Course Specification

Course Summary Information				
1	**Courses Title**		BSc (Hons) / MSci Computer Networks	
2	**BCU Course Codes**	**UCAS Codes**	BSc (Hons) US0669 MSci UM0040	G422 I121
3	**Awarding Institution**		Birmingham City University	
4	**Teaching Institution(s)** (if different from point 3)			
5	**Professional Statutory or Regulatory Body (PSRB) accreditation** (if applicable)			

6	**Course Description**
	BSc (Hons) / MSci Computer Networks course will equip you to take the revolution in communications technology to the next level in our modern, mobile, connected society. At Birmingham City University, you will have access to networked laboratories running the latest software, ensuring you become well acquainted with technologies you'll encounter when working in the industry. **What's covered in the course?** The course takes a practice-led approach, making use of equipment and tools found in the workplace to give you the best preparation for employment. We prioritise the practical skills sought by industry, backing them up with a thorough understanding of theory. You will explore the latest in computing, network, and cloud and server technologies, and have the opportunity to gain additional accreditation from Microsoft, Cisco Systems and the Linux Professional Institute. You will study a well-rounded curriculum in computer network engineering, programming, server systems and practice, as well as develop management-level skills such as project and change management to maximise you career potential. Studying computing with us puts you at the heart of an exciting, innovative community. Part of your first-year assessment will involve taking part in our annual Innovation Fest, where students get together to solve society's problems with creative technology. Previous projects have included medical assistance drones, accessible gaming controllers, and smart housing solutions. The event brings together students, academics and industry guests, so it's a great way to have fun, build experience and network, and win prizes! Upon graduation you could progress into a career as a network administrator, network services engineer, network architect, network support analyst, data centre engineer, storage and virtualisation analyst, technical infrastructure architect, Linux network administrator, field network technician, service desk analyst, solutions architect, and IT infrastructure specialist.

7	Course Awards		
7a	**Possible Final Awards for the Computer Networks course**	**Level**	**Credits Awarded**
	Bachelor of Science with Honours Computer Networks	6	360
	Bachelor of Science with Honours Computer Networks with Sandwich Year	6	360
	Integrated Masters of Science Computer Networks	7	480
	Integrated Masters of Science Computer Networks with Sandwich Year	7	480
7b	**Possible Exit Awards and Credits Awarded for the Computer Networks course**		
	Certificate of Higher Education Computer Networks	4	120
	Diploma of Higher Education Computer Networks	5	240
	Bachelor of Science Computer Networks	6	300

8	Derogation from the University Regulations
	1. For modules with more than one item of assessment, students must achieve a minimum of 30% (undergraduate) or 40% (postgraduate) in each item of assessment in order to pass the module 2. Compensation of marginal failure in up to 20 credits is permitted at each level 3. Condonement of failed modules is not permitted 4. Students on an Integrated Masters course must achieve an overall average of 50% or above at the end of Level 5 to remain on the Integrated Masters course.

9	Delivery Patterns		
Mode(s) of Study	**Location**	**Duration of Study**	**Code**
BSc (Hons) Full Time	City Centre	3 years	US0669
BSc (Hons) Sandwich	City Centre	4 years	US0669S
MSci Full Time	City Centre	4 years	UM0040
MSci Sandwich	City Centre	5 years	UM0040S

10	Entry Requirements
	The admission requirements for this course are stated on the course page of the BCU website at https://www.bcu.ac.uk/ or may be found by searching for the course entry profile located on the UCAS website.

11	**Course Learning Outcomes**
	Knowledge & Understanding
1	Demonstrate knowledge and understanding of network design and systems management, analysis of business requirements and documentation procedures for network design and systems management.
2	Demonstrate knowledge of principles and underlying technologies of computer and data communications, device operating systems, and their underpinning protocols and data structures.
3	Demonstrate knowledge and understanding of appropriate tools, techniques and standards used in designing, managing computer networked systems.
4	Describe the open standards for data commination systems and principal requirements for network and information security.
5	Draw on a range of existing and emergent technologies and approaches in the development and justification of innovative computing and information technology solutions.
	Cognitive & Intellectual Skills
6	Make proficient use of information and materials from a variety of sources for independent enquiry and learning.
7	Demonstrate a creative and innovative ability in the synthesis of solutions and in formulating designs in computer networked systems.
8	Draw independent conclusions based on a rigorous, analytical and critical assessment of arguments and opinions.
9	Critically analyse and evaluate the requirements for advanced networks within a range of network and business requirements.
	Practical & Professional Skills
10	Plan, design and employ techniques and technologies used by network engineers and managers for computer and information management.
11	Demonstrate practical skills acquired through work carried out in laboratories and workshops in individual and/or group project work in accordance with ethical standards, professional codes of conduct and set guidelines.
12	Implement applications using appropriate methodologies, tools and techniques.
13	Work independently or within a group, with limited need for supervision, in a professional and/or industrial context.
	Key Transferable Skills
14	Monitor, record, analyse and interpret data to effectively communicate to diverse audiences.
15	Manage time, prioritise activities and work to timescales.
16	Demonstrate effective information retrieval skills from a rage of sources and be able to cite and reference such sources.
17	Reflect on progress and plan for personal and career development.

