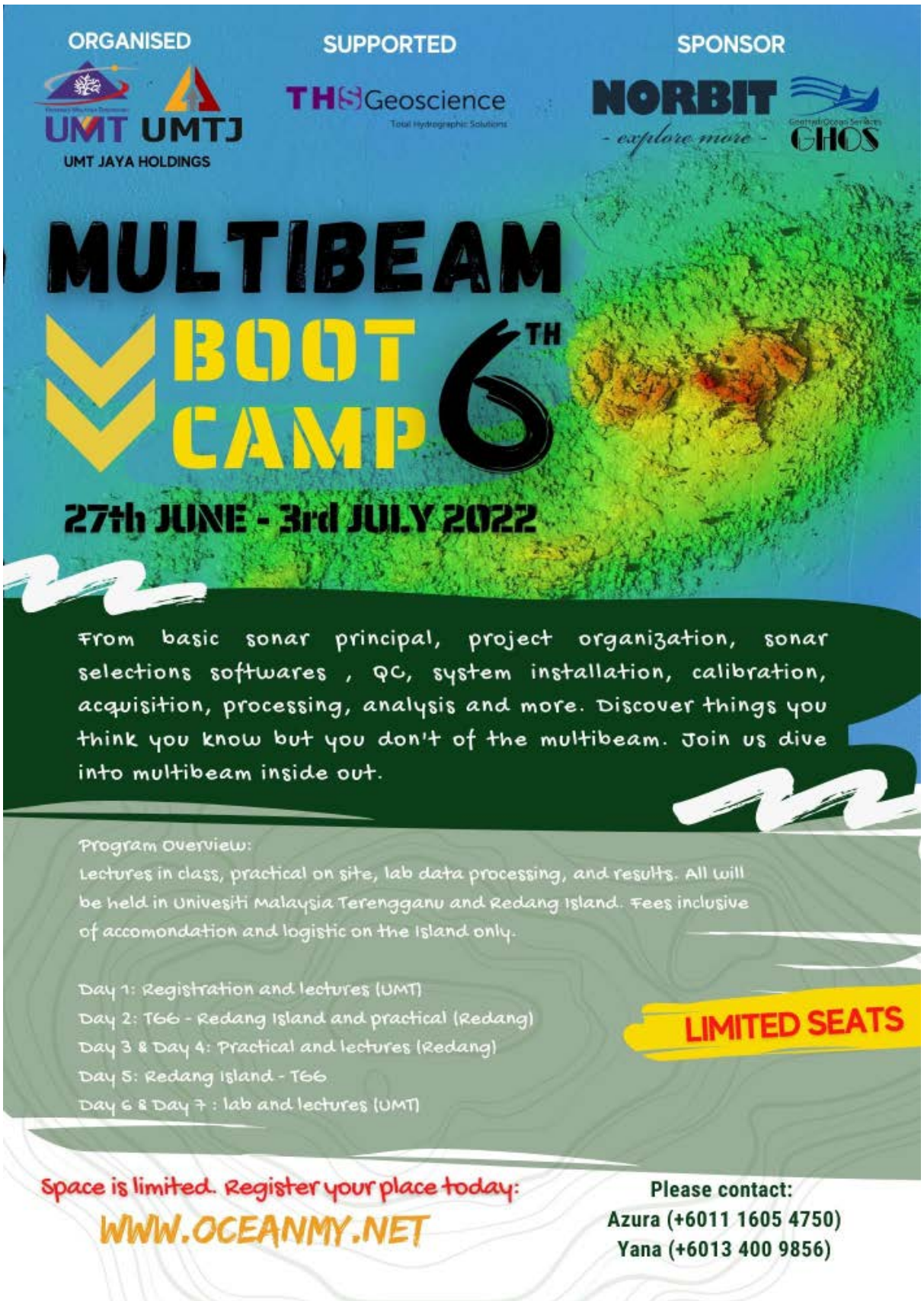
ORGANISED
UMT UMTJ
UMT JAYA HOLDINGS
SUPPORTED
THS Geoscience
Total Hydrographic Solutions
SPONSOR
NORBIT
- explore more -
GHOS
MULTIBEAM
BOOT CAMP 6TH
27th JUNE - 3rd JULY 2022
From basic sonar principal, project organization, sonar selections softwares , QC, system installation, calibration, acquisition, processing, analysis and more. Discover things you think you know but you don't of the multibeam. Join us dive into multibeam inside out.
Program Overview:
Lectures in class, practical on site, lab data processing, and results. All will be held in Univesiti Malaysia Terengganu and Redang Island. Fees inclusive of accomondation and logistic on the Island only.
Day 1: Registration and lectures (UMT)
Day 2: T66 - Redang Island and practical (Redang)
Day 3 & Day 4: Practical and lectures (Redang)
Day 5: Redang Island - T66
Day 6 & Day 7 : lab and lectures (UMT)
LIMITED SEATS
Space is limited. Register your place today:
WWW.OCEANMY.NET
Please contact:
Azura (+6011 1605 4750)
Yana (+6013 400 9856)

