

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

KNOWLEDGE ASPECT	<p>P.1. <i>Understand the concepts of organization and business management</i></p> <p>Memahami konsep-konsep Manajemen Organisasi & Bisnis</p> <p>P.1.1</p>	
	<p><i>Understand the general concepts of Process, Function, and management of business and organization (including organizational behaviour, business model, business function, business strategy)</i></p> <p>Memahami konsep-konsep umum Proses, Fungsi, & Manajemen organisasi & bisnis (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 effectively²</i>
			Memahami konsep & metode analisis & perancangan proses bisnis yang lebih efektif & efisien ²
	P.1.3	<i>Understand methods for evaluating organization performance (including individual performance, group performance, and business performance)</i>	
		Memahami metode evaluasi unjuk-kerja organisasi/bisnis (termasuk unjuk kerja individu, tim, maupun perusahaan)	
	P.2. Understand IT driven opportunities to improve business		
	Memahami peluang-peluang yang dapat diciptakan oleh inovasi-inovasi teknologi terkini bagi kemajuan organisasi/bisnis		
	P.2.1	<i>Understand trends in technology innovation</i>	
		Memahami perkembangan inovasi teknologi-teknologi terkini	
	P.2.2	<i>Possesing and having insights into global and national issues in business and IS/IT</i>	
	Memiliki wawasan permasalahan bisnis & SI/TI nasional & global		
P.2.3	<i>Understand aspects, issues, and business process supported by IT</i>		
	Memahami aspek-aspek, permasalahan, proses organisasi & bisnis yang dapat ditingkatkan/diselesaikan dengan bantuan TI		

	<p>P.2.4</p>	<p><i>Understand information requirements in business/organization and the related documentations.</i></p> <p>Memahami kebutuhan informasi organisasi/bisnis dan dokumentasinya</p>
	<p>P.3. <i>Understand IS/IT Enterprise Architecture and management</i></p> <p>Memahami arsitektur SI/TI perusahaan & manajemen pengelolaannya</p> <p>P.3.1</p>	<p><i>Understand the concepts of IS/IT Enterprise Architecture in organization (networks, data centers, etc.)</i></p> <p>Memahami konsep-konsep arsitektur & infrastruktur SI/TI perusahaan (jaringan komputer, data centers, dll)</p>
	<p>P.4. <i>Understand IS/IT solutions and acquisitions</i></p> <p>Memahami alternatif solusi dan pengadaan SI/TI organisasi</p> <p>P.4.1</p> <p>P.4.2</p> <p>P.4.3</p>	<p><i>Well understand the concepts of IS/IT Strategy and Acquisition Management</i>²</p> <p>Menguasai konsep Strategi & Manajemen Pengadaan SI²</p> <p><i>Understand various technology and their compatibilities</i></p> <p>Memahami variasi teknologi dan kompatibilitas/integritas antar teknologi tersebut</p> <p><i>Well understand the basic concepts of Information Systems</i>²</p> <p>Menguasai konsep-konsep dasar & jenis Sistem Informasi²</p>

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

	P.5.4	Menguasai konsep & metode Implementasi Sistem Informasi (Integrasi aplikasi ke dalam proses bisnis) ⁵	
		<i>Well understand concepts and methods in evaluating 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 konsep-konsep logika & matematika untuk dasar pemrograman komputer dan analisis informasi</p>	P.6.1	Menguasai konsep & metode evaluasi aplikasi SI ⁵
			<i>Understand the concept of Discrete Mathematics</i>
		P.6.2	Memahami konsep-konsep Matematika Diskret
			<i>Understand the concept of Statistics</i>
		Memahami konsep-konsep Statistika	
	<p>P.7. <i>Understand the concepts of IS/IT Risk Management, data security, and IS/IT infrastructure</i></p> <p>Memahami konsep-konsep manajemen resiko TI, pengamanan data & infrastruktur SI/TI</p>	P.7.1	<i>Understand IS/IT related risks</i>
			Memahami resiko-resiko SI/TI
		P.7.2	<i>Understand threats related to data security and IS/IT infrastructure</i>
Memahami potensi-potensi ancaman data & infrastruktur SI/TI			

