COURSE UNIT CHOICES FOR FIRST YEAR STUDENTS COMMENCING IN SEPTEMBER 2008

(See http://intranet.cs.man.ac.uk/Study_subweb/Ugrad/ for latest version)
BSc (Hons) Computer Science (and with Industrial Experience)

YEAR 1
120 CREDITS

Mandatory – 120 Credits

You must take the following course units totaling 120 credits
- COMP10020 (20) Mathematical Techniques for Computer Science
- COMP10031 (10) Fundamentals of Computer Architecture
- COMP10042 (10) Fundamentals of Computation
- COMP10052 (10) Fundamentals of Distributed Systems
- COMP10081 (20) Object Oriented Prog with Java (I)
- COMP10092 (10) Object Oriented Prog with Java (II)
- COMP10211 (10) Fundamentals of Computer Engineering
- COMP10412 (10) Fundamentals of Artificial Intelligence
- COMP10900 (20) First Year Team Project

YEAR 2
120 CREDITS

Mandatory – 60 Credits

You must take the following course units totaling 60 credits
- COMP20010 (20) Algorithms and Imperative Programming
- COMP20051 (10) Operating Systems
- COMP20312 (10) Databases
- COMP20340 (20) Software Engineering

Optional – 60 Credits

You must chose 60 credits from the following course units
- COMP20032 (10) Distributed Systems Development
- COMP20072 (10) Computer Graphics
- COMP20081 (10) Computer Networks
- COMP2009x (10) System Architecture
- COMP20142 (10) Logic and Modelling
- COMP20241 (10) VLSI System Design
- COMP20252 (10) Mobile Systems
- COMP20262 (10) Microcontrollers
- COMP20411 (10) Machine Learning and Optimisation
- COMP20442 (10) Symbolic AI
MEng (Hons) Computer Science

YEAR 1
120 CREDITS

Mandatory – 120 Credits

You must take the following course units totaling 120 credits

- COMP10020 (20) Mathematical Techniques for Computer Science
- COMP10031 (10) Fundamentals of Computer Architecture
- COMP10042 (10) Fundamentals of Computation
- COMP10052 (10) Fundamentals of Distributed Systems
- COMP10081 (20) Object Oriented Prog with Java (I)
- COMP10092 (10) Object Oriented Prog with Java (II)
- COMP10211 (10) Fundamentals of Computer Engineering
- COMP10412 (10) Fundamentals of Artificial Intelligence
- COMP10900 (20) First Year Team Project

YEAR 2
120 CREDITS

Mandatory – 60 Credits

Optional – 60 Credits

You must take the following course units totaling 60 credits

- COMP20010 (20) Algorithms and Imperative Programming
- COMP20051 (10) Operating Systems
- COMP20312 (10) Databases
- COMP20340 (20) Software Engineering

You must choose 60 credits from the following course units

- COMP20032 (10) Distributed Systems Development
- COMP20072 (10) Computer Graphics
- COMP20081 (10) Computer Networks
- COMP2009x (10) System Architecture
- COMP20142 (10) Logic and Modelling
- COMP20241 (10) VLSI System Design
- COMP20252 (10) Mobile Systems
- COMP20262 (10) Microcontrollers
- COMP20411 (10) Machine Learning and Optimisation
- COMP20442 (10) Symbolic AI
BSc (Hons) Software Engineering (and with industrial experience)

**YEAR 1**
120 CREDITS

Mandatory – 120 Credits

You must take the following course units totaling 120 credits

- COMP10020 (20) Mathematical Techniques for Computer Science
- COMP10031 (10) Fundamentals of Computer Architecture
- COMP10042 (10) Fundamentals of Computation
- COMP10052 (10) Fundamentals of Distributed Systems
- COMP10081 (20) Object Oriented Prog with Java (I)
- COMP10092 (10) Object Oriented Prog with Java (II)
- COMP10211 (10) Fundamentals of Computer Engineering
- COMP10412 (10) Fundamentals of Artificial Intelligence
- COMP10900 (20) First Year Team Project

**YEAR 2**
120 CREDITS

Mandatory – 70 Credits

You must take the following course units totaling 70 credits

- COMP20010 (20) Algorithms and Imperative Programming
- COMP20032 (10) Distributed Systems Development
- COMP20051 (10) Operating Systems
- COMP20312 (10) Databases
- COMP20340 (20) Software Engineering

