

## Liverpool John Moores University

Title: Advanced Networking  
Status: Definitive  
Code: **6214COMP** (128015)  
Version Start Date: 01-08-2021

Owning School/Faculty: Computer Science and Mathematics  
Teaching School/Faculty: Computer Science and Mathematics

Team	Leader
Alessandro Raschella	Y
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**Academic Level:** FHEQ6      **Credit Value:** 20      **Total Delivered Hours:** 44  
**Total Learning Hours:** 200      **Private Study:** 156

### Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	22
Practical	11
Tutorial	11

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Application Evaluation	50	
Report	AS2	Network Design Model	50	

### Aims

*To develop and extend students ability to critically analyse state-of-the-art developments in networking.*

### Learning Outcomes

After completing the module the student should be able to:

- 1 Evaluate a range of state of the art developments in networking.
- 2 Critically analyse state of the art research in networking.
- 3 Assess the impact of state of the art platforms on networking applications.

## Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Application Evaluation	1	
Network Design Model	2	3

## Outline Syllabus

*A range of state-of-the-art networking technologies will be studied, including:*

*Internet of Things (IoT):*

*IoT Network structures, organisation and protocols*

*Large-scale and Massive IoT*

*Software Defined Networking (SDN):*

*Network Operative System*

*OpenFlow*

*SDN Architecture*

*Network Function Virtualization (NFV):*

*Virtual Machines*

*NFV Architecture*

*Scalability*

*Cloud Computing:*

*Data Centres*

*Architectures and organisation*

*Service Models*

*Network Performance Measurement:*

*Congestion Control*

*Quality of Service*

*Quality of Experience*

## Learning Activities

Students will attend lectures, supported by tutorials and lab sessions to develop their theoretical and practical knowledge through tasks and discussions.

## Notes

This module will examine advanced topics in computer networking and use case studies to help students develop an understanding. These will be research-informed and may vary from year-to-year, i.e. to keep up with research developments.