	P.7.3	<i>Understand solution to secure data and IS/IT infrastructure</i>
		Memahami alternatif solusi melindungi data & infrastruktur SI/TI
	P.7.4	<i>Understand IS/IT risk management (including security, disaster recovery, etc)</i>
		Memahami manajemen resiko SI/TI (termasuk keamanan, disaster recovery, dll)
	<p>P.8. <i>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 data dalam jumlah yang sangat besar dikumpulkan oleh organisasi modern dapat digunakan untuk mengevaluasi, mendesain kembali, dan meningkatkan proses-proses & keunggulan bisnis/organisasi</p>	
	P.8.1	<i>Understand concepts of data, information, knowledge and wisdom⁵</i>
		Memahami konsep umum data, informasi, pengetahuan, dan kebijaksanaan ⁵
	P.8.2	<i>Well understand the concepts of basis data and data management, i.e. designing, developing, managing, and administering data basis^{2&3}</i>
		Menguasai konsep-konsep basis data dan metode perancangan, pembangunan, manajemen, &

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

P.10.2	<i>Understand principles of scientific methods</i>
Memahami prinsip-prinsip metode ilmiah	
<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 amanat ITS 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 meningkatkan efektifitas & efisiensi proses organisasi & bisnis</p>	
	K.1.1	<p>Analyze existing business/organizational process by applying data gathering methods, e.g. interview, field and desk observation, and other related methods</p> <p>Mampu menganalisis proses-proses bisnis/organisasi yang ada dengan metode wawancara, pengamatan (observasi), analisis dokumen, dan metode-metode sejenis</p>
	K.1.2	<p>Identify dan summarize important findings from data analysis</p> <p>Mampu mengidentifikasi & menangkap poin-poin temuan penting dari sumber data yang sangat besar</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 model-model referensi industri & best practice untuk meningkatkan desain-desain proses
	K.1.4	<i>Use results from data analysis as a basis to design process improvement in an organization.</i>
		Mampu menggunakan hasil analisis sebagai dasar mendesain perbaikan proses bisnis/organisasi berdasarkan pemahaman terhadap organisasi maupun IT
	K.1.5	<i>Apply business process simulation and improve the business process accordingly</i>
	Mampu melakukan simulasi proses bisnis/organisasi yang diusulkan dan memperbaikinya jika diperlukan	
K.1.6	<i>Modify and customize process according to local context, and customs</i>	
	Mampu memodifikasi/mengkustomisasi proses menyesuaikan kebutuhan budaya & konteks lokal	
	<i>K.2. Realise information requirements in an organization and how to meet them</i>	
	Mampu mengenal dan memenuhi kebutuhan-kebutuhan informasi organisasi & bisnis	
K.2.1	<i>Analyze information requirements from individu, staff, unit, and organization</i>	
	Mampu menganalisis kebutuhan informasi individu staf, unit organisasi, atau organisasi.	

	<p>K.2.2</p>	<p>Consolidate data with different types and formats from various organization</p> <p>Mampu memanfaatkan & mengintegrasikan data yang dihasilkan oleh jenis organisasi dengan tipe dan format data yang berbeda</p>
	<p>K.2.3</p>	<p>Analyze massive data/information⁵</p> <p>Mampu menganalisis data/informasi dengan jumlah yang besar⁵</p>
	<p>K.3. Identify and evaluate IS/IT solutions and acquisition (profits and trade-offs analysis) in an organization</p> <p>Mampu mengidentifikasi & mengevaluasi (termasuk analisis keuntungan-kerugian/trade-offs) alternatif solusi dan pengadaan SI/TI organisasi</p>	<p>K.3.1 Analyze organizational issues and provide with IT based solutions</p> <p>Mampu menganalisis masalah organisasi/bisnis dan merancang alternatif-alternatif solusi TI</p> <p>K.3.2 Identify and understand business limitations from various aspects, i.e. technology, budgets, and organizational capability</p> <p>Mampu mengidentifikasi & memahami batasan-batasan yang dapat dicapai dengan teknologi, keuangan, & kemampuan organisasi yang ada</p> <p>K.3.3 Identify, evaluate, and conduct procurement of IT and the related resources</p> <p>Mampu Mengidentifikasi, mengevaluasi, dan melakukan pengadaan pilihan-pilihan solusi TI dan sumber-daya pendukungnya</p>

