

## Liverpool John Moores University

Title: APPLICATIONS OF MARINE TECHNOLOGY  
Status: Definitive  
Code: **6016MAR** (105336)  
Version Start Date: 01-08-2016

Owning School/Faculty: Maritime and Mechanical Engineering  
Teaching School/Faculty: Maritime and Mechanical Engineering

Team	Leader
Alan Wall	Y

**Academic Level:** FHEQ6  
**Credit Value:** 12  
**Total Delivered Hours:** 8  
**Total Learning Hours:** 120  
**Private Study:** 112

### Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Online	8

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Short answer, data based coursework 1500 words	50	
Report	AS2	Project report 3000 words	50	

### Aims

*To provide a detailed appreciation of the applications of modern technology to marine applications.*

### Learning Outcomes

After completing the module the student should be able to:

- 1 Be aware of the merits and limitations of different position fixing systems.
- 2 Be aware of the merits and limitations of integrated bridge concepts.
- 3 Identify and evaluate recent developments in radar technology and the benefits and limitations when used as a collision avoidance or position fixing aid.

### **Learning Outcomes of Assessments**

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

short answer	1	2	3
project report	1	2	3

### **Outline Syllabus**

*Automatic Identification Systems (AIS & LRIT), Voyage Data Recorders (VDR and SVDR)*

*Developments in GNSS; GPS, Glonass, Gallileo, Compass including and Augmentation Systems (EGNOS, WAAS). Developments in eLORAN*

*Application of radar technology: Collision avoidance and navigation displays, new and old technology radar.*

*Electronic charts, raster, vector, ECDIS, capabilities and limitations, chart data, accuracy.*

*Integrated navigation systems, capabilities and limitations, NMEA standards.*

*Developments in marine communications systems, GMDSS.*

### **Learning Activities**

Students will be supported through tutorial sessions and provided with learning material through their distance learning pack.

### **Notes**

This module contributes to a distance learning programme allowing seafarers to progress to a BSc in Maritime Operations.