Artificial Intelligence wIE BSc (Hons) options 2017-2018

If you wish to take an external unit which is not listed on your programme course unit list (such as, for example, from University College) you must get permission from your Year Tutor. This applies for every year of your programme. If your choices do not meet the School’s course unit and theme requirements you will be contacted and be required to change your choices.

Level 1 - compulsory units

All of the units in this pool are mandatory.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>COMP10120</td>
<td>First Year Team Project</td>
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<tr>
<td>COMP11120</td>
<td>Mathematical Techniques for Computer Science</td>
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<tr>
<td>COMP11212</td>
<td>Fundamentals of Computation</td>
<td>10</td>
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<tr>
<td>COMP12111</td>
<td>Fundamentals of Computer Engineering</td>
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<td>COMP14112</td>
<td>Fundamentals of Artificial Intelligence</td>
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<td>COMP15111</td>
<td>Fundamentals of Computer Architecture</td>
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<td>COMP16121</td>
<td>Object Oriented Programming with Java 1</td>
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<td>COMP16212</td>
<td>Object Oriented Programming with Java 2</td>
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<tr>
<td>COMP18112</td>
<td>Fundamentals of Distributed Systems</td>
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Level 2 options

MANDATORY UNITS - 80 CREDITS
OPTIONAL UNITS - 40 CREDITS

From the optional lists you must choose 10 credits from semester one and 30 credits from semester two. This programme requires 2 themes to be completed from the following list.

* Learning and Search in Artificial Intelligence (COMP24111 & COMP34120)
* Natural Language, Representation and Reasoning (COMP24412 & COMP34412)
* Visual Computing (COMP27112, COMP37111 & COMP37212)

Level 2 - compulsory units

All of the units in this pool are mandatory.

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<tr>
<td>COMP23111</td>
<td>Fundamentals of Databases</td>
<td>10</td>
<td>Web and Distributed Systems</td>
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<tr>
<td>COMP23311</td>
<td>Software Engineering 1</td>
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<td>Agile Methods</td>
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<td>COMP23412</td>
<td>Software Engineering 2</td>
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<td>Software Engineering</td>
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<td>COMP24111</td>
<td>Machine Learning and Optimisation</td>
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<td>Learning and Search in Artificial Intelligence</td>
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<td>COMP24412</td>
<td>Symbolic AI</td>
<td>10</td>
<td>Natural Language, Representation and Reasoning</td>
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<tr>
<td>COMP25111</td>
<td>Operating Systems</td>
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<td>Computer Architecture</td>
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<tr>
<td>COMP26120</td>
<td>Algorithms and Imperative Programming</td>
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<td>Computer Languages</td>
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Level 2 - option pool 1

From this option pool choose a maximum of 10 credits and a minimum of 0 credits.

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<tr>
<td>COMP21111</td>
<td>Logic and Modelling</td>
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<td>Rigorous Development</td>
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<td>COMP22111</td>
<td>Processor Microarchitecture</td>
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<td>System-on-Chip</td>
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<td>COMP25411</td>
<td>Computer Networks</td>
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Level 2 - option pool 2

From this option pool choose a maximum of 30 credits and a minimum of 20 credits.

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<td>COMP22712</td>
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<td>COMP25212</td>
<td>System Architecture</td>
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**Level 2 - option pool 3**

From this option pool choose a maximum of 10 credits and a minimum of 0 credits.

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<td>Fundamentals of Financial Reporting</td>
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<td>Managing Business Operations</td>
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<td>BMAN20821</td>
<td>New Product Development and Innovation</td>
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<td>BMAN21061</td>
<td>Introduction to Management Information Systems</td>
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<td>Science and the Modern World</td>
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<td>Science, the Media and the Public</td>
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<td>UCIL20331</td>
<td>From Cholera to AIDS: A Global History of Epidemics</td>
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<td>UCIL21301</td>
<td>Communicating with Confidence</td>
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<td>UCIL22301</td>
<td>Curating Culture</td>
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<td>UCIL22501</td>
<td>Global Citizenship and Sustainability</td>
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**Level 2 - option pool 4**

From this option pool choose a maximum of 10 credits and a minimum of 0 credits.