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

	K.4.3	Design IS software application Mampu merancang aplikasi SI
	K.4.4	Design and build basis data model Mampu merancang dan membangun model-model basis data
	K.4.5	Build/develop IS software application Mampu membangun/mengembangkan aplikasi SI
	K.4.6	Manage process of developing and acquiring IS Mampu mengelola proses pengembangan SI dan pengadaan SI
	K.4.7	Manage IS/IT project Mampu mengelola proyek SI/TI
	K.4.8	Perform testing for IS software application Mampu melakukan pengujian aplikasi SI
	K.4.9	Design, configure, operate an ERP system in order to integrate processes and functions in business/organization³ Mampu merancang, mengkonfigurasi, dan mengoperasikan ERP dalam rangka mengintegrasikan proses-proses & fungsi-fungsi bisnis/perusahaan ³
	K.5. <i>Manage IS/IT operational and implement IT Governance</i> Mampu mengelola operasional SI/TI & mengimplementasikan tata-kelola TI	
	K.5.1	Build IS/IT strategy and plan Mampu membuat strategi & perencanaan SI/TI
	K.5.2	Implement IT Governance frameworks/best practices Mampu mengimplementasikan kerangka-kerja (frameworks)/best practices manajemen & kontrol TI
K.5.3	Manage and administer basis data	

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

<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 mind¹</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.¹</p>	<p><i>This knowledge aspect taken from ITS has been covered within learning outcomes number K1 - K5</i></p> <p>Kemampuan Amanat ITS ini telah dicover di LO nomor K1 - K5</p>
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3. MANAGERIAL SKILL Aspect

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

		<p>Mengelola proyek-proyek pada tingkat global/internasional</p>
M.1.4		<p><i>Work together effectively in teams</i>³</p>
M.1.5		<p>Bekerja sama efektif dalam tim-tim yang berbeda³</p> <p>Design effectitve organizational structure</p>
M.1.6		<p>Membangun struktur organisasi yang efektif.</p> <p><i>Make effective decisions 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>¹</p>
M.1.7		<p>Mampu mengambil keputusan yang tepat berdasar pada analisa informasi dan data dengan berbekal wawasan pembangunan berkelanjutan yang mencakup aspek lingkungan dan pemukiman, kelautan, energi, teknologi informasi dan komunikasi serta mengedepankan keperdulian sosial¹</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>¹</p> <p>Mampu memberikan alternatif solusi berbekal sikap kepemimpinan, kreatifitas dan kemampuan komunikasi serta bertanggung jawab pada pekerjaan sendiri dan dapat diberi tanggung jawab atas pencapaian hasil kerja organisasi¹</p>
	M.2. Communcation skill	
	Communicate	
M.2.1		<p><i>Listen, search for, interview, and analyze various sources of information</i></p> <p>Mendengar, menyelami, mewawancarai, dan menganalisis berbagai sumber informasi</p>
M.2.2		<p><i>Write a memo, report, and document</i></p> <p>Menulis memo, laporan, dan dokumen</p>

