

**Curriculum for Bachelor of Engineering
(Software and Knowledge Engineering - International Program)**

First Year

First Semester

| | | Credits (Lect - Lab) |
|----------|---------------------------|-----------------------------|
| 01204111 | Computers and Programming | 3 (2-3) |
| 01208111 | Engineering Drawing | 3 (2-3) |
| 01417167 | Engineering Mathematics I | 4 (4-0) |
| 01420111 | General Physics I | 3 (3-0) |
| 01420113 | Laboratory in Physics I | 1 (0-3) |
| | Foreign Language | <u>6 (-)</u> |
| | | <u>20 (-)</u> |

Second Semester

| | | Credits (Lect - Lab) |
|----------|---|-----------------------------|
| 01219141 | Object-Oriented Modeling and Programming | 3 (3-0) |
| 01219142 | Object-Oriented Modeling and Programming Laboratory | 1 (0-3) |
| 01403114 | Laboratory in Fundamental of General Chemistry | 1 (0-3) |
| 01403117 | Fundamental of General Chemistry | 3 (3-0) |
| 01417168 | Engineering Mathematics II | 3 (3-0) |
| 01420112 | General Physics II | 3 (3-0) |
| 01420114 | Laboratory in Physics II | 1 (0-3) |
| 01175xxx | Physical Education Activities | 1 (0-2) |
| | Foreign Language | <u>3 (-)</u> |
| | | <u>19 (-)</u> |

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Second Year

First Semester

| | | Credits (Lect - Lab) |
|----------|--|-----------------------------|
| 01204211 | Discrete Mathematics | 3 (3-0) |
| 01204212 | Abstract Data Types and Problem Solving | 3 (3-0) |
| 01204214 | Programming Skill Development Laboratory | 1 (0-3) |
| 01219211 | Software Development Training Camp | 1 (0-3) |
| 01219243 | Software Specification and Design | 3 (3-0) |
| 01219244 | Software Specification and Design Laboratory | 1 (0-3) |
| 01999xxx | Social Sciences | 3 (3-0) |
| | Foreign Language | <u>3 (-)</u> |
| | | <u>18 (-)</u> |

Second Semester

| | | Credits (Lect - Lab) |
|----------|--|-----------------------------|
| 01204313 | Algorithm Design and Analysis | 3 (3-0) |
| 01204482 | Computer-Human Interfaces | 3 (3-0) |
| 01219221 | Computer Organization and Architecture | 3 (3-0) |
| 01219245 | Individual Software Development Process | 3 (3-0) |
| 01219246 | Individual Software Development Process Laboratory | 1 (0-3) |
| 01219271 | Knowledge Engineering and Knowledge Management | 3 (3-0) |
| 01175xxx | Physical Education Activities | <u>1 (0-2)</u> |
| | | <u>17 (15-5)</u> |

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Third Year

First Semester

| | | Credits (Lect - Lab) |
|----------|---|-----------------------------|
| 01204312 | Applied Probability for Computer Engineers | 3 (3-0) |
| 01219331 | Database Design and Programming | 3 (3-0) |
| 01219347 | Workgroup Software Development Process | 3 (3-0) |
| 01219348 | Workgroup Software Development Process Laboratory | 1 (0-3) |
| | Technical Electives | <u>6 (6-0)</u> |
| | | <u>16 (15-3)</u> |

Second Semester

| | | Credits (Lect - Lab) |
|----------|--|-----------------------------|
| 01219311 | Operating Systems for Software and Knowledge Engineer | 3 (3-0) |
| 01219321 | Data Communication and Computers Networks Programming | 3 (3-0) |
| 01219372 | Enterprise Management in Software and Knowledge Business | 3 (3-0) |
| | Humanities | 3 (3-0) |
| | Technical Electives | <u>6 (6-0)</u> |
| | | <u>18 (18-0)</u> |

**Curriculum for Bachelor of Engineering
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Fourth Year

First Semester

| | | Credits (Lect - Lab) |
|----------|------------------------|----------------------|
| 01219490 | Co-operative Education | 9 (-) |
| | | <u>9 (-)</u> |

Second Semester

| | | Credits (Lect - Lab) |
|----------|--|----------------------|
| 01204352 | Laws and Ethics in Information Technology | 3 (3-0) |
| 01219449 | Software Patterns and Architecture | 3 (3-0) |
| 01219497 | Seminar | 1 |
| 01219499 | Software and Knowledge Engineering Workgroup Project | 3 (2-3) |
| | Science and Mathematics | 3 (3-0) |
| | Free Electives | <u>6 (-)</u> |
| | | <u>19 (-)</u> |