COURSE UNIT CHOICES
2009/10

THIRD YEAR
COMPUTER SCIENCE
STUDENTS

Last updated: 7 October 2009

See http://intranet.cs.man.ac.uk/Study_subweb/Ugrad/ for latest version and instructions on how to choose optional units
INTRODUCTION

If you would like to enquire about the possibility of registering on any course units that are not listed above please contact Alex Walker MEng (Hons) Software Engineering.

Mandatory units will automatically be added to your record in the student system, Campus Solutions.

Optional units must be chosen and entered by you into Campus Solutions before 9th October 2009. Instructions on how to make your choices can be found here: http://intranet.cs.man.ac.uk/Study_subweb/Ugrad/

You will only be entered for examinations for the course units you are registered on so please ensure that your record is up to date by the deadline above.

External Units

If you wish to take an external unit which is not listed on your programme course unit list you must get permission from your Year Tutor. This applies for every year of your programme.

You will not be able to add these units yourself, once you have permission please e-mail the Student Support Office (sso@cs.man.ac.uk) with your name, ID, the unit you wish to register on and who has given you permission.
You must take the following course unit totaling 30 credits

COMP30900 (30) Third Year Project Laboratory

The optional choices you make should consist of 50 credits from semester 1 and 40 credits from semester 2

You must choose a minimum of 40 credits and may choose a maximum of 90 credits from the following

- COMP30001 (10) High Performance Microprocessors
- COMP30061 (10) Applying UML and Patterns
- COMP30071 (10) Advanced Computer Graphics
- COMP30082 (10) Cryptography and Network Security
- COMP30092 (10) Digital Wireless Communications and Networks
- COMP30112 (10) Concurrency
- COMP30142 (10) Compilers
- COMP30151 (10) Understanding Programming Languages
- COMP30172 (10) Advanced Algorithms

You may choose between 0 and 50 credits from the following course units

- COMP30222 (10) Quantum Computing
- COMP30251 (10) Optical Computing
- COMP30291 (10) Digital Media Processing
- COMP30311 (10) Advanced Databases
- COMP30341 (10) Model-Based Software Design
- COMP30421 (10) Natural Language Engineering
- COMP30432 (10) Computer Vision
- COMP30332 (10) Software Evolution
- COMP30351 (10) Engineering Web Applications
- COMP30412 (10) Knowledge Representation
- COMP30202 (10) From Transistors to Systems-on-Chip
- COMP30332 (10) Data Integration and Analysis
- COMP30412 (10) Dialogue Systems
- COMP30321 (10) Software Engineering 3
- BMAN31270 (20) Management Support Systems
- COMP30342 (10) Topics in Advanced Information Retrieval
- MSEC31131 (10) Enterprise Management
- MSEC31122 (10) Managing Finance in Enterprise

You may choose between 0 and 20 credits from the following course units

- BMAN30741 (10) Requirements Engineering
- BMAN31510 (10) Technological Development in the Network Society
- BMAN30732 (10) IT Architecture

You may choose between 0 and 20 credits for the following list of external units. If you wish to choose a different external unit please see your year tutor.

- ECON20120 (20) Mathematical Economics
- ULSP20010 (20) Intermediate Spanish
- ULIT20010 (20) Intermediate Italian
- ULLJ20010 (20) Intermediate Japanese
- ULFR20010 (20) Intermediate French
- MSEC30052 (10) Interdisciplinary Sustainable Development
**MEng (Hons) Computer Science**

**YEAR 3**

120 CREDITS

### Mandatory – 70 Credits

- COMP30900 (30) Third Year Project Laboratory
- COMP30311 (10) Advanced Databases
- COMP30061 (10) Applying UML and Patterns
- MSEC31131 (10) Enterprise Management
- MSEC31122 (10) Managing Finance in Enterprise

### Optional – 50 Credits

- You must choose a minimum of 30 credits and may choose a maximum of 50 credits from the following

  - COMP30071 (10) Advanced Computer Graphics
  - COMP30082 (10) Cryptography and Network Security
  - COMP30112 (10) Concurrency
  - COMP30142 (10) Compilers
  - COMP30172 (10) Advanced Algorithms
  - COMP30001 (10) High Performance Microprocessors
  - COMP30092 (10) Digital Wireless Communications and Networks
  - COMP30151 (10) Understanding Programming Languages
  - COMP30341 (10) Model-Based Software Design