	M.2.3	Use online collaborative tools/software , e.g. wiki, blog, google doc, etc.
		Menggunakan tools/software kolaborasi online seperti wiki, blog, google doc, dan lain-lain,
	M.2.4	Provide an effective presentation
		Melakukan presentasi yang efektif
	M.2.5	Be fluent in English and abide by international etchis³
		Fasih berbahasa Inggris & bermental & faham etika internasional³
	M.3. Negotiation skill	
	Negosiasi	
	M.3.1	Negotiate with customers with regard to financial, response time, staf availability, and IT service
		Negosiasi dengan pelanggan menyangkut keuangan, waktu, staf, dan <i>features</i> layanan TI,
	M.3.2	Negotiate with IT service providers with regard to standard quality of service, IT delivery performance
		Negosiasi dengan penyedia layanan TI terkait tingkat standar kualitas dan unjuk kerja penyampaian layanan TI.
	M.3.3	Facilitate negotiations between stakeholder internal in an organization
		Memfasilitasi negosiasi antara pihak-pihak internal perusahaan (manajmen) yang memiliki kepentingan.
	M.4. Analytical, critical, creative thinking and ethical skill	
	Berpikir analitis dan kritis, kreatif dan etis	
	M.4.1	Analyze implications on legal and ethical practices in complex situations
		Mampu mengalisis implikasi hukum dan etika situasi-situasi kompleks tertentu

	M.4.2	<i>Analyze risks in complex situations</i>
		Mampu menganalisis resiko menyangkut situasi-situasi kompleks tertentu
	M.4.3	<i>Solve problems in complex situations³</i>
		Mampu memecahkan masalah-masalah kompleks (logika problem solving) ³
	M.4.4	<i>Apply quantitative analysis techniques effectively</i>
		Mampu menggunakan teknik-teknik analisis kuantitatif dengan benar dan efektif
	M.4.5	<i>Think critically, analytically, systematically, and logically</i>
		Mampu berfikir kritis, analitis, sistematis dan logis
	M.4.6	<i>Think innovatively and creatively</i>
		Mampu berfikir inovatif dan kreatif

4. ATTITUDE AND VALUES Aspect

ATTITUDE AND VALUES	1. <i>Abide by good principles of ethical practices</i>	
	Menerapkan prinsip-prinsip etika yang baik (IS 2010)	
	S.1.1	<i>Evaluate and response to issues related to ethical practices 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 ³ Jujur ³
2. Possess entrepreneurial skill		
Memiliki jiwa Entrepreneur ¹		
	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> ³ Bersemangat & Pantang Menyerah ³
	S.2.4	<i>Be creative</i> Kreatif ³
	S.2.5	<i>Be diligent</i> Ulet/Tekun ³
	S.2.6	<i>Take actions</i> ³ Inisiatif Bertindak ³
	S.2.7	<i>Be solution oriented</i> Beorientasi solusi
	S.2.8	<i>Adapt to environment</i> ³ Mampu menyesuaikan diri ³
3. Attitudes and values taken from national and local (ITS) level ¹		
Sikap & Tata Nilai amanat Nasional & ITS ¹		

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

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

Notes:

Keterangan

Referensi daftar LO

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

- ¹: LO Titipan **Kurikulum Nasional & ITS**
LO Taken from National Curriculum and ITS
- ²: LO analisis hasil **Survey Alumni** JSI-ITS
LO Taken from Alumni Survey of IS-ITS Graduates
- ³: LO analisis **Survey Perusahaan Pengguna Alumni** JSI-ITS
LO taken from Corporate Survey
- ⁴: LO analisis **Tren Nasional & Internasional**
LO from national and international trends
- ⁵: 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	Pendidikan Agama <i>Religion</i>	2	
2	KS141201	MO	Manajemen & Organisasi <i>Management & Organization</i>	3	
3	IG141106	WK	Wawasan Kebangsaan <i>Nationalism</i>	3	
4	KS141202	STI	Sistem dan Teknologi Informasi <i>Information Technology & Systems</i>	3	
5	KS141203	MD	Matematika Diskrit <i>Discrete Mathematics</i>	3	
6	KS141204	BP	Bahasa Pemrograman <i>Programming Language</i>	4	
TOTAL				18	

SEMESTER II

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

SEMESTER III

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

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

SEMESTER IV

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

SEMESTER V

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

SEMESTER VI

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

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

SEMESTER VII

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

SEMESTER VIII

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

TOTAL SKS	144
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ELECTIVE COURSES

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