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<td>BMAN10552</td>
<td>Fundamentals of Finance</td>
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<td>Business Economics</td>
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<td>BMAN10632</td>
<td>Fundamentals of Accounting</td>
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<td>BMAN20242</td>
<td>Introduction to Corporate Finance &amp; Financial Instruments</td>
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<td>BMAN20792</td>
<td>Technology Strategy &amp; Innovation 1</td>
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<td>Marketing</td>
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<td>Organisations and Employment</td>
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<td>Global Contexts of Business and Management</td>
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<td>Leadership in Action Online Unit</td>
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<td>UCIL20092</td>
<td>The Crisis of Nature: Issues in Environmental History</td>
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<td>UCIL20102</td>
<td>Multilingual Manchester</td>
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<td>UCIL20282</td>
<td>The Information Age</td>
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<td>UCIL20882</td>
<td>An Introduction to Current Topics in Biology</td>
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<td>UCIL21102</td>
<td>Diverse Britain in a Globalising World</td>
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<td>UCIL21202</td>
<td>Bioethics: Contemporary Issues in Science and Biomedicine</td>
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<td>UCIL21402</td>
<td>Innovation for a Sustainable Society</td>
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<td>UCIL21802</td>
<td>Body, Health and Well-Being</td>
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<td>UCIL24002</td>
<td>The Art of Enterprise</td>
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<td>UCIL25002</td>
<td>The Digital Society</td>
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<tr>
<td>UCIL29002</td>
<td>Physics &amp; The Grand Challenges of Today</td>
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**Level 3 options**

MANDATORY UNITS - 40 CREDITS

OPTIONAL UNITS - 80 CREDITS

From the optional lists you must choose 40 credits from semester one and 40 credits from semester two. This programme requires 2 themes to be completed from the following list.

* Learning and Search in Artificial Intelligence (COMP24111 & COMP34120)
* Natural Language, Representation and Reasoning (COMP24412 & COMP34412)
* Visual Computing (COMP27112, COMP37111 & COMP37212)

**Level 3 - compulsory units**

All of the units in this pool are mandatory.
## Level 3 - option pool 1
From this option pool choose a maximum of 40 credits and a minimum of 20 credits.

<table>
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<th>Credits</th>
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<tbody>
<tr>
<td>COMP31111</td>
<td>Verified Development</td>
<td>10</td>
<td>Rigorous Development</td>
</tr>
<tr>
<td>COMP32211</td>
<td>Implementing System-on-Chip Designs</td>
<td>10</td>
<td>System-on-Chip</td>
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<tr>
<td>COMP33511</td>
<td>User Experience</td>
<td>10</td>
<td>Interactive Systems Design</td>
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<tr>
<td>COMP33711</td>
<td>Agile Software Engineering</td>
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<td>Agile Methods</td>
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<tr>
<td>COMP36111</td>
<td>Advanced Algorithms 1</td>
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<td>Programming and Algorithms</td>
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<tr>
<td>COMP37111</td>
<td>Advanced Computer Graphics</td>
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<td>Visual Computing</td>
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<tr>
<td>COMP38411</td>
<td>Cryptography and Network Security</td>
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<td>Mobile Computing and Networks</td>
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## Level 3 - option pool 2
From this option pool choose a maximum of 40 credits and a minimum of 20 credits.

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<tr>
<td>COMP33812</td>
<td>Software Evolution</td>
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<td>Agile Methods</td>
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<td>COMP34412</td>
<td>Natural Language Systems</td>
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<td>Natural Language, Representation and Reasoning</td>
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<td>COMP35112</td>
<td>Chip Multiprocessors</td>
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<td>Computer Architecture</td>
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<td>COMP36212</td>
<td>Advanced Algorithms 2</td>
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<td>Programming and Algorithms</td>
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<td>COMP36512</td>
<td>Compilers</td>
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<td>COMP37212</td>
<td>Computer Vision</td>
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<td>COMP39112</td>
<td>The Internet of Things: Architectures and Applications</td>
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## Level 3 - option pool 3
From this option pool choose a maximum of 40 credits and a minimum of 0 credits.

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<td>COMP34120</td>
<td>AI and Games</td>
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<td>Learning and Search in Artificial Intelligence</td>
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<td>Documents, Services and Data on the Web</td>
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<td>Web and Distributed Systems</td>
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## Level 3 - option pool 4
From this option pool choose a maximum of 20 credits and a minimum of 0 credits.

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<td>Investment Economics and Innovation</td>
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<td>BMAN31752</td>
<td>Consumers and Markets</td>
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<td>People Management and Change</td>
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<td>MCEL30001</td>
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<td>Global Citizenship and Sustainability</td>
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<td>Physics &amp; The Grand Challenges of Today</td>
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<td>UCIL30832</td>
<td>Madness and Society in the Modern Age</td>
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<td>From Baker Street to CSI</td>
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