- You may choose between 20 and 0 credits from the following course units

  - COMP30222 (10) Quantum Computing
  - COMP30251 (10) Optical Computing
  - COMP30291 (10) Digital Media Processing
  - COMP30412 (10) Knowledge Representation
  - COMP30332 (10) Software Evolution
  - COMP30351 (10) Engineering Web Applications
  - COMP30421 (10) Natural Language Engineering
  - COMP30432 (10) Computer Vision
  - COMP30202 (10) From Transistors to Systems-on-Chip
  - COMP37332 (10) Data Integration and Analysis
  - COMP37412 (10) Dialogue Systems
  - COMP37321 (10) Software Engineering 3
  - BMAN31270 (20) Management Support Systems
  - COMP37342 (10) Topics in Advanced Information Retrieval

- You may choose between 0 and 20 credits from the following course units

  - BMAN30741 (10) Requirements Engineering
  - BMAN31510 (10) Technological Development in the Network Society
  - BMAN30732 (10) IT Architecture
**BSc (Hons) Computer Engineering (and with Industrial Experience)**

**YEAR 3**

**120 CREDITS**

**Mandatory – 30 Credits**

You must take the following course unit totaling 30 credits

COMP30900 (30) Third Year Project Laboratory

**Optional – 90 Credits**

You must choose between 20 and 40 credits from the following

- COMP30222 (10) Quantum Computing
- COMP30251 (10) Optical Computing
- COMP30291 (10) Digital Media Processing
- COMP30202 (10) From Transistors to Systems-on-Chip

You must choose between 50 and 70 credits from the following

- COMP30001 (10) High Performance Microprocessors
- COMP30061 (10) Applying UML and Patterns
- COMP30071 (10) Advanced Computer Graphics
- COMP30082 (10) Cryptography and Network Security
- COMP30092 (10) Digital Wireless Communications and Networks
- COMP30112 (10) Concurrency
- COMP30141 (10) Compilers
- COMP30151 (10) Understanding Programming Languages
- COMP30172 (10) Advanced Algorithms
- COMP30311 (10) Advanced Databases
- COMP30341 (10) Model-Based Software Design
- COMP30351 (10) Engineering Web Applications
- COMP30421 (10) Natural Language Engineering
- COMP30432 (10) Computer Vision
- COMP30412 (10) Knowledge Representation
- COMP30332 (10) Software Evolution
- COMP30202 (10) From Transistors to Systems-on-Chip
- COMP37332 (10) Data Integration and Analysis
- COMP37412 (10) Dialogue Systems
- COMP37321 (10) Software Engineering 3
- BMAN31270 (20) Management Support Systems
- COMP37342 (10) Topics in Advanced Information Retrieval
- MSEC31131 (10) Enterprise Management
- MSEC31122 (10) Managing Finance in Enterprise

You may choose between 0 and 20 credits from the following course units

- BMAN30741 (10) Requirements Engineering
- BMAN31510 (10) Technological Development in the Network Society
- BMAN30732 (10) IT Architecture

You may choose between 0 and 20 credits from the following list of external units. If you wish to choose a different external unit please see your year tutor.

- ECON20120 (20) Mathematical Economics
- ULSP20010 (20) Intermediate Spanish
- ULIT20010 (20) Intermediate Italian
- ULLJ20010 (20) Intermediate Japanese
- ULFR20010 (20) Intermediate French
- MSEC30052 (10) Interdisciplinary Sustainable Development

The optional choices you make should consist of 50 credits from semester 1 and 40 credits from semester 2.
MEng (Hons) Computer Engineering

YEAR 3
120 CREDITS

Mandatory – 50 Credits

You must take the following course unit totaling 50 credits
COMP30900 (30) Third Year Project Laboratory
MSEC31131 (10) Enterprise Management
MSEC31122 (10) Managing Finance in Enterprise

Optional – 70 Credits

You must choose a minimum of 20 credits from the following
COMP30222 (10) Quantum Computing
COMP30251 (10) Optical Computing
COMP30202 (10) From Transistors to Systems-on-Chip
COMP30291 (10) Digital Media Processing

