



SBEU3523 HYDROGRAPHIC SURVEYING TECHNOLOGY

Lecture 1: Briefing on Course Outline

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CLASS ATTENDANCE



SECTION 1

SECTION 2

COURSE LECTURER(S)

Course lecturer(s)	Name	Office	Contact no.	E-mail
	Dr. Mohammad Hanif Hamden	---	010-9694949	mohammad.hanif@utm.my
Sr Dr. Kelvin Tang Kang Wee	B08-315	012-7258699	tkkelvin@utm.my	

01 COURSE INFORMATION

02 COURSE ASSESSMENT

03 WEEKLY SCHEDULE

04 LIST OF LECTURERS

05 MAIN REFERENCE



Course Information

School/Faculty:	Faculty of Built Environment and Surveying		
Program name:	Bachelor of Geomatics Engineering with Honours		
Course code:	SBEU3523	Academic Session/Semester:	2023-2024/2
Course name:	Hydrographic Surveying Technology	Pre/co requisite (course name and code, if applicable):	Null
Credit hours:	3		

Course Synopsis

This subject is intended to give additional knowledge to the student in terms of various technologies and techniques as well as to highlight the needs of hydrography survey products or results for various applications. In particular, the study will emphasise on the understanding of various technologies or product used in hydrographic surveying nowadays, principles of the measurement, preparation for field survey, system configuration and specification, procedures of data acquisition, elements of data processing and data presentation. In brief, the topics of the subject consists of development in hydrographic surveying, automation in hydrographic surveying, electronic chart, multi-beam and multi-transducer seabed mapping, introduction to seismic survey, the role of hydrographer in oil industry, the needs of hydrographic survey in port development and introduction to the law of the sea.

COURSE LEARNING OUTCOME (CLO)

At the end of this course, all of you will be able to:

1. Distinguish the various concepts of latest measurement, techniques, and procedures of implementation hydrographic survey.
2. Solve related problem in hydrography and creatively using modern tools and techniques.
3. Assemble data obtained from hydrographic survey technology.
4. Use systematic research methodology to the role of surveyor or hydrographer in providing quality coastal and offshore data / information for various activities.

Course Content

Week	Topic	Remarks
18 March 2024 (Week 1)	Overview of the development in hydrographic survey technology	
25 March 2024 (Week 2)	Multibeam Theory & Applications	
1 April 2024 (Week 3)	Multibeam Installation & Operation	
8 April 2024 (Week 4)	Multibeam Installation & Calibration	
15 April 2024 (Week 5)	Hydrographic Surveying in Port Area	
22 April 2024 (Week 6)	Hydrographic Surveying in Port Area	
29 April 2024 (Week 7)	Seismic Survey	
6 May 2024 (Week 8)	Mid Semester Break	

Week	Topic	Remarks
13 May 2024 (Week 9)	Seismic Survey	
20 May 2024 (Week 10)	Electronic Chart	
27 May 2024 (Week 11)	Hydrography for Oil Exploration Industry	
3 June 2024 (Week 12)	Hydrography for Oil Exploration Industry (Offshore Pipeline Survey)	
10 June 2024 (Week 13)	Law of The Sea (UNCLOS)	
17 June 2024 (Week 14)	Law of The Sea: Maritime Zones	
24 June 2024 (Week 15)	Future Hydrographic Surveying in Malaysia	
Week 16	Revision Week	
Week 17 -19	Final Examination	Good Luck!
10 Weeks	Final Break for Semester II	

Course Assessment

LIST OF ASSESSMENTS		Marks (%)
1	Assignment 1	10
2	Assignment 2	10
3	Project	15
4	Quiz 1	5
5	Quiz 2	5
6	Mid-Term Test	15
7	Final Examination	40
	TOTAL MARKS	100

**Commitment (Learning activities, attendance, punctuality etc.) – EXTRA MARKS WILL BE GIVEN*

References

Text book (*if applicable*)