12	Course Requirements

12a Level 4:

In order to complete this course a student must successfully complete all the following CORE modules (totalling 120 credits):

Module Code	Module Name	Credit Value
CMP4285	Innovation Project	20
CMP4265	Applied Operating Systems	20
CMP4267	Computer Systems	20
CMP4266	Computer Programming	20
CMP4268	Mathematics for Computing	20
CMP4269	Network Fundamentals	20

Level 5:

In order to complete this course a student must successfully complete all the following CORE modules (totalling 120 credits):

Module Code	Module Name	Credit Value
CMP5322	Enterprise Practice Project	20
CMP5324	Smart Systems	20
CMP5350	Server Systems	20
CMP5321	Programming for Network Engineers	20
CMP5320	Networking Technologies	20
CMP5337	Enterprise Network Systems	20

Level 6:

In order to complete this course a student must successfully complete all the following CORE modules (totalling 120 credits):

Module Code	Module Name	Credit Value
CMP6200	Individual Honours Project	40
CMP6174	Datacentre Systems Management	20
CMP6178	Wireless Networking Technologies	20
CMP6172	Consultancy and IT Management	20
CMP6175	IT Infrastructure	20

Level 7:

In order to complete this course a student must successfully complete all the following CORE modules (totalling 120 credits):

Module Code	Module Name	Credit Value
CMP7207	Group Integrated Master's Project	40
CMP7152	Cloud Services	20
CMP7157	Software Defined Network Engineering	20
CMP7151	Advanced Networking Systems and Security	20
CMP7159	Technology Deployment and Innovation	20

12b Structure Diagram

<table>
<tr><td colspan="4">Level 7</td></tr>
<tr><td>Semester 2</td><td rowspan="2">Integrated Masters Project
[40 credits]</td><td>Technology Deployment and Innovation
[20 Credits]</td><td>Software Defined Network Engineering Advanced Network Systems and Security
[20 Credits]</td></tr>
<tr><td>Semester 1</td><td>Advanced Network Systems and Security [20 Credits]</td><td>Cloud Services
[20 Credits]</td></tr>
<tr><td colspan="4">Level 6</td></tr>
<tr><td>Semester 2</td><td rowspan="2">Individual Honours Project
[40 credits]</td><td>Consultancy and IT Management
[20 Credits]</td><td>Datacentre Systems Management
[20 Credits]</td></tr>
<tr><td>Semester 1</td><td>IT Infrastructure
[20 Credits]</td><td>Wireless Networking Technologies
[20 Credits]</td></tr>
<tr><td colspan="4">Industrial Placement Year (Optional)</td></tr>
<tr><td colspan="4">Level 5</td></tr>
<tr><td>Semester 2</td><td>Enterprise Practice Project *
[20 Credits]</td><td>Smart Systems
[20 Credits]</td><td>Enterprise Network Systems
[20 Credits]</td></tr>
<tr><td>Semester 1</td><td>Server Systems
[20 Credits]</td><td>Programming for Network Engineers
[20 Credits]</td><td>Networking Technologies
[20 Credits]</td></tr>
<tr><td colspan="4">Level 4</td></tr>
<tr><td>Semester 2</td><td>Innovation Project
[20 Credits]</td><td>Applied Operating Systems
[20 Credits]</td><td>Network Fundamentals
[20 Credits]</td></tr>
<tr><td>Semester 1</td><td>Computer Programming
[20 Credits]</td><td>Mathematics for Computing
[20 Credits]</td><td>Computer Systems
[20 Credits]</td></tr>
</table>

13 Overall Student Workload and Balance of Assessment

Overall student *workload* consists of class contact hours, independent learning and assessment activity, with each credit taken equating to a total study time of around 10 hours. While actual contact hours may depend on the optional modules selected, the following information gives an indication of how much time students will need to allocate to different activities at each level of the course.

- *Scheduled Learning* includes lectures, practical classes and workshops, contact time specified in timetable
- *Directed Learning* includes placements, work-based learning, external visits, on-line activity, Graduate+, peer learning
- *Private Study* includes preparation for exams

The *balance of assessment* by mode of assessment (e.g. coursework, exam and in-person) depends to some extent on the optional modules chosen by students. The approximate percentage of the course assessed by coursework, exam and in-person is shown below.

Level 4

Workload

25% time spent in timetabled teaching and learning activity

Activity	Number of Hours
Scheduled Learning	304
Directed Learning	443
Private Study	453
Total Hours	1200

Balance of Assessment

Assessment Mode	Percentage
Coursework	83%
Exam	17%
In-Person	0

Level 5

Workload

24% time spent in timetabled teaching and learning activity

Activity	Number of Hours
Scheduled Learning	288
Directed Learning	460
Private Study	452
Total Hours	1200

Balance of Assessment

Assessment Mode	Percentage
Coursework	73%
Exam	9%
In-Person	18%

Level 6

Workload

17% time spent in timetabled teaching and learning activity

Activity	Number of Hours
Scheduled Learning	202
Directed Learning	298
Private Study	700
Total Hours	1200

Balance of Assessment

Assessment Mode	Percentage
Coursework	88%
Exam	12%
In-Person	0%

Level 7

Workload

18% time spent in timetabled teaching and learning activity

Activity	Number of Hours
Scheduled Learning	210
Directed Learning	316
Private Study	674
Total Hours	1200

Balance of Assessment

Assessment Mode	Percentage
Coursework	56%
Exam	20%
In-Person	24%