You can choose between 30 and 50 credits from the following course units
COMP30001 (10) High Performance Microprocessors
COMP30061 (10) Applying UML and Patterns
COMP30071 (10) Advanced Computer Graphics
COMP30082 (10) Cryptography and Network Security
COMP30092 (10) Digital Wireless Communication and Network
COMP30112 (10) Concurrency
COMP30142 (10) Compilers
COMP30151 (10) Understanding Programming Languages
COMP30172 (10) Advanced Algorithms
COMP30311 (10) Advanced Databases
COMP30332 (10) Software Evolution
COMP30351 (10) Engineering Web Applications
COMP30341 (10) Model-Based Software Design
COMP30412 (10) Knowledge Representation
COMP30421 (10) Natural Language Engineering
COMP30432 (10) Computer Vision
COMP30202 (10) From Transistors to Systems-on-Chip
COMP30732 (10) Data Integration and Analysis
COMP307412 (10) Dialogue Systems
COMP307321 (10) Software Engineering 3
BMAN31270 (20) Management Support Systems
COMP307342 (10) Topics in Advanced Information Retrieval

You may choose between 0 and 20 credits from the following course units
BMAN30741 (10) Requirements Engineering
BMAN31510 (10) Technological Development in the Network Society
BMAN30732 (10) IT Architecture

The optional choices you make should consist of 40 credits from semester 1 and 30 credits from semester 2.
COMPUTER SCIENCE - BSc (Hons) Software Engineering (and with industrial experience)

YEAR 3
120 CREDITS

You must take the following course units totaling 50 credits

- COMP30900 (30) Third Year Project Laboratory
- COMP30061 (10) Applying UML and Patterns
- MSEC31131 (10) Enterprise Management for Computer Scientists

Optional – 70 Credits

You must choose a minimum of 30 credits and may choose a maximum of 50 credits from the following course units

- COMP30142 (10) Compilers
- COMP30311 (10) Advanced Databases
- COMP30341 (10) Model-Based Software Design
- COMP30332 (10) Software Evolution
- BMAN31270 (20) Management Support Systems
- COMP37321 (10) Software Engineering 3
- COMP37332 (10) Data Integration and Analysis

You may choose between 20 and 40 credits from the following course units

- COMP30071 (10) Advanced Computer Graphics
- COMP30082 (10) Cryptography and Network Security
- COMP30092 (10) Digital Wireless Communications and Networks
- COMP30151 (10) Understanding Programming Languages
- COMP30251 (10) Optical Computing
- COMP30291 (10) Digital Media Processing
- COMP30421 (10) Natural Language Engineering
- COMP30001 (10) High Performance Microprocessors
- COMP30112 (10) Concurrency
- COMP30172 (10) Advanced Algorithms
- COMP30222 (10) Quantum Computing
- COMP30351 (10) Engineering Web Applications
- COMP30412 (10) Knowledge Representation
- COMP30432 (10) Computer Vision
- MSEC31122 (10) Managing Finance in Enterprise
- COMP30202 (10) From Transistors to Systems-on-Chip
- COMP37412 (10) Dialogue Systems
- COMP37342 (10) Topics in Advanced Information Retrieval

You may choose between 0 and 20 credits from the following course units

- BMAN30741 (10) Requirements Engineering
- BMAN31510 (10) Technological Development in the Network Society
- BMAN30732 (10) IT Architecture

You may choose between 0 and 20 credits for the following list of external units. If you wish to choose a different external unit please see your year tutor.

- ECON20120 (20) Mathematical Economics
- ULSP20010 (20) Intermediate Spanish
- ULIT20010 (20) Intermediate Italian
- ULJA20010 (20) Intermediate Japanese
- ULFR20010 (20) Intermediate French
- MSEC30052 (10) Interdisciplinary Sustainable Development

The optional choices you make should consist of 30 credits from semester 1 and 40 credits from semester 2.
If you would like to enquire about the possibility of registering on any course units that are not listed above please contact Alex Walker
MEng (Hons) Software Engineering

YEAR 3
120 CREDITS

Mandatory – 60 Credits

You must take the following course unit totaling 60 credits

COMP30900 (30) Third Year Project Laboratory
COMP30061 (10) Applying UML and Patterns
MSEC31131 (10) Enterprise Management for Computer Scientists
MSEC31122 (10) Managing Finance in Enterprises for Computer Scientists

Optional – 60 Credits

You must choose between 30 and 50 credits from the following

COMP30142 (10) Compilers
COMP30311 (10) Advanced Databases
COMP30332 (10) Software Evolution
COMP30341 (10) Model-Based Software Design
BMAN31270 (20) Management Support Systems
COMP37321 (10) Software Engineering 3
COMP37332 (10) Data Integration and Analysis

