

The Hong Kong Polytechnic University

Subject Description Form

Subject Code	LGT4006
Subject Title	Advanced Navigation and Ship Handling
Credit Value	3
Level	4
Normal Duration	1-semester
Pre-requisite	<i>LGT3004 Navigation and Communication Systems</i>
Objectives	<ol style="list-style-type: none"> 1. This subject will provide students a full knowledge of practical management of ship navigation in both normal and emergency situations. It also provide students the fundamental principles of safe operation in Ship Handling. 2. To promote students' interest in seagoing careers and enhance their qualifications for the sea time remission requirement granted by the Marine Department of HKSAR towards the examination of Sea Going Class 3 (Deck) Certificate of Competency. 3. To provide adequate professionally-related skills and knowledge to the students for them to make readily contribution on navigational knowledge to the organization which employ them. To provide also a foundation for their future professional development, thus meeting the BBA Program Learning Outcomes.
Subject Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> a. Prepare and execute a safe passage planning for a seagoing ship; Manage its bridge resources and bridge team effectively; b. Manage and execute berthing and un-berthing operations of a seagoing ship; and c. Understand the operation and coordination of maritime search and rescue operations to ships under distress or emergency.
Subject Synopsis/ Indicative Syllabus	Practices of navigation; various navigational instruments in use; tidal calculations; bridge procedures; principles and practices of collision avoidance; vessel traffic management services; position reporting systems; use and interpretation of weather data; bridge resources management; bridge teamwork; passage planning and monitoring; ship maneuvering; berthing and un-berthing; use of tugs and other maneuvering devices; managing emergencies in port and at sea: towage, salvage and offshore supply; sea survival; search and rescue.

Teaching/Learning Methodology	In the lectures, the general principle of the above mentioned topics will be presented and developed. During the tutorial and laboratory sessions, students will learn to develop and apply the general principle of these topics under simulation, as well as other student-centered activities.																																													
Assessment Methods in Alignment with Intended Learning Outcomes	<table border="1" data-bbox="536 416 1390 819"> <thead> <tr> <th data-bbox="536 416 810 613" rowspan="2">Specific assessment methods/tasks</th> <th data-bbox="810 416 963 613" rowspan="2">% weighting</th> <th colspan="6" data-bbox="963 416 1390 546">Intended subject learning outcomes to be assessed (Please tick as appropriate)</th> </tr> <tr> <th data-bbox="963 546 1034 613">a</th> <th data-bbox="1034 546 1104 613">b</th> <th data-bbox="1104 546 1174 613">c</th> <th data-bbox="1174 546 1244 613"></th> <th data-bbox="1244 546 1315 613"></th> <th data-bbox="1315 546 1390 613"></th> </tr> </thead> <tbody> <tr> <td data-bbox="536 613 810 680">Coursework</td> <td data-bbox="810 613 963 680">60%</td> <td data-bbox="963 613 1034 680">✓</td> <td data-bbox="1034 613 1104 680">✓</td> <td data-bbox="1104 613 1174 680">✓</td> <td data-bbox="1174 613 1244 680"></td> <td data-bbox="1244 613 1315 680"></td> <td data-bbox="1315 613 1390 680"></td> </tr> <tr> <td data-bbox="536 680 810 748">Examination</td> <td data-bbox="810 680 963 748">40%</td> <td data-bbox="963 680 1034 748">✓</td> <td data-bbox="1034 680 1104 748">✓</td> <td data-bbox="1104 680 1174 748">✓</td> <td data-bbox="1174 680 1244 748"></td> <td data-bbox="1244 680 1315 748"></td> <td data-bbox="1315 680 1390 748"></td> </tr> <tr> <td data-bbox="536 748 810 819">Total</td> <td data-bbox="810 748 963 819">100 %</td> <td colspan="6" data-bbox="963 748 1390 819"></td> </tr> </tbody> </table> <p data-bbox="536 842 1390 987">Assessment of Intended Learning Outcomes: Means of assessment on coursework and examination are suitably employed to assess students' understanding of the legal and practical issues in the subject areas.</p>								Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)						a	b	c				Coursework	60%	✓	✓	✓				Examination	40%	✓	✓	✓				Total	100 %						
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Student Study Effort Expected	Class contact:																																													
	▪ Lecture							26 Hrs.																																						
	▪ Tutorial / Laboratory							13 Hrs.																																						
	Other student study effort:																																													
	▪ Self Study							70 Hrs.																																						
	▪ Visits to ships / piers							6 Hrs.																																						
	Total student study effort							126 Hrs.																																						
Reading List and References	<p data-bbox="536 1525 1390 1637"><u>Essential</u> Danton, G. (1996), <i>The Theory and Practice of Seamanship</i>, 11th edition, London: Routledge. House, D.J. (2006), <i>Navigation for Masters</i>, London: Witherby. MacElrevey, D.H. (2004), <i>Shiphandling for the Mariner</i>, Centerville, Md.: Cornell Maritime Press.</p> <p data-bbox="536 1805 1390 1977"><u>Supplementary</u> Admiralty Manual of Navigation (1987) Volume 1. London: Her Majesty's Stationery Office. House, D.J. (2007), <i>Ship Handling</i>, Oxford: Elsevier</p>																																													

	<p>Marsden, R.G. (2003), <i>Marsden on Collisions at Sea</i>, London: Sweet & Maxwell.</p> <p>Williamson, P.R. (2001), <i>Ship Manoeuvring Principles and Pilotage</i>, London: Witherby and Co. Ltd.</p> <p><u>Indicative</u></p> <p>Barrass, C.B. (2009), <i>Ship Squat and Interaction</i>, Volumes 1 & 2. Edinburgh: Witherby Seamanship International</p> <p>Wilde, J.N. (2008), <i>Navigation – Guidance for Senior Students</i>, Southampton: Warsash Publishing</p>
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