Optional – 50 Credits

You must choose 50 credits from the following course units

- COMP20072 (10) Computer Graphics
- COMP20081 (10) Computer Networks
- COMP2009x (10) System Architecture
- COMP20142 (10) Logic and Modelling (p)
- COMP20241 (10) VLSI System Design
- COMP20252 (10) Mobile Systems
- COMP20262 (10) Microcontrollers
- COMP20411 (10) Machine Learning and Optimisation
- COMP20442 (10) Symbolic AI
**MEng (Hons) Software Engineering**

**YEAR 1**

120 CREDITS

**Mandatory – 120 Credits**

You must take the following course units totaling 120 credits

- COMP10020 (20) Mathematical Techniques for Computer Science
- COMP10031 (10) Fundamentals of Computer Architecture
- COMP10042 (10) Fundamentals of Computation
- COMP10052 (10) Fundamentals of Distributed Systems
- COMP10081 (20) Object Oriented Prog with Java (I)
- COMP10092 (10) Object Oriented Prog with Java (II)
- COMP10211 (10) Fundamentals of Computer Engineering
- COMP10412 (10) Fundamentals of Artificial Intelligence
- COMP10900 (20) First Year Team Project

**YEAR 2**

120 CREDITS

**Mandatory – 70 Credits**

You must take the following course units totaling 70 credits

- COMP20010 (20) Algorithms and Imperative Programming
- COMP20032 (10) Distributed Systems Development
- COMP20051 (10) Operating Systems
- COMP20312 (10) Databases
- COMP20340 (20) Software Engineering

**Optional – 50 Credits**

You must choose 50 credits from the following course units

- COMP20072 (10) Computer Graphics
- COMP20081 (10) Computer Networks
- COMP2009x (10) System Architecture
- COMP20142 (10) Logic and Modelling (p)
- COMP20241 (10) VLSI System Design
- COMP20252 (10) Mobile Systems
- COMP20262 (10) Microcontrollers
- COMP20411 (10) Machine Learning and Optimisation
- COMP20442 (10) Symbolic AI
BSc (Hons) Artificial Intelligence (and with Industrial Experience)

YEAR 1
120 CREDITS

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You must take the following course units totaling 120 credits
COMP10020 (20) Mathematical Techniques for Computer Science
COMP10031 (10) Fundamentals of Computer Architecture
COMP10042 (10) Fundamentals of Computation
COMP10052 (10) Fundamentals of Distributed Systems
COMP10081 (20) Object Oriented Prog with Java (I)
COMP10092 (10) Object Oriented Prog with Java (II)
COMP10211 (10) Fundamentals of Computer Engineering
COMP10412 (10) Fundamentals of Artificial Intelligence
COMP10900 (20) First Year Team Project

YEAR 2
120 CREDITS

Mandatory – 80 Credits

You must take the following course units totaling 80 credits
COMP20010 (20) Algorithms and Imperative Programming
COMP20051 (10) Operating Systems
COMP20312 (10) Databases
COMP20340 (20) Software Engineering
COMP20411 (10) Machine Learning and Optimisation
COMP20442 (10) Symbolic AI

Optional – 40 Credits

You must chose 40 credits from the following course units
COMP20032 (10) Distributed Systems Development
COMP20072 (10) Computer Graphics (p)
COMP20081 (10) Computer Networks
COMP2009x (10) System Architecture
COMP20142 (10) Logic and Modelling
COMP20241 (10) VLSI System Design
COMP20252 (10) Mobile Systems
COMP20262 (10) Microcontrollers
MEng (Hons) Artificial Intelligence

YEAR 1
120 CREDITS

Mandatory – 120 Credits

You must take the following course units totaling 120 credits

- COMP10020 (20) Mathematical Techniques for Computer Science
- COMP10031 (10) Fundamentals of Computer Architecture
- COMP10042 (10) Fundamentals of Computation
- COMP10052 (10) Fundamentals of Distributed Systems
- COMP10081 (20) Object Oriented Programming with Java (I)
- COMP10092 (10) Object Oriented Programming with Java (II)
- COMP10211 (10) Fundamentals of Computer Engineering
- COMP10412 (10) Fundamentals of Artificial Intelligence
- COMP10900 (20) First Year Team Project

YEAR 2
120 CREDITS

Mandatory – 80 Credits

You must take the following course units totaling 80 credits

- COMP20010 (20) Algorithms and Imperative Programming
- COMP20051 (10) Operating Systems
- COMP20312 (10) Databases
- COMP20340 (20) Software Engineering
- COMP20411 (10) Machine Learning and Optimisation
- COMP20442 (10) Symbolic AI