You must choose between 30 and 10 credits from the following course units

COMP30071 (10) Advanced Computer Graphics
COMP30082 (10) Cryptography and Network Security
COMP30092 (10) Digital Wireless Communication and Networks
COMP30151 (10) Understanding Programming Languages
COMP30251 (10) Optical Computing
COMP30291 (10) Digital Media Processing
COMP30351 (10) Engineering Web Applications
COMP30412 (10) Knowledge Representation
COMP30421 (10) Natural Language Engineering
COMP30001 (10) High Performance Microprocessors
COMP30112 (10) Concurrency
COMP30172 (10) Advanced Algorithms
COMP30222 (10) Quantum Computing
COMP30432 (10) Computer Vision
COMP30202 (10) From Transistors to Systems-on-Chip
COMP37412 (10) Dialogue Systems
COMP37342 (10) Topics in Advanced Information Retrieval

You may choose between 0 and 20 credits from the following course units

BMAN30741 (10) Requirements Engineering
BMAN31510 (10) Technological Development in the Network Society
BMAN30732 (10) IT Architecture
BSc (Hons) Artificial Intelligence (and with Industrial Experience)

YEAR 3
120 CREDITS

Mandatory – 30 Credits

You must take the following course unit totaling 30 credits
COMP30900 (30) Third Year Project Laboratory

Optional – 90 Credits

You must choose a minimum of 20 credits and may choose a maximum of 40 credits from the following
COMP30421 (10) Natural Language Engineering
COMP30432 (10) Computer Vision
COMP30412 (10) Knowledge Representation
COMP37412 (10) Dialogue Systems

You may choose between 40 and 70 credits from the following course units
COMP30001 (10) High Performance Microprocessors
COMP30061 (10) Applying UML and Patterns
COMP30071 (10) Advanced Computer Graphics
COMP30082 (10) Cryptography and Network Security
COMP30002 (10) Digital Wireless Communications and Networks
COMP30112 (10) Concurrency
COMP30142 (10) Compilers
COMP30151 (10) Understanding Programming Languages
COMP30172 (10) Advanced Algorithms
COMP30222 (10) Quantum Computing
COMP30251 (10) Optical Computing
COMP30291 (10) Digital Media Processing
COMP30311 (10) Advanced Databases
COMP30341 (10) Model-Based Software Design
COMP30351 (10) Engineering Web Applications
MSEC31122 (10) Managing Finance in Enterprise
MSEC31131 (10) Enterprise Management
COMP30332 (10) Software Evolution
COMP30202 (10) From Transistors to Systems-on-Chip
COMP37332 (10) Data Integration and Analysis
COMP37321 (10) Software Engineering 3
BMAN31270 (20) Management Support Systems
COMP37342 (10) Topics in Advanced Information Retrieval

You may choose between 0 and 20 credits from the following course units
BMAN30741 (10) Requirements Engineering
BMAN31510 (10) Technological Development in the Network Society
BMAN30732 (10) IT Architecture

You may choose between 0 and 20 credits from the following course units
ECON20120 (20) Mathematical Economics
ULSP20010 (20) Intermediate Spanish
ULIT20010 (20) Intermediate Italian
ULJA20010 (20) Intermediate Japanese
ULFR20010 (20) Intermediate French
MSEC30052 (10) Interdisciplinary Sustainable Development

The optional choices you make should consist of 40 credits from semester 1 and 50 credits from semester 2
MEng (Hons) Artificial Intelligence

YEAR 3
120 CREDITS

Mandatory – 40 Credits

You must take the following course unit totaling 40 credits
COMP30900 (30) Third Year Project Laboratory
MSEC31131 (10) Enterprise Management

Optional – 60 Credits

You must choose between 20 and 40 credits from the following
COMP30411 (10) Knowledge Representation
COMP30421 (10) Natural Language Engineering
COMP37412 (10) Dialogue Systems
COMP30432 (10) Computer Vision

