

# CSE Undergraduate degree requirements

# Graduation Requirements

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- Liberal Arts: 51 credits or above
- Major: 63 credits or above
  - Mandatory courses: 31 credits or above
  - department requirements: 8 credits or above
  - elective courses
- Total 130 or above
- Overall GPA 2.0 or above
  - GPA of major courses 2.0 or above

# 2020 Requirements of liberal arts courses

Grade	1 <sup>st</sup> Semester	2 <sup>nd</sup> Semester
1	<ul style="list-style-type: none"> <li>▪ International language (2 or 3credits)</li> <li>▪ Math 1 or Math practice1 or Advanced Math 1 or Advanced Math practice 1 (3credits)</li> <li>▪ Physics 1,2, Chemistry 1,2, Biology 1,2, 8credits among Physics, Chemistry, Biology(including lab ) (8 credits)</li> <li>▪ <b>Computer Basics and Practice(3credits)</b></li> </ul>	<ul style="list-style-type: none"> <li>▪ College Writing1 (2credits)</li> <li>▪ Math 2 or Math practice2 or Advanced Math 2 or Advanced Math practice 2 (3credits)</li> <li>▪ Physics 1,2, Chemistry 1,2, Biology 1,2, 4credits among Physics, Chemistry, Biology(including lab ) (4 credits)</li> </ul>
2	<ul style="list-style-type: none"> <li>▪ College Writing2: Writing in Social Sciences(2credits)</li> <li>▪ Statistics, Statistics lab (4credits)</li> <li>▪ <b>Engineering Mathematics1 (3credits)</b></li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Engineering Mathematics2 (3credits)</b></li> </ul>
3	<ul style="list-style-type: none"> <li>▪ International language (2 or 3credits)</li> <li>▪ Worlds of Knowledge(3credits)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Worlds of Knowledge(3credits)</li> </ul>
4	<ul style="list-style-type: none"> <li>▪ Worlds of Knowledge(3credits)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Worlds of Knowledge(3credits)</li> </ul>



# 2020 Year Requirements of Major courses

Grade	1 <sup>st</sup> Semester	2 <sup>nd</sup> Semester
1		<ul style="list-style-type: none"> <li>▪ Discrete Mathematics (3 credits)</li> </ul>
2	<ul style="list-style-type: none"> <li>▪ Computer Programming (4credits)</li> <li>▪ Logic design (4credits)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Electrical and Electronic Circuits (3credits)</li> <li>▪ CSE Seminar (1 subject among 2 seminar subjects) (1credit)</li> <li>▪ Computer Architecture (3credits)</li> <li>▪ Data Structure (4credits)</li> <li>▪ ( )* CoE common subjects (3credits)</li> </ul>
3	<ul style="list-style-type: none"> <li>▪ System programming (4credits)</li> <li>▪ Principles and Practices of Software development(4credits)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Algorithms (3credits)</li> <li>▪ Creative Integrated Design1 (1 subject among 1 and 2) (3credits)</li> </ul>
4	<ul style="list-style-type: none"> <li>▪ IT-Leadership seminar (1 subject among 2 seminar subjects) (1credit)</li> <li>▪ Creative Integrated Design2 (1 subject among 1 and 2) (3credits)</li> </ul>	

( )\* CoE (College of Engineering) common subjects

- Have to complete 3 credits from all CoE common criteria
- 400.XXX or M2177.XXXXXXX subject can be approved maximum. 9 credits(Integrated Nano system and Introduction to deep learning will be exempted from 9 credits limitation)

# 2020 Year Elective Major

Grade	1 <sup>st</sup> Semester	2 <sup>nd</sup> Semester
1		<ul style="list-style-type: none"> <li>▪ Programming Practice</li> </ul>
2	<ul style="list-style-type: none"> <li>▪ Information Communication convergence</li> </ul>	<ul style="list-style-type: none"> <li>▪ Programming Principles</li> </ul>
3	<ul style="list-style-type: none"> <li>▪ Automata Theory</li> <li>▪ Linear and Non-Linear Computational model</li> <li>▪ Digital signal processing</li> <li>▪ Introduction of data mining</li> </ul>	<ul style="list-style-type: none"> <li>▪ OS</li> <li>▪ Hardware System design</li> <li>▪ Programming language</li> <li>▪ Data Base</li> <li>▪ Data Communication</li> <li>▪ Introduction of IT Start-up</li> </ul>
4	<ul style="list-style-type: none"> <li>▪ Embedded System and application</li> <li>▪ Software engineering</li> <li>▪ AI</li> <li>▪ Compiler</li> <li>▪ Computer Graphics</li> <li>▪ Computer Networks</li> <li>▪ Social Network Analysis</li> <li>▪ Quantum computing and Introduction of information</li> <li>▪ Understanding Block Chain</li> <li>▪ Introduction of Deep Learning</li> </ul>	<ul style="list-style-type: none"> <li>▪ Software application</li> <li>▪ Mobile computing and application</li> <li>▪ Computer modelling</li> <li>▪ Multi-core computing</li> <li>▪ Computer Security</li> <li>▪ Computer Convergence Application</li> <li>▪ Human-Computer Interaction</li> <li>▪ Introduction of Machine Learning</li> <li>▪ Computer Vision</li> <li>▪ Topics in Computer New Technology</li> <li>▪ Internet Security</li> </ul>