Multibeam Boot Camp 6th, 2022

Missing the basic knowledge of Sonar and the principal giving a lot of disadvantages on Multibeam survey overall. This course is intended for those who are interested knowing how to work with the sonar the proper way and getting the better result. From sonar principal and theory, basic sonar equation, multibeam project organization from line planning, sonar selection, project requirements, and QA & QC. Hands-on practical with the sonar on board for two days including installation, echo sounder calibration, and online recording. Using the latest technology for data processing, analysis and interpretation and 4D visualization and production. Basically, this workshop will be introducing the multibeam seamless workflow that had been introduced around the world.

The course focus on practical and spend 69% most of the camp time. The course intended for beginner and intermediate level.

The following subjects are dealt with:

- ✓ What is Multibeam? What is sound and why sound!
- ✓ Pick the right multibeam for your operation.
- ✓ All the settings in the multibeam software you MUST and NEED to know why.
- ✓ The heart of the operation, Motion Sensor. The important stuff.
- ✓ What environment got to do with multibeam operation.
- ✓ Result comparison between multibeam systems on same area at our research area.
- ✓ Just bathymetry? Object detection? Sediment type?
- ✓ Bottom detection? Save by the water column! Actually, you missed a lot of things.
- ✓ Learn how to read and understand your data.
- ✓ Beside your multibeam system, things effecting your result that always forgotten.
- ✓ Etc.

**The subject covers are trying to provide you with basic understanding of what involved in multibeam survey. We assume that a little knowledge is present. We are aware that time is short to cover each subject in depth. We do not intend to be fully comprehensive nor all-knowing and are well aware of our shortcomings. However, it is our belief that the training will enhance your understanding and providing essential knowledge of the multibeam that most of us forget.*

Course Content

Multibeam Surveying	This topic covers the principal of multibeam and the applications. Understand how to work with the system in order to archive an excellent result. Getting to understand sonar is the major key in successful survey. The lecture will also discuss oh subjects such as transducers, installation, calibration, sonar setting, types of sonar, object detection with multibeam, bottom mapping, standard, QA and QC, and survey planning and most import, best practice guide.
Underwater Acoustics Basic & Sonar	Learning about the basic of how multibeam works as it important element in doing the right thing to archived a useful and valuable data. This topic will share some important knowledge to be taken such as how sonar works, acoustic properties, sonar equation
Sensors Calibration	The most important part in setting up the system. This will focus on the multibeam calibration and part of Gyro calibration, motion sensor calibration and ways of Position verification.
Basic Oceanography	The lecture will share a basic oceanography information that is very important and need to be taking into consideration for multibeam survey. Such as tide, current, sediment and other physical phenomena that affecting multibeam operation and data quality.
Multibeam Processing	Processing evolved. This session will share the latest technology and types of advanced processing. With the advance processing, users will able to QC the data right away and doing analysis. This will cover bathymetry, backscatter and water column processing.
Mobilization and Data Acquisition	The course is focusing on this subject matter. In this session, participant will get down with the equipment themselves with the trainer. Trainer will share do's and don'ts, tips and standard to follow. Setting up the sensors the right way is a big role in providing accurate, precise and quality data that the sensor can achieved.
Data Visualization and Analysis	The course will be focusing on advance processing with 3D visualization. The 3D/4D environment allows users to rapidly gain insight and extract more information from their underlying data. This provides added value in data processing efficiency, quality control accuracy, data analysis completeness, and project integration, that promotes clear communication.

