup>3</sup> Mampu menyesuaikan diri <sup>3</sup>
3. Attitudes and values taken from national and local (ITS) level <sup>1</sup>		
Sikap & Tata Nilai amanat Nasional & ITS <sup>1</sup>		

S.3.1	<p><i>Be <b>fear</b> of God and be <b>religious</b></i></p> <p><b>Bertaqwa kepada Tuhan Yang Maha Esa</b> dan mampu menunjukkan <b>sikap religius</b></p>
S.3.2	<p><i>Be <b>proud</b> of being Indonesia's citizens/residents and be <b>responsible</b> toward this role</i></p> <p>Berperan sebagai warga negara yang <b>bangga dan cinta tanah air</b>, memiliki <b>nasionalisme</b> serta rasa <b>tanggungjawab</b> pada negara dan bangsa</p>
S.3.3	<p><i>Contribute to improving <b>quality of society</b> and nation based on Pancasila</i></p> <p>Mampu <b>berkontribusi dalam peningkatan mutu kehidupan</b> bermasyarakat, berbangsa, dan bernegara berdasarkan <b>Pancasila</b></p>
S.3.4	<p><i>Uphold <b>human values</b> when performing duties based on moral and ethical practices</i></p> <p><b>Menjunjung tinggi nilai kemanusiaan</b> dalam menjalankan tugas berdasarkan <b>moral dan etika</b></p>
S.3.5	<p><i><b>Work together</b> and possess <b>social sensitivity</b> and <b>social care</b> toward society</i></p> <p>Mampu <b>bekerja sama</b> dan memiliki <b>kepekaan sosial</b>, serta <b>kepedulian</b> terhadap masyarakat dan lingkungan</p>
S.3.6	<p><i><b>Respect differences</b> in cultures, views, religion and beliefs, and arguments and original findings from others</i></p> <p><b>Menghargai keanekaragaman</b> budaya, pandangan, agama dan kepercayaan, serta pendapat atau temuan orisinal orang lain</p>
S.3.7	<p><i>Abide by <b>laws</b>, and be <b>discipline</b> living in society</i></p> <p><b>Taat hukum</b> dan <b>disiplin</b> dalam kehidupan bermasyarakat dan bernegara</p>
S.3.8	<p><i>Internalize <b>values, norms, and ethics</b> related to academic practices</i></p> <p>Mampu meng<b>internalisasi nilai, norma, dan etika akademik</b></p>
S.3.9	<p><i>Internalize <b>independence and survival spirits</b></i></p>

	S.3.10	Mampu menginternalisasi semangat <b>kemandirian</b> dan <b>kejuangan</b>
		<i>Abide by appropriate practices for using and citing the intellectual property of others</i>
		Memiliki kemampuan <b>literasi</b> yang memadai

Notes:

Keterangan

### Referensi daftar LO

Referensi utama (tanpa tanda): **IS2010**

- <sup>1</sup>: LO Titipan **Kurikulum Nasional & ITS**  
*LO Taken from National Curriculum and ITS*
- <sup>2</sup>: LO analisis hasil **Survey Alumni** JSI-ITS  
*LO Taken from Alumni Survey of IS-ITS Graduates*
- <sup>3</sup>: LO analisis **Survey Perusahaan Pengguna Alumni** JSI-ITS  
*LO taken from Corporate Survey*
- <sup>4</sup>: LO analisis **Tren Nasional & Internasional**  
*LO from national and international trends*
- <sup>5</sup>: LO analisis kompetensi **Profil Lulusan** yang belum dicover  
*LO given to meet IS graduate profiles*

## II. COURSE PROGRAMME

### SEMESTER I

No	Course Code	Course Abbr.	Course name	Credit	Prerequisite courses
1	IG14110x	PA	<b>Pendidikan Agama</b> <i>Religion</i>	2	
2	KS141201	MO	<b>Manajemen &amp; Organisasi</b> <i>Management &amp; Organization</i>	3	
3	IG141106	WK	<b>Wawasan Kebangsaan</b> <i>Nationalism</i>	3	
4	KS141202	STI	<b>Sistem dan Teknologi Informasi</b> <i>Information Technology &amp; Systems</i>	3	
5	KS141203	MD	<b>Matematika Diskrit</b> <i>Discrete Mathematics</i>	3	
6	KS141204	BP	<b>Bahasa Pemrograman</b> <i>Programming Language</i>	4	
<b>TOTAL</b>				<b>18</b>	