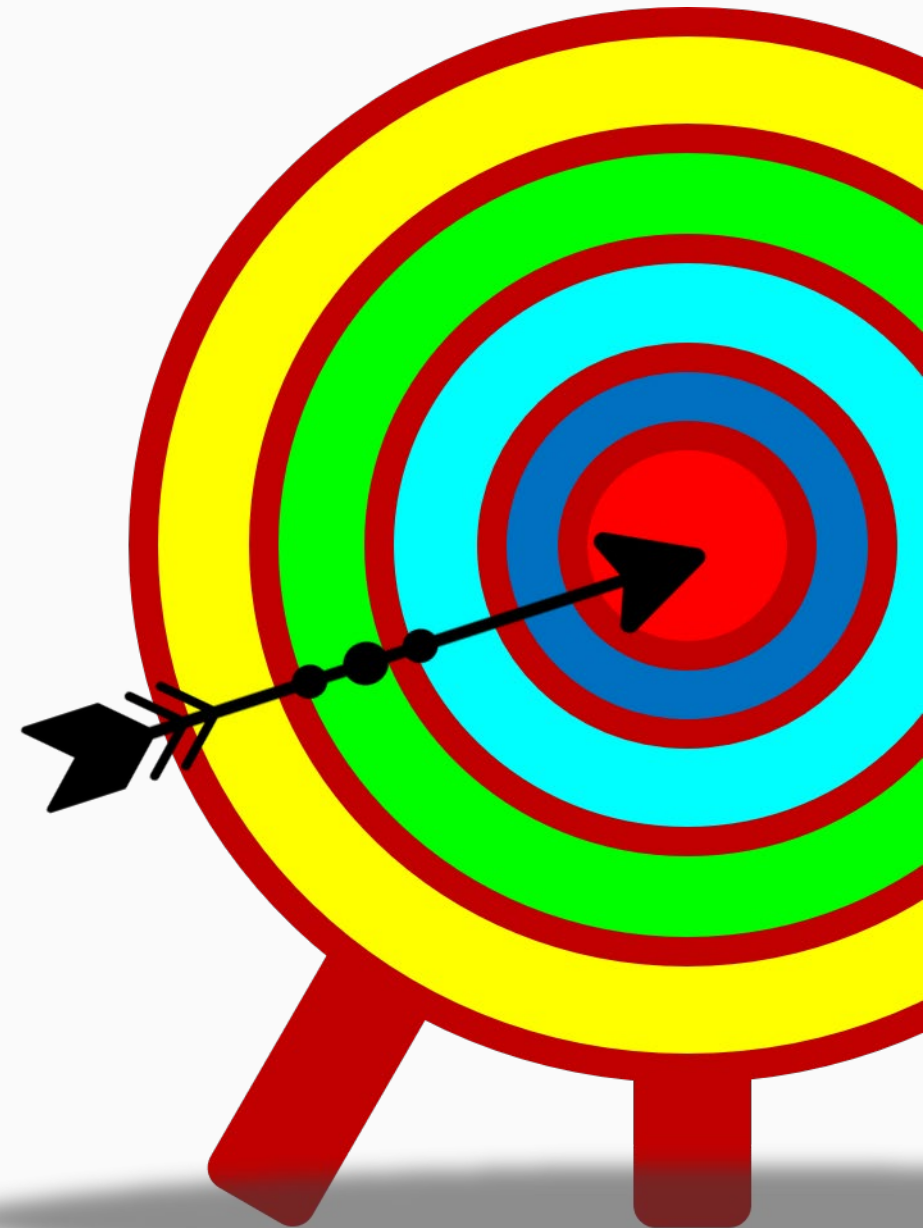
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Main references:

1. Ingham A.E , hydrography for the Surveyor and Engineer, Granada, 1984.
2. L.Tetley, D.Calcutt, Navigation -Electronic Aids to Navigation, 1986.
3. S.F.Appleyard, Marine Electronic Navigation , 2nd.Edition Routledge & Kegan Paul,UK. 1987.
4. IHO STANDARDS FOR HYDROGRAPHIC SURVEYS 6th Edition, 2020 Special Publication No. 44.
5. Manual on Hydrography, IHO, 2005.
6. Hydro International. (2017). Trends and New Technology In the ROV Industry.
7. USGS (2020). What is remote sensing and what is it used for?
8. Hydro International. (2022). Bathymetry LiDAR.
9. International Hydrographic Organization (IHO), (2021). About the IHO.

**ANY
QUESTION...???**

Set you target from now.....





THANK YOU



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