You may choose between 30 and 60 credits from the following
COMP30061 (10) Applying UML and Patterns
COMP30071 (10) Advanced Computer Graphics
COMP30082 (10) Cryptography and Network Security
COMP30091 (10) Digital Wireless Communication Networks
COMP30151 (10) Understanding Programming Languages
COMP30251 (10) Optical Computing
COMP30311 (10) Advanced Databases
COMP30332 (10) Software Evolution
COMP30001 (10) High Performance Microprocessors
COMP30112 (10) Concurrency
COMP30142 (10) Compilers
COMP30172 (10) Advanced Algorithms
COMP30222 (10) Quantum Computing
COMP30291 (10) Digital Media Processing
MSEC31122 (10) Managing Finances in Enterprises
COMP30202 (10) From Transistors to Systems-on-Chip
COMP37332 (10) Data Integration and Analysis
COMP37321 (10) Software Engineering 3
BMAN31270 (20) Management Support Systems
COMP37342 (20) Topics in Advanced Information Retrieval

You may choose between 0 and 10 credits from the following course units
BMAN30741 (10) Requirements Engineering
BMAN31510 (10) Technological Development in the Network Society
BMAN30732 (10) IT Architecture
BSc (Hons) Computer Science with Business and Management (and with Industrial Experience)

YEAR 3
120 CREDITS

Mandatory – 60 Credits

You must take the following course unit totaling 60 credits

COMP30910 (20) Third Year Project Laboratory
BMAN30010 (20) Management and Technology
BMAN30021 (10) Marketing
BMAN30022 (10) Strategy

Optional – 60 Credits

You must choose 50 credits from the following

COMP30061 (10) Applying UML and Patterns
COMP30071 (10) Advanced Computer Graphics
COMP30082 (10) Cryptography and Network Security
COMP30092 (10) Digital Wireless Communications and Networks
COMP30151 (10) Understanding Programming Languages
COMP30251 (10) Optical Computing
COMP30291 (10) Digital Media Processing
COMP30311 (10) Advanced Databases
COMP30341 (10) Model-Based Software Design
COMP30412 (10) Knowledge Representation
COMP30421 (10) Natural Language Engineering
COMP30001 (10) High Performance Microprocessors
COMP30112 (10) Concurrency
COMP30142 (10) Compilers
COMP30172 (10) Advanced Algorithms
COMP30432 (10) Computer Vision
COMP30332 (10) Software Evolution
COMP30351 (10) Engineering Web Applications

You must choose 10 credits from the following course units

BMAN31031 (10) Organisational Analysis
BMAN30042 (10) Human Resource Management
BSc (Hons) Computer Science and Maths (and with Industrial Experience)

**YEAR 3**

**120 CREDITS**

**Mandatory – 20 Credits**

You must take the following course unit totaling 20 credits

COMP30910 (20) Third Year Project Laboratory

**Optional – 100 Credits**

You must take a minimum of 30 and a maximum of 50 credits from the following

- COMP30071 (10) Advanced Computer Graphics
- COMP30082 (10) Cryptography and Network Security
- COMP300151 (10) Understanding Programming Languages
- COMP30251 (10) Optical Computing
- COMP30291 (10) Digital Media Processing
- COMP30311 (10) Advanced Databases
- COMP30332 (10) Software Evolution
- COMP30341 (10) Model-Based Software Design
- COMP30421 (10) Natural Language Engineering
- COMP30001 (10) High Performance Microprocessors
- COMP30112 (10) Concurrency
- COMP30142 (10) Compilers
- COMP30222 (10) Quantum Computing
- COMP30332 (10) Computer Vision
- COMP300172 (10) Advanced Algorithms

You must take a minimum of 40 and a maximum of 70 credits from the following Level 3 Maths course units

You may take between 0 and 20 credits of level 2 Maths course units including:

- MATH20411 (10) Partial Differential Equations and Vector Calculus
- MATH20122 (10) Metric Spaces
- MATH20132 (10) Calculus of Several Variables
- MATH20212 (10) Algebraic Structures 2
- MATH20602 (10) Numerical Analysis 1
- MATH20912 (10) Introduction to Financial Mathematics
- MATH20902 (10) Discrete Mathematics
- MATH20302 (10) Propositional Logic
BSc (Hons) Computing for Business Applications (and with Industrial Experience)

**YEAR 3 120 CREDITS**

**Mandatory – 80 Credits**

You must take the following course unit totaling 80 credits

- **BMAN31270 (20)** Management Support Systems
- **BMAN30801 (10)** IS & Professional Issues
- **COMP37900 (40)** Third Year Project
- **BMAN30741 (10)** Requirements Engineering