### SEMESTER II

No	Course Code	Course Abbr.	Course name	Credit	Prerequisite courses
1	IG141107	WTKI	<b>Wawasan Teknologi &amp; Komunikasi Ilmiah</b> <i>Technology Knowledge and Scientific Communication</i>	3	
2	KS141205	ASD	<b>Algoritma &amp; Struktur Data</b> <i>Algorithm &amp; Data Structure</i>	3	
3	IG141108	BI	<b>Bahasa Inggris</b> <i>English</i>	3	
4	KS141206	PSI	<b>Pengantar Sistem Operasi</b> <i>Operating Systems Foundations</i>	2	
5	KS141207	ASP	<b>Arsitektur SI/TI Perusahaan</b> <i>IS/IT Enterprise Architecture</i>	3	
6	KS141208	KKI	<b>Kepemimpinan &amp; Ketrampilan Interpersonal</b> <i>Leadership &amp; Interpersonal Skills</i>	4	
<b>TOTAL</b>				<b>18</b>	

### SEMESTER III

No	Course Code	Course Abbr.	Course name	Credit	Prerequisite courses
1	KS141209	S	<b>Statistika</b> <i>Statistics</i>	4	
2	KS141301	DMPB	<b>Desain &amp; Manajemen Proses Bisnis</b> <i>Business Processes Management &amp; Design</i>	4	

3	KS141302	DMJK	<b>Desain &amp; Manajemen Jaringan Komputer</b> <i>Computer Network Management &amp; Design</i>	3	PSO
4	KS141303	DDPPL	<b>Dasar-Dasar Pengembangan Perangkat Lunak</b> <i>Software Development Foundations</i>	3	
5	KS141304	PBD	<b>Pengantar Basis Data</b> <i>Database Foundations</i>	3	
6	KS141305	PBO	<b>Pemrograman Berbasis Objek</b> <i>Object-Oriented Programming</i>	3	ASD
<b>TOTAL</b>				<b>20</b>	

#### SEMESTER IV

No	Course Code	Course Abbr.	Course name	Credit	Prerequisite courses
1	KS141306	ADPL	<b>Analisis &amp; Desain Perangkat Lunak</b> <i>Software Design &amp; Analysis</i>	4	PBO
2	KS141307	IMK	<b>Interaksi Manusia &amp; Komputer</b> <i>Human-Computer Interaction</i>	3	
3	KS141308	KAI	<b>Keamanan Aset Informasi</b> <i>Information Assets Security</i>	4	DMJK
4	KS141309	DBD	<b>Desain Basis Data</b> <i>Database Design</i>	4	PBD
5	KS141310	PBW	<b>Pemrograman Berbasis Web</b> <i>Web-based Programming</i>	3	
<b>TOTAL</b>				<b>18</b>	

#### SEMESTER V

No	Course Code	Course Abbr.	Course name	Credit	Prerequisite courses
1	KS141311	KPPL	<b>Konstruksi &amp; Pengujian Perangkat Lunak</b> <i>Software Development &amp; Testing</i>	3	ADPL
2	KS141312	MPTI	<b>Manajemen Proyek TI</b> <i>IS Project Management</i>	4	
3	KS141313	ROSS	<b>Riset Operasi</b> <i>Operation Research</i>	3	S
4	.....	SS	<b>Simulasi Sistem</b> <i>Systems Simulation</i>	2	S
5	KS141314	PSDP	<b>Perencanaan Sumber Daya Perusahaan</b> <i>Enterprise Resource Planning</i>	4	DMPB
6	KS141315	MLTI	<b>Manajemen Layanan TI</b> <i>TI Service Management</i>	3	
<b>TOTAL</b>				<b>19</b>	

#### SEMESTER VI

No	Course Code	Course Abbr.	Course name	Credit	Prerequisite courses
1	KS141316	TKTI	<b>Tata Kelola TI</b> <i>IT Governance</i>	3	