Optional – 40 Credits

You must choose 40 credits from the following course units

- COMP20032 (10) Distributed Systems Development
- COMP20072 (10) Computer Graphics (p)
- COMP20081 (10) Computer Networks
- COMP2009x (10) System Architecture
- COMP20142 (10) Logic and Modelling
- COMP20241 (10) VLSI System Design
- COMP20252 (10) Mobile Systems
- COMP20262 (10) Microcontrollers
**BSc (Hons) Computing for Business Applications (and with Industrial Experience)**

**YEAR 1**

**Mandatory – 80 Credits**

You must take the following course units totaling 80 credits

- COMP10031 (10) Fundamentals of Computer Architecture
- COMP10052 (10) Fundamentals of Distributed Systems
- COMP10081 (20) Object Oriented Prog with Java (I)
- COMP10092 (10) Object Oriented Prog with Java (II)
- COMP10900 (20) First Year Team Project
- BMAN10652 (10) Nature of Information Systems

**Optional – 40 Credits**

You must choose 40 credits from the following course units

- COMP10020 (20) Mathematical Techniques for Computer Science
- BMAN10011 (10) Fundamentals of Management
- BMAN10552 (10) Fundamentals of Finance
- BMAN10612 (10) Business Economics
- BMAN10252 (10) Management of Technological Change
- BMAN10641 (10) Human Computer Interaction
- BMAN10621A (10) Fundamentals of Financial Reporting

**YEAR 2**

**Mandatory – 80 Credits**

You must take the following course units totaling 80 credits

- COMP20010 (20) Algorithms and Imperative Programming
- COMP20051 (10) Operating Systems
- COMP20312 (10) Databases
- COMP20340 (20) Software Engineering
- BMAN20880 (20) Information Systems and Business Process Modelling

**Optional – 40 Credits**

You must choose 40 credits from the following course units

- COMP20032 (10) Distributed Systems Development
- COMP20072 (10) Computer Graphics
- COMP20081 (10) Computer Networks
- COMP2009x (10) System Architecture
- COMP20142 (10) Logic and Modelling
- COMP20252 (10) Mobile Systems
- COMP20411 (10) Machine Learning and Optimisation
- COMP20442 (10) Symbolic AI
- BMAN20871 (10) User Centred System Design
- BMAN20890 (20) Systems Investigation Methods
- BMAN20922 (10) Knowledge Management
**BSc (Hons) Distributed Computing (and with Industrial Experience)**

**YEAR 1**

**120 CREDITS**

Mandatory – 120 Credits

You must take the following course units totaling 120 credits

- COMP10020 (20) Mathematical Techniques for Computer Science
- COMP10031 (10) Fundamentals of Computer Architecture
- COMP10042 (10) Fundamentals of Computation
- COMP10052 (10) Fundamentals of Distributed Systems
- COMP10081 (20) Object Oriented Prog with Java (I)
- COMP10092 (10) Object Oriented Prog with Java (II)
- COMP10211 (10) Fundamentals of Computer Engineering
- COMP10412 (10) Fundamentals of Artificial Intelligence
- COMP10900 (20) First Year Team Project

**YEAR 2**

**120 CREDITS**

Mandatory – 80 Credits

You must take the following course units totaling 80 credits

- COMP20010 (20) Algorithms and Imperative Programming
- COMP20032 (10) Distributed Systems Development
- COMP20051 (10) Operating Systems
- COMP20081 (10) Computer Networks
- COMP20312 (10) Databases
- COMP20340 (20) Software Engineering

Optional – 40 Credits

You must choose 40 credits from the following course units

- COMP20072 (10) Computer Graphics
- COMP2009x (10) System Architecture
- COMP20142 (10) Logic and Modelling (p)
- COMP20241 (10) VLSI System Design
- COMP20252 (10) Mobile Systems (p)
- COMP20262 (10) Microcontrollers
- COMP20411 (10) Machine Learning and Optimisation
- COMP20442 (10) Symbolic AI
MEng (Hons) Distributed Computing (and with Industrial Experience)

YEAR 1
120 CREDITS

Mandatory – 120 Credits
You must take the following course units totaling 120 credits
COMP10020 (20) Mathematical Techniques for Computer Science
COMP10031 (10) Fundamentals of Computer Architecture
COMP10042 (10) Fundamentals of Computation
COMP10052 (10) Fundamentals of Distributed Systems
COMP10081 (20) Object Oriented Prog with Java (I)
COMP10092 (10) Object Oriented Prog with Java (II)
COMP10211 (10) Fundamentals of Computer Engineering
COMP10412 (10) Fundamentals of Artificial Intelligence
COMP10900 (20) First Year Team Project