#5 | 2019

SCHEDULE MBES BOOT CAMP #6 | 2022

	Sunday (Day 1)	Monday (Day 2)	Tuesday (Day 3)	Wednesday (Day 4)	Thursday (Day 5)	Friday (Day 6)	Saturday (Day 7)
	Breakfast		*Breakfast*	*Breakfast*	*Breakfast*	*Breakfast*	*Breakfast*
9.00 am - 10.30 am	Introduction & MB 1	*Travel to Island*	Multibeam Mobilization [P]	Multibeam Survey [P] Bidong	Travel to UMT	Bathymetry Processing	Data visualisation & Analysis
10.30 am - 10.50 am	*Break*					*Break*	*Break*
10.50 pm - 12.30 pm	Basic Oceanography					Bathymetry Processing	Data visualisation & Analysis
12.30 pm - 2.15 pm	**L U N C H**						**CLOSING**
2.15 pm - 3.15 pm	Underwater Acoustics Basic & Sonar	Backscatter & Sediment	Calibration MB & Multibeam Survey[P] Redang	Multibeam Survey [P] Bidong		Backscatter Processing	
3.15 pm - 3.30pm		*Break*				*Break*	
3.30 pm - 5.00 pm	MB 1	Equipment Setup and Practice [P] & MBII				Water Column Processing	
5.00 pm - 8.00 pm	**D I N N E R**						
8.45 pm - 9.30 pm		MBES Calibration & Ancillary Sensors	Water Column				
9.30 pm - 10.30 pm			Acquisition Software				

Programme Description

1.0	Name	:	Multibeam Boot Camp
2.0	Mode of Course	:	Full Time
3.0	Duration of Course	:	7 days
4.0	Target Group	:	The course is intended for beginner and Intermediate level
5.0	Attendee	:	Local & International Company, University, and Public
6.0	Objectives	:	✓ To provide a learning platform for understanding the multibeam to produce a reliable result. ✓ Hands on practical experience and practise.
7.0	Introduction	:	Hands-on practical with the sonar on board for 7 days including installation, echo sounder calibration, and online recording. Using the latest technology for data processing, analysis and interpretation and 4D visualization and production. Basically, this workshop will be introducing the multibeam seamless workflow that had been introduced around the world.
8.0	Course subject	:	✓ Multibeam Survey ✓ Underwater Acoustics Basic & Sonar ✓ Sensors Calibration ✓ Basic Oceanography ✓ Bathymetry Processing ✓ Mobilization and Data Acquisition ✓ Data Visualization and Analysis
9.0	Course Schedule	:	Monday to Sunday (9.00am to 10pm)
10	Course Fees	:	✓ International company/university – USD1800.00 / person ✓ Malaysian company/ Private – RM5400.00 / person ✓ Malaysian Government/ University – RM3500/person ✓ Malaysian Government/University – (All-in) RM3900/person * Fee is inclusive meal during the course for 7 days and accommodation only provided at Redang Island during the course. We can recommend the accommodation at UMT if you are required.

Conclusion

As a conclusion, the Multibeam Bootcamp, as an established programme, running the 6th year in the result providing a platform for the participant in demonstrating and share latest seabed mapping technology. By the end of the course, participants will have the knowledge and quality driven to produce a precise and accurate bathymetry chart and additional product derives from multibeam. The participants will be also equipped with the hands-on experience in conducting of mobilisation and acquisition on board in a real project situation. The course will guide participants doing it right the first time in multibeam survey.