2	KS141317	MRTI	<b>Manajemen Resiko TI</b> <i>IT Risk Management</i>	3	
5	KS141318	MPITI	<b>Manajemen Pengadaan &amp; Investasi TI</b> <i>IT Investment and Acquisition</i>	3	
4	KS141319	MRP-MHP	<b>Manajemen Rantai Pasok &amp; Hubungan Pelanggan</b> <i>Customer Relationship &amp; Supply Chain Management</i>	3	DMPB
5	KS141320	MABD	<b>Manajemen &amp; Administrasi Basis Data</b> <i>Database Administration &amp; Management</i>	3	DBD
6	KS141321	SC	<b>Sistem Cerdas</b> <i>Intelligent Systems</i>	3	
7	KS1412010	TTI	<b>Tata Tulis Ilmiah</b> <i>Scientific Writing</i>	2	
<b>TOTAL</b>				<b>20</b>	

### SEMESTER VII

No	Course Code	Course Abbr.	Course name	Credit	Prerequisite courses
1	KS141322	PKETI	<b>Pengukuran Kinerja &amp; Evaluasi TI</b> <i>IS Evaluation &amp; Performance Measurement</i>	3	
2	KS141323	KB	<b>Kecerdasan Bisnis</b> <i>Business Intelligence</i>	3	SC
3	KS141324	EPSI	<b>Etika Profesi SI</b> <i>IS Professional Ethics</i>	2	Min. smtr 5
4	IG141109	T	<b>Technopreneurship</b> <i>Technopreneurship</i>	3	
5	KS141325	PSSI	<b>Perencanaan Strategis SI/TI</b> <i>IS Strategic Plan</i>	3	
6	KS141326	KP	<b>Kerja Praktek</b> <i>Internship</i>	2	
7	KS1414yz		<b>Mata Kuliah Pilihan</b> <i>Elective courses</i>	3	
<b>TOTAL</b>				<b>19</b>	

### SEMESTER VIII

No	Course Code	Course Abbr.	Course name	Credit	Prerequisite courses
1	KS1414yz		<b>Mata Kuliah Pilihan</b> <i>Elective courses</i>	6	
2	KS141501	TA	<b>Tugas Akhir</b> <i>Final Project</i>	6	
<b>TOTAL</b>				<b>12</b>	

<b>TOTAL SKS</b>	<b>144</b>
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## ELECTIVE COURSES

No	Course Code	Course Abbr.	Course name	Credit	Prerequisite courses
1	KS141401	SPK	<b>Sistem Pendukung Keputusan</b> <i>Decision Support Systems</i>	3	
2	KS141402	PDAB	<b>Penggalian Data &amp; Analitika Bisnis</b> <i>Data Mining &amp; Business Analytics</i>	3	DBD
3	KS141403	ROL	<b>Riset Operasi Lanjut</b> <i>Advanced Operation Research</i>	3	ROSS
4	KS141404	TP	<b>Teknik Peramalan</b> <i>Forecasting Techniques</i>	3	
5	KS141405	PPB	<b>Pemrograman Perangkat Bergerak</b> <i>Mobile Programming</i>	3	
6	KS141406	IAK	<b>Integrasi Aplikasi Korporasi</b> <i>Enterprise Application Integration</i>	3	KPPL
7	KS141407	PI	<b>Pemrograman Integratif</b> <i>Integrative Programming</i>	3	
8	KS141408	TOST	<b>Teknologi Open-Source dan Terbaru</b> <i>Open-Source and Emerging Technologies</i>	3	
9	KS141409	EB	<b>e-Business</b> <i>e-Business</i>	3	
10	KS141410	KBM	<b>Komputasi Berpusat pada Manusia</b> <i>Human-centered Computing</i>	3	
11	KS141411	FD	<b>Forensika Digital</b> <i>Digital Forensics</i>	3	KAI
12	KS141412	PKB	<b>Perencanaan Keberlangsungan Bisnis</b> <i>Business Continuity Plan</i>	3	
13	KS141413	MKSI	<b>Manajemen Kualitas SI/TI</b> <i>IS/IT Quality Management</i>	3	
14	KS141414	ASI	<b>Audit SI</b> <i>IS Audit</i>	3	
<b>TOTAL</b>				<b>42</b>	