YEAR 2
120 CREDITS

Mandatory – 80 Credits
You must take the following course units totaling 80 credits
COMP20010 (20) Algorithms and Imperative Programming
COMP20032 (10) Distributed Systems Development
COMP20051 (10) Operating Systems
COMP20081 (10) Computer Networks
COMP20312 (10) Databases
COMP20340 (20) Software Engineering

Optional – 40 Credits
You must chose 40 credits from the following course units
COMP20072 (10) Computer Graphics
COMP2009x (10) System Architecture
COMP20142 (10) Logic and Modelling (p)
COMP20241 (10) VLSI System Design
COMP20252 (10) Mobile Systems (p)
COMP20262 (10) Microcontrollers
COMP20411 (10) Machine Learning and Optimisation
COMP20442 (10) Symbolic AI
BSc (Hons) Computer Science with Business and Management (and with Industrial Experience)

YEAR 1
120 CREDITS

Mandatory – 100 Credits

You must take the following course units totaling 100 credits
COMP10020 (20) Mathematical Techniques for Computer Science
COMP10081 (20) Object Oriented Prog with Java (I)
COMP10900 (20) First Year Team Project
BMAN10552 (10) Fundamentals of Finance
BMAN10721 (10) Transferable Management and Study Skills

Optional – 20 Credits

You must choose 20 credits from the following
COMP1042 (10) Fundamentals of Computation
COMP10052 (10) Fundamentals of Distributed Systems
COMP10412 (10) Fundamentals of Artificial Intelligence

YEAR 2
120 CREDITS

Mandatory – 70 Credits

You must take the following course units totaling 70 credits
COMP20010 (20) Algorithms and Imperative Programming
COMP20340 (20) Software Engineering
BMAN10621 (10) Fundamentals of Financial Reporting
BMAN10632 (10) Fundamentals of Accounting
BMAN21012 (10) Global Contexts of Business and Management

Optional – 50 Credits

You must chose 50 credits from the following course units
COMP20032 (10) Distributed Systems Development
COMP20051 (10) Operating Systems
COMP20072 (10) Computer Graphics
COMP20081 (10) Computer Networks
COMP2009x (10) System Architecture
COMP20142 (10) Logic and Modelling
COMP20411 (10) Machine Learning and Optimisation
COMP20442 (10) Symbolic AI
BMAN20880 (20) Information Systems and Business Process Modelling
**BSc (Hons) Computer Science and Maths (and with Industrial Experience)**

**YEAR 1**

120 CREDITS

**Mandatory – 110 Credits**
- You must take the following course units totaling 110 credits
  - COMP10081 (20) Object Oriented Prog with Java (I)
  - COMP10092 (10) Object Oriented Prog with Java (II)
  - COMP10900 (20) First Year Team Project
  - MATH10111 (15) Sets, Numbers and Functions
  - MATH10131 (15) Calculus and Vectors
  - MATH10212 (15) Linear Algebra
  - MATH10232 (15) Calculus and Applications

**Optional – 10 Credits**
- You must choose 10 credits from the following course units
  - COMP10042 (10) Fundamentals of Computation
  - COMP10052 (10) Fundamentals of Distributed Systems
  - COMP10412 (10) Fundamentals of Artificial Intelligence

**YEAR 2**

120 CREDITS

**Mandatory – 70 Credits**
- You must take the following course units totaling 70 credits
  - COMP20010 (20) Algorithms and Imperative Programming
  - COMP20340 (20) Software Engineering
  - MATH20111 (10) Real Analysis
  - MATH290142 (10) Complex Analysis
  - MATH20201 (10) Algebraic Structures 1

**Optional – 50 Credits**
- You must choose 50 credits from the following course units
  - COMP20032 (10) Distributed Systems Development
  - COMP20072 (10) Computer Graphics
  - COMP20081 (10) Computer Networks
  - COMP20142 (10) Logic and Modelling
  - COMP20312 (10) Databases
  - COMP20411 (10) Machine Learning and Optimisation
  - COMP20442 (10) Symbolic AI
  - MATH20122 (10) Metric Spaces
  - MATH20212 (10) Algebraic Structures 2
  - MATH20302 (10) Propositional Logic
  - MATH20602 (10) Numerical Analysis 1
  - MATH20902 (10) Discrete Mathematics
  - MATH20912 (10) Introduction to Financial Mathematics