



BUKU PEDOMAN MATA KULIAH
COURSE MODULE HANDBOOK

REKAYASA SURVEI HIDROGRAFI
APPLIED HYDROGRAPHIC SURVEY

DEPARTEMEN TEKNIK GEOMATIKA
Fakultas Teknik Sipil, Perencanaan, dan Kebumihan

DEPARTMENT OF GEOMATICS ENGINEERING
Faculty of Civil Engineering, Planning, and Geo Engineering

INSTITUT TEKNOLOGI SEPULUH NOPEMBER

<p><i>Module objectives/ course learning outcomes</i></p>	<ol style="list-style-type: none"> 2. Mahasiswa memahami aspek teknis instrumen akustik bawah air dan gerak kapal. 3. Mahasiswa mampu mendeskripsikan propagasi gelombang suara di kolom air. 4. Mahasiswa mampu memahami konsep dan menghitung cepat rambat gelombang suara di kolom air. 5. Mahasiswa mengetahui faktor-faktor yang mempengaruhi propagasi gelombang suara di kolom air. 6. Mahasiswa mengenal konsep Multispektral Multibeam Echosounder. 7. Mahasiswa mampu menjelaskan mengenai pasang surut dan pengaruhnya terhadap survei hidrografi. 8. Mahasiswa mengetahui mengenai Underwater Acoustic Positioning beserta aplikasinya. <ol style="list-style-type: none"> 1. <i>Students are able to know the concept and application of hydrographic survey.</i> 2. <i>Students understand the technical aspects of underwater acoustic instruments and ship motion.</i> 3. <i>Students are able to describe the propagation of sound waves in the water column.</i> 4. <i>Students are able to understand the concept and calculate the speed of sound waves in the water column.</i> 5. <i>Students know the factors that affect the propagation of sound waves in the water column.</i> 6. <i>Students are familiar with the concept of Multispectral Multibeam Echosounder.</i> 7. <i>Students are able to explain about tides and their effects on hydrographic surveys.</i> 8. <i>Students know about Underwater Acoustic Positioning and its applications.</i> 																																																																																																																					
<p>CPMK dan hubungan dengan CPL Prodi <i>Learning outcomes and their corresponding to PLOs</i></p>	<table border="1"> <thead> <tr> <th></th> <th>PLO.1</th> <th>PLO.2</th> <th>PLO.3</th> <th>PLO.4</th> <th>PLO.5</th> <th>PLO.6</th> <th>PLO.7</th> <th>PLO.8</th> <th>PLO.9</th> <th>PLO.10</th> <th>PLO.11</th> <th>PLO.12</th> </tr> </thead> <tbody> <tr> <td>CLO.1</td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CLO.2</td> <td>✓</td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CLO.3</td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CLO.4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>✓</td> <td></td> <td></td> <td></td> <td>✓</td> </tr> <tr> <td>CLO.5</td> <td></td> <td></td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CLO.6</td> <td></td> <td></td> <td></td> <td>✓</td> <td></td> <td></td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CLO.7</td> <td></td> <td></td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CLO.8</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		PLO.1	PLO.2	PLO.3	PLO.4	PLO.5	PLO.6	PLO.7	PLO.8	PLO.9	PLO.10	PLO.11	PLO.12	CLO.1	✓												CLO.2	✓	✓											CLO.3	✓												CLO.4								✓				✓	CLO.5			✓										CLO.6				✓			✓						CLO.7			✓										CLO.8							✓					
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Media yang digunakan <i>Media employed</i>	Media pengajaran secara klasik dengan papan tulis dan presentasi power point <i>Classical teaching tools with white board and power point presentation</i>				
Daftar Pustaka <i>Reading list</i>	<ol style="list-style-type: none"> 1. IHO., 2020. IHO Standards for Hydrographic Survey. 6th Edition. Special Publication 44. Monaco 2. Poerbandono., Djunarsjah, E. 2005. Survei Hidrografi. Bandung: Refika Aditama 3. IHO., 2005. Manual On hydrography. Monaco. International Hydrographic Beareau 4. Lurton, Xavier. 2010. An Introduction to Underwater Acoustic: Principles and Applications: Second Edition. Perancis. Praxis Publ. 				