# prerequisite relations among courses

■ Requisite Liberal Arts

■ Requisite Major

■ Requisite by regulation

■ Major Elective Major

1-1st Semester

1-2nd Semester

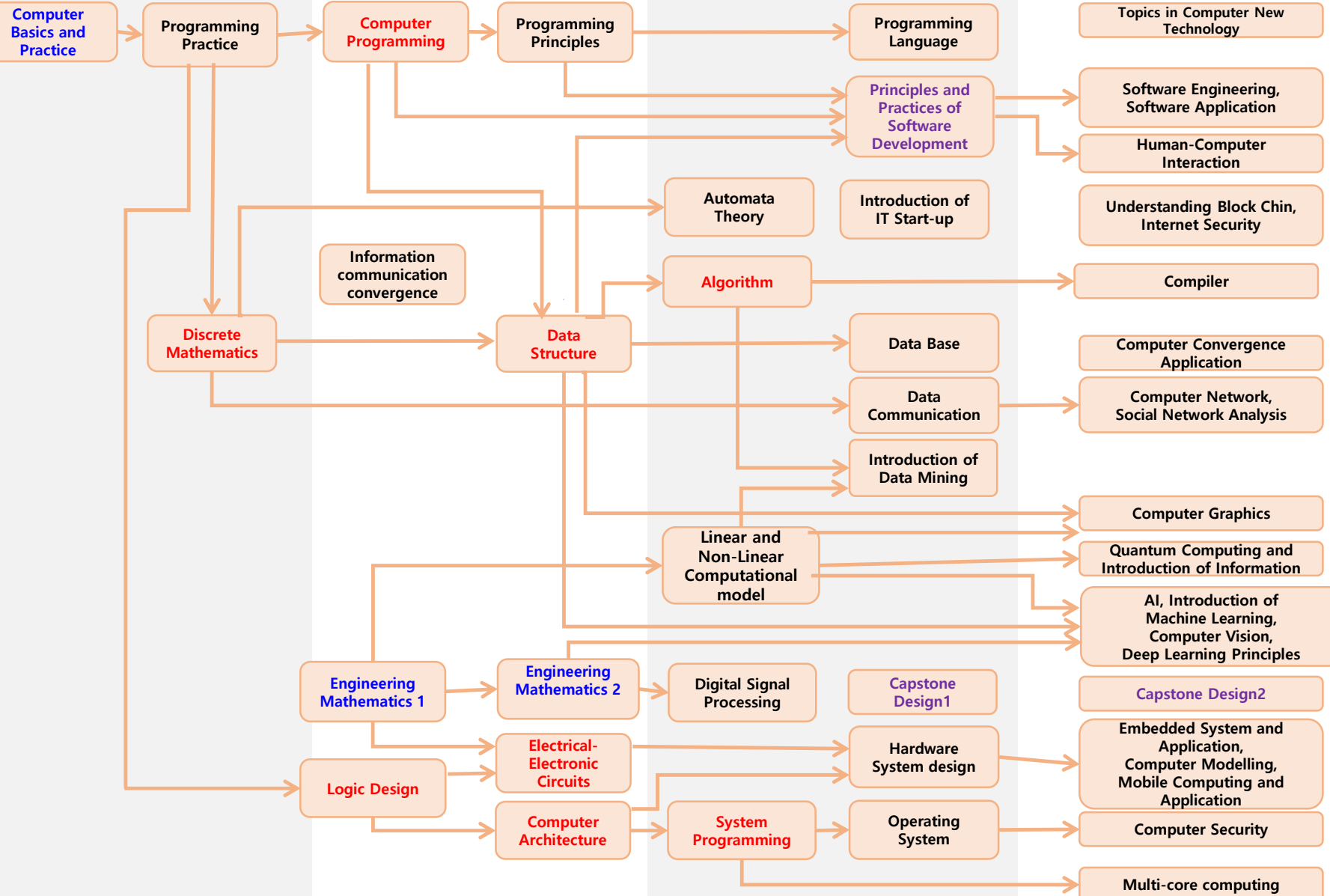
2-1st Semester

2-2nd Semester

3-1st Semester

3-2nd Semester

4th Grade



Higher grades Elective Courses are recommended after completion of all compulsory subjects of lower grades.

# Note

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- Check graduation requirements one year before your intended graduation.  
-Ask Admin Office

# Other Requirements

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- Must Complete “Life Protection Education” supervised by
  - recommended timeline: before the end of freshmen year
  - no credits, but mandatory for graduation
  - program schedule will be announced later (expected starting from April)
    - [eng.snu.ac.kr](http://eng.snu.ac.kr) → online service → education for life protection
  - Those who completed the education have to submit the to CSE admin office
- Must complete “Environmental Safety Education”
  - no credits, but mandatory for graduation
  - Off-line or On-line ([rsis.snu.ac.kr](http://rsis.snu.ac.kr))