**Optional – 40 Credits**

You may choose between 30 and 40 credits from the following

- **COMP37332 (10)** Data Integration and Analysis
- **COMP30311 (10)** Advanced Databases
- **COMP37412 (10)** Dialogue Systems
- **BMAN31510 (20)** Technological Development in the Network Society
- **COMP30061 (10)** Applying UML and Patterns
- **COMP30341 (10)** Model-Based Software Design
- **COMP30332 (10)** Software Evolution
- **COMP37321 (10)** Software Engineering 3
- **BMAN30732 (10)** IT Architecture
- **COMP30421 (10)** Natural Language Engineering

You may choose between 0 and 10 credits from the following

- **MSEC31131 (10)** Enterprise Management
- **MSEC31122 (10)** Managing Finance in Enterprise
- **MSEC30052 (10)** Interdisciplinary Sustainable Development

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BSc (Hons) Internet Computing (and with Industrial Experience)

**YEAR 3 120 CREDITS**

**Mandatory – 80 Credits**

You must take the following course unit totaling 80 credits

- **COMP37342 (10)** Topics in Advanced Information Retrieval
- **BMAN30801 (10)** IS & Professional Issues
- **COMP37900 (40)** Third Year Project
- **BMAN30741 (10)** Requirements Engineering
- **COMP30351 (10)** Engineering Web Applications

**Optional – 40 Credits**

You may choose between 30 and 40 credits from the following

- **COMP37332 (10)** Data Integration and Analysis
- **COMP30311 (10)** Advanced Databases
- **COMP37412 (10)** Dialogue Systems
- **BMAN31510 (20)** Technological Development in the Network Society
- **COMP30061 (10)** Applying UML and Patterns
- **COMP30341 (10)** Model-Based Software Design
- **COMP30332 (10)** Software Evolution
- **COMP37321 (10)** Software Engineering 3
- **BMAN30732 (10)** IT Architecture
- **COMP30421 (10)** Natural Language Engineering

You may choose between 0 and 10 credits from the following

- **MSEC31131 (10)** Enterprise Management
- **MSEC31122 (10)** Managing Finance in Enterprise
- **MSEC30052 (10)** Interdisciplinary Sustainable Development
### BSc (Hons) Software Engineering (Business Systems) (and with Industrial Experience)

#### YEAR 3

**120 CREDITS**

**Mandatory – 80 Credits**

- COMP37321 (10) Software Engineering 3
- COMP30332 (10) Software Evolution
- BMAN30801 (10) IS & Professional Issues
- BMAN30741 (10) Requirements Engineering
- COMP37900 (40) Third Year Project
- BMAN30741 (10) Requirements Engineering

**Optional – 40 Credits**

- COMP37332 (10) Data Integration and Analysis
- COMP30311 (10) Advanced Databases
- COMP37412 (10) Dialogue Systems
- BMAN31510 (20) Technological Development in the Network Society
- COMP30061 (10) Applying UML and Patterns
- COMP30341 (10) Model-Based Software Design
- COMP30351 (10) Engineering Web Applications
- COMP37342 (10) Semantic Web
- BMAN30732 (10) IT Architecture
- COMP30421 (10) Natural Language Engineering

You may choose between 0 and 10 credits from the following:

- MSEC31131 (10) Enterprise Management
- MSEC31122 (10) Managing Finance in Enterprise
- MSEC30052 (10) Interdisciplinary Sustainable Development

### INFORMATICS - BSc (Hons) Software Engineering (and with Industrial Experience)

#### YEAR 3

**120 CREDITS**

**Mandatory – 80 Credits**

- COMP37900 (40) Third Year Project
- BMAN30801 (10) IS & Professional Issues
- BMAN30741 (10) Requirements Engineering
- COMP37321 (10) Software Engineering 3
- COMP30332 (10) Software Evolution

**Optional – 40 Credits**

- You may choose between 30 and 40 credits from the following:
  - COMP37332 (10) Data Integration and Analysis
  - COMP30311 (10) Advanced Databases
  - COMP37412 (10) Dialogue Systems
  - BMAN31510 (20) Technological Development in the Network Society
  - COMP30061 (10) Applying UML and Patterns
  - COMP30341 (10) Model-Based Software Design
  - COMP30351 (10) Engineering Web Applications
  - COMP37342 (10) Semantic Web
  - BMAN30732 (10) IT Architecture
  - COMP30421 (10) Natural Language Engineering

You may choose between 0 and 10 credits from the following:

- MSEC31131 (10) Enterprise Management
- MSEC31122 (10) Managing Finance in Enterprise
- MSEC30052 (10) Interdisciplinary Sustainable Development