Undergraduate Minor Program in Big Data Technology

Except for those studying in the Information Technology Minor Program offered by the Department of Computer Science and Engineering, any undergraduate students with an overall CGA of 2.15 or above may enroll in the Big Data Technology Minor Program. The program is designed for students with fundamental knowledge in programming [e.g. COMP 1021/ COMP 1022P/ COMP 1022Q (prior to 2020-21)/ ISOM 3230] and in statistics/probability (e.g. ELEC 2600/ ISOM 2500/ LIFS 3150/ MATH 2411/ MATH 2421/ MATH 2431), but also open to other students for enrollment, given that they may be required to take one or two additional courses to acquire relevant foundation. Students must declare their intention to enroll in the Minor Program no earlier than the first regular term of their second year of study but no later than the last day of the add/drop period in the first regular term of their final year of study. Students who wish to withdraw from the Minor Program should apply before the last day of the add/drop period in the first regular term of their final year of study.

To graduate with a minor in Big Data Technology, students must have enrolled in the Minor Program and complete a minimum of 19 credits and all of its requirements, as well as the requirements of the major program of study; and have attained an average grade point of at least 2.15 in courses taken within the minor program.

For credit transfer, students can transfer a maximum total of 6 credits to the Minor Program.

Out of the total credits required by the minor program, at least 9 credits should be single-counted within the minor and are not used to fulfill any other requirements for graduation except the 120-credit degree requirement.

Students may use no more than 6 credits earned from courses offered in self-paced online delivery mode to satisfy the graduation requirements of a degree program. This 6-credit limit does not apply to credits obtained through the credit transfer procedures of the University.

Required Course(s)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit(s)</th>
<th>Note</th>
<th>Credit(s) attained</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 1991</td>
<td>0</td>
<td>Industrial Experience</td>
<td>0</td>
</tr>
<tr>
<td>COMP 2011</td>
<td>4-5</td>
<td>Note: COMP 2011 OR COMP 2012H</td>
<td></td>
</tr>
<tr>
<td>COMP 2012H</td>
<td>5</td>
<td>Programming with C++</td>
<td></td>
</tr>
<tr>
<td>COMP 4211</td>
<td>3</td>
<td>Note: COMP 4211 OR COMP 4331</td>
<td></td>
</tr>
<tr>
<td>COMP 4331</td>
<td>3</td>
<td>Machine Learning</td>
<td></td>
</tr>
<tr>
<td>COMP 4651</td>
<td>3</td>
<td>Cloud Computing and Big Data Systems</td>
<td></td>
</tr>
</tbody>
</table>

2022-23 MINOR-BDT
## Elective(s)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Minimum credit(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 4221</td>
<td>Introduction to Natural Language Processing</td>
<td>3</td>
</tr>
<tr>
<td>COMP 4222</td>
<td>Machine Learning with Structured Data</td>
<td>3</td>
</tr>
<tr>
<td>COMP 4321</td>
<td>Search Engines for Web and Enterprise Data</td>
<td>3</td>
</tr>
<tr>
<td>COMP 4332</td>
<td>Big Data Mining and Management</td>
<td>3</td>
</tr>
<tr>
<td>COMP 4421</td>
<td>Image Processing</td>
<td>3</td>
</tr>
<tr>
<td>COMP 4462</td>
<td>Data Visualization</td>
<td>3</td>
</tr>
<tr>
<td>COMP 4471</td>
<td>Deep Learning in Computer Vision</td>
<td>3</td>
</tr>
<tr>
<td>COMP 4632</td>
<td>Practicing Cybersecurity: Attacks and Counter-measures</td>
<td>3</td>
</tr>
<tr>
<td>COMP 4641</td>
<td>Social Information Network Analysis and Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

Big Data Technology Electives (3 courses from the specified elective list. Students may request to use up to 3 credits of courses listed under [http://www.cse.ust.hk/ug/minor/BDT/](http://www.cse.ust.hk/ug/minor/BDT/) to count towards this requirement.)