

## Computer Science (Human Computer Interaction) wIE MEng (Hons) options

You must take these core units making up a minimum of 120 credits.

### Level 1 - compulsory units

All of the units in this pool are mandatory.

Code	Title	Credits
COMP10120	First Year Team Project	20
COMP15111	Fundamentals of Computer Architecture	10
BIOL10832	Excitable Cells	10
COMP13212	Data Science	10
COMP16321	Introduction to Programming 1	20
COMP16412	Introduction to Programming 2	10
PSYC10100	Research Methods	20
PSYC10431	Introduction to Cognition	5
PSYC11222	Brain and Behaviour	10
PSYC11322	Sensation & Perception	5

### Level 2 options

You will be automatically enrolled on nine course units which total 90 credits.

For the remaining 30 credits:

You need to select a minimum of two course units totalling 20 credits or a maximum of three course units totalling 30 credits from Option Pool 1.

You may select a minimum of zero course units or a maximum of one course unit totalling 10 credits from Option Pool 2.

If you take a 20 credit whole year course unit you are not permitted to drop this unit when course unit selection reopens at the start of semester 2.

You must ensure your credits are balanced over the academic year (60 credits in each semester).

### Level 2 - compulsory units

All of the units in this pool are mandatory.

Code	Title	Credits	Theme
COMP23111	Fundamentals of Databases	10	Web and Distributed Systems
COMP23311	Software Engineering 1	10	Agile Methods
COMP23412	Software Engineering 2	10	Agile Methods
COMP28112	Distributed Computing	10	Web and Distributed Systems
BIOL22332	Motor Systems for Human Computer Interaction	10	None
BIOL22341	Sensory Systems for Human Computer Interaction	10	None
PSYC21112	Perception & Action	5	None
PSYC21122	Cognitive Neuroscience	10	None
PSYC21181	Cognition	5	None
SOST20022	Essentials of Survey Design & Analysis	20	None

### Level 2 - option pool 1

From this option pool choose a maximum of 20 credits and a minimum of 10 credits.

Code	Title	Credits	Theme
COMP22712	Microcontrollers	10	None
COMP24111	Machine Learning and Optimisation	10	Learning and Search in Artificial Intelligence
COMP24412	Symbolic AI	10	Natural Language, Representation and Reasoning
COMP25111	Operating Systems	10	Computer Architecture
COMP25212	System Architecture	10	Computer Architecture
COMP27112	Computer Graphics and Image Processing	10	Visual Computing
COMP28512	Mobile Systems	10	Mobile Computing and Networks
PSYC21061	Statistics and Data Analysis	10	None

## Level 2 - option pool 2

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

Code	Title	Credits		Theme
BIOL21261	Endocrinology	10	None	
BIOL21321	Membrane Excitability	10	None	
BIOL21451	How to Make a Brain	10	None	
MATS21702	Digital Branding	10	None	
SOST20041	Market Research	10	None	

## Level 3 options

**You will be automatically enrolled on six course units, including the Third Year Project course unit, totalling 100 credits.**

For the remaining 20 credits:

You may choose a minimum of zero course units or a maximum of one course unit totalling 10 credits from Option Pool 1.

You may choose a minimum of zero course units or a maximum of one course unit totalling 10 credits from Option Pool 2.

You may choose a minimum of zero course units or a maximum of two course units totalling 20 credits from External Option Pool 1 (listed as Option Pool 3 below).

If you take a 20 credit whole year course unit you are not permitted to drop this unit when course unit selection reopens at the start of semester 2.

**You must ensure your credits are balanced over the academic year (60 credits in each semester).**

## Level 3 - compulsory units

All of the units in this pool are mandatory.

Code	Title	Credits		Theme
COMP30030	3rd Year Project (Joint Hons 30 Credits)	30	None	
COMP33511	User Experience	10	Interactive Systems Design	
MCEL30031	Enterprise Management for Computer Scientists	10	None	
MCEL30032	Managing Finance in Enterprises for Computer Scientists	10	None	
SOST30022	Advanced Social Network Analysis	20	None	

## Level 3 - option pool 1

From this option pool choose 20 credits.

Code	Title	Credits		Theme
COMP33711	Agile Software Engineering	10	Agile Methods	
COMP34412	Natural Language Systems	10	Natural Language, Representation and Reasoning	
COMP35112	Chip Multiprocessors	10	Computer Architecture	
COMP36512	Compilers	10	Computer Languages	
COMP37111	Advanced Computer Graphics	10	Visual Computing	
COMP38411	Cryptography and Network Security	10	Mobile Computing and Networks	
COMP32412	The Internet of Things: Architectures and Applications	10	Web and Distributed Systems	
COMP34212	Cognitive Robotics	10	None	
COMP38211	Documents and Data on the Web	10	None	

## Level 3 - option pool 2

From this option pool choose 20 credits.

Code	Title	Credits		Theme
BIOL21451	How to Make a Brain	10	None	
BIOL31681	Clocks, Sleep & the Rhythms of Life	10	None	
BIOL31692	Learning, Memory & Cognition	10	None	
PSYC31122	Emotion	20	None	
PSYC31142	The Psychology of Time	10	None	
PSYC31242	Understanding Dementia: Brain & Behaviour	20	None	
SOAN30811	Anthropology of Vision, Memory and the Senses	20	None	
SOST30031	Modelling Social Inequality	20	None	

**You will be automatically enrolled on the Summer Industrial Project and MCEL40042: Business Feasibility Study which totals <u>40 credits</u>.**

For the remaining <u>90 credits</u>:

You need to select a minimum of one course unit totalling <u>15 credits</u> or a maximum of two course units totalling <u>30 credits</u> from Option Pool 1.

You need to select one course unit totalling <u>15 credits</u> from Option Pool 2.

You may select a minimum of zero course units and a maximum of one course unit totalling <u>15 credits</u> from Option Pool 3.

You need to select a minimum of one course unit totalling <u>15 credits</u> or a maximum of two course units totalling <u>30 credits</u> from Option Pool 4.

You need to select a minimum of one course unit totalling <u>15 credits</u> or a maximum of two course units totalling <u>30 credits</u> from Option Pool 5. </strong>

#### **Level 4 - compulsory units**

All of the units in this pool are mandatory.

Code	Title	Credits
COMP40901	UG MEng Industrial Project	25
MCEL40021	Entrepreneurial Commercialisation of Knowledge	15
MCEL40042	Business Feasibility Study	15

#### **Level 4 - option pool 1**

From this option pool choose 45 credits.

Code	Title	Credits
COMP60411	Modelling data on the web	15
COMP60711	Data Engineering	15
COMP61011	Foundations of Machine Learning	15
COMP61021	Modelling and visualization of high-dimensional data	15
COMP61332	Text Mining	15
COMP62342	Ontology Engineering for the Semantic Web	15
COMP62421	Querying Data on the Web	15
COMP62532	Component-based Software Development	15

#### **Level 4 - option pool 2**

From this option pool choose 15 credits.

Code	Title	Credits
COMP60532	Principles of Digital Biology	15
BIOL60771	Advanced Biotechnology	15
BIOL61820	Bioinformatics for Systems Biology	15
PSYC60132	Cognitive and Social Neuroscience	15
SOST70011	Introduction to Statistical Modelling	15

#### **Level 4 - option pool 3**

From this option pool choose 15 credits.

Code	Title	Credits
COMP60542	Introduction to Health Informatics	15
BIOL60140	Advanced Methods for Biological Sequence Analysis	15
PSYC60142	Clinical and Behavioural Neuroscience	15
SOST70292	Multilevel Modelling	15