

**Curriculum for Bachelor of Engineering
(Software and Knowledge Engineering)**

(Knowledge Engineering)

First Year

First Semester

		Credits (Lect - Lab)
204111	Computers and Programming	3 (2-3)
204112	Information Technology for Engineers	1 (0-2)
417167	Engineering Mathematics I	4 (4-0)
420111	General Physics I	3 (3-0)
420113	Laboratory in Physics I	1 (0-3)
999021	Thai Language for Communication	3 (3-0)
175xxx	Physical Education Activities	1 (0-2)
355xxx	English	<u>3 (3-0)</u>
		<u>19 (15-10)</u>

Second Semester

		Credits (Lect - Lab)
204214	Programming Skill Development Laboratory	1 (0-3)
208111	Engineering Drawing	3 (2-3)
403111	General Chemistry	4 (4-0)
403112	Laboratory in General Chemistry	1 (0-3)
417168	Engineering Mathematics II	3 (3-0)
420112	General Physics II	3 (3-0)
420114	Laboratory in Physics II	1 (0-3)
175xxx	Physical Education Activities	1 (0-2)
355xxx	English	<u>3 (3-0)</u>
		<u>20 (15-14)</u>

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Second Year

First Semester

		Credits (Lect - Lab)
204211	Discrete Mathematics	3 (3-0)
204212	Abstract Data Types and Problem Solving	3 (3-0)
208201	Basic Principle in Engineering Mechanics	3 (3-0)
219211	Software Development Training Camp	1 (0-3)
219241	Object-Oriented Modeling and Programming	3 (3-0)
417267	Engineering Mathematics III	3 (3-0)
355XXX	English	3 (3-0)
999xxx	Science and Mathematics	<u>3 (3-0)</u>
		<u>22 (21-3)</u>

Second Semester

		Credits (Lect - Lab)
204213	Theory of Computation	3 (3-0)
204313	Algorithm Design and Analysis	3 (3-0)
204352	Laws and Ethics in Information Technology	3 (3-0)
213211	Materials Science for Engineers	3 (3-0)
219221	Computer Organization and Architecture	3 (3-0)
999xxx	Social Science	3 (3-0)
999xxx	Humanities	<u>3 (3-0)</u>
		<u>21 (21-0)</u>

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Third Year

First Semester

		Credits (Lect - Lab)
204351	Database Systems	3 (3-0)
204461	Artificial Intelligence	3 (3-0)
219311	Operating Systems for Software and Knowledge Engineer	3 (3-0)
219323	Probability and Statistics for Software and Knowledge Engineer	3 (3-0)
219324	Data Communication and Computer Networks for Software and Knowledge Engineer	3 (3-0)
	Technical Electives	<u>3 (-)</u>
		<u>18 (-)</u>

Second Semester

		Credits (Lect - Lab)
219342	Software Process and Quality Assurance	3 (3-0)
219361	Decision Support System	3 (3-0)
219362	Machine Learning	3 (3-0)
219364	Knowledge Discovery	3 (3-0)
219365	Knowledge Engineering	3 (3-0)
	Technical Electives	<u>3 (-)</u>
		<u>18 (-)</u>

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Fourth Year

First Semester

		Credits (Lect - Lab)
219491	Basic Research Methodology in Software and Knowledge Engineering	3 (3-0)
219495	Software and Knowledge Engineering Individual Project	3 (3-0)
	Technical Electives	<u>3 (-)</u>
		<u>9 (-)</u>

Second Semester

		Credits (Lect - Lab)
219497	Seminar	1
219499	Software and Knowledge Engineering Workgroup Project	3 (3-0)
	Technical Electives	6 (-)
	Free Electives	<u>6 (-)</u>
		<u>16 (-)</u>