

## 1. Course Title: Bridge Resource Management and Leadership & Teamwork (Operation Level)

### 2. Scope With reference to convention Imo Model Course:

This course is designed to equip individual with skills, knowledge and attitudes required to -

- Define what is Bridge Resource Management
- Explain the requirement of Resource Management
- Factors that affect the performance of seafarer
- Attitude and management skills
- Cultural Diversity and Awareness
- Definition of Short term strategy and how to apply it
- Different Management Style
- Managing Workloads, Delegation and Human Involvement in Errors
- Judgment and Decision Making
- Automation Awareness
- Crisis Management
- Managing the crew
- Crisis Phase

in accordance with maritime industry standards.

### 3. Objective:

After completing the course, the candidates should be able to acquire the knowledge, skills and attitude for the safe navigational watch, precautions to prevent hazards, prevention of pollution, firefighting operations, emergencies, fundamental understanding of bridge resource management and to successfully participate in leadership and team exercises, thereby displaying knowledge of leadership, managerial skills, and team working skills

### 4. Course Outline Shore base & On board Training:

Sl No	Knowledge, understanding and proficiency	Hours
1.	Review of basic principles	0.75
2.	Familiarization with the bridge	
3.	Standard manoeuvres	0.75
4.	Wind and current effects	
5.	Attitude	0.75
6.	Cultural awareness	
7.	Briefing and debriefing	0.75
8.	Challenge and response	
9.	Shallow-water effects	0.75
10.	Bank, channel and interaction effects	
11.	Planning	0.75
12.	Authority	
13.	Management on the bridge	1.5
14.	Workload and stress	
15.	Anchoring and single-buoy mooring	0.75
16.	Human factor in error	
17.	Decision making	0.75
18.	Crisis management	0.75
19.	Planning and carrying out a voyage in normal and emergency situations	0.75

20.	Practical	1.5
21.	Introduction(Leadership & Teamwork)	0.75
22.	Working knowledge of shipboard personnel management and training	3.0
23.	Need for international maritime conventions, recommendations and national legislation	0.75
24.	Ability to apply task and workload management	2.25
25.	Knowledge and ability to apply effective resource management	1.5
26.	Knowledge and ability to apply decision-making techniques	2.25
27.	Conclusion	0.75
28.	Assessment	0.75
	Total	22.5

#### 5. Competence Standard/Course Syllabus Checked with up-to-date STCW/IMO Model Course:

Sl No	Knowledge, understanding and proficiency	Hours
<b>1</b>	<b>1. Review of basic principles</b>	0.75 Hrs
	1.1 state the basic principles to be observed in keeping a navigational watch as set out in regulation VIII/2 of STCW	
	1.2 convention and A-VIII/2 STCW code	
	1.3 state the datum used on charts	
	1.4 agree with the position obtained by visual or radar observations	
	1.5 list methods commonly available for position fixing, with an indication of their accuracy	
	1.6 state the accuracy of range and bearing measurements required by the performance standards for radar equipment	
	1.7 describe factors affecting radar detection, including blind shadow sectors	
	1.8 explain how the characteristics of targets influence their detection range	
	1.9 demonstrate the use of parallel indexing techniques for monitoring a ship's movement	
	1.10 demonstrate the use of nautical publications	
<b>2.</b>	<b>Familiarizations with the bridge</b>	0.75 Hrs
	2.1 demonstrate the operation of the different bridge instruments	
	2.2 demonstrate the uses of the rudder and engine controls	
	2.3 describe and allow for the parallax in the visual system	
<b>3.</b>	<b>standard man oeuvers</b>	
	3.1 carry out a turning-circle trial with given initial speed rudder angle in loaded condition	
	3.2 describe how to carry out zigzag man oeuvers	
	3.3 carry out a crash stop in loaded condition	
	3.4 carry out a coasting stop in loaded condition	
	3.5 compare plots for loaded and ballast conditions	
	3.6 describe how trim affects the pivot point during turns	
	3.7 demonstrate how to make a pilot card and a wheelhouse poster	
<b>4.</b>	<b>Wind and current effects</b>	
	4.1 repeat standard man oeuvre with wind and current present for the loaded condition	
	4.2 repeat the man oeuvre in objective 4.1 for the ballast condition	
	4.3 record times, positions, headings, speed and other relevant data	
	4.4 plot the man oeuvres from the recorded data	
	4.5 compare the result with of the same man oeuvre without wind and current	
	4.6 compare the results for loaded and ballast conditions	
	4.7 compare the difference in ship behavior under the influence of wind, of current and	

	of both wind and current for various conditions of loading, investigate the effect of wind in slow speed situations	
<b>5.</b>	<b>Attitude</b>	0.75 Hrs
	5.1 demonstrate the establishment of minimum standards of safety margins	
	5.2 recognize the importance of using all available human resources	
<b>6.</b>	<b>Cultural Awareness</b>	0.75 Hrs
	6.1 be sensitive to cultural differences and similarities	
	6.2 be aware of methods for dealing with cultural differences	
<b>7.</b>	<b>Briefing and debriefing</b>	0.75 Hrs
	7.1 demonstrate the master's job	
	7.2 Demonstrate pilot's job	
	7.3 demonstrate that the bridge team member's job	0.75 Hrs
<b>8</b>	<b>Challenge and Response</b>	
	8.1 demonstrate that the master shall establish an open communication style on the bridge that challenge and appropriate responses from the whole bridge team	
	8.2 demonstrate that the pilot shall request challenges if time permits validate or deny a received challenge, if time does not permit, respond cautiously	0.75 Hrs
	8.3 demonstrate that the bridge team member shall challenge whenever limits are exceeded or there is any doubt about the situation compared to the original concept	
<b>9.</b>	<b>Shallow-water effects</b>	
	9.1 define shallow water	0.75 Hrs
	9.2 state that, in shallow water, a ship: has increased directional stability, has an increase in turning radius, experiences a change of trim.	
	9.3 state that shallow-water effects become more marked as the depth decreases	
	9.4 define squat	0.75 Hrs
	9.5 describe the reduction in under-keel clearance resulting from rolling and pitching	
<b>10.</b>	<b>Bank, channel and interaction effects</b>	
	10.1 describe the moments and forces affecting a ships behavior when navigating close to a bank or in a narrow channel	0.75 Hrs
	10.2 state that speed should be moderate in rivers, estuaries and similar channels to reduce shallow-water effects and to provide reserve power for correcting a sheer	
	10.3 explain the need for speed reduction to prevent damage being caused by the ships bow wave or stem wave	
	10.4 describe how a passing ship affects a moored ship	0.75 Hrs
	10.5 describe the interaction between passing and overtaking ships	
	10.6 describe how to pass or overtake another ship safety in a narrow channel	
	10.7 apply a knowledge of bank effect and international in exercises in confined channels	0.75 Hrs
<b>11</b>	<b>Planning</b>	
	11.1 demonstrate that the master shall:	
	11.2 create an emergency plan, whenever time permits, for problems not covered by a standard operating procedure	0.75 Hrs
	11.3 modify and update the combined plan if conditions change	
	11.4 demonstrate that the bridge team members, including the pilot shall actively support the master in his efforts to develop and start an emergency plan	
<b>12</b>	<b>Authority</b>	0.75 Hrs
	12.1 demonstrate that the master shall coordinate bridge activity so as to bridge about an appropriate balance between his authority and the assertiveness of the bridge team members	
	12.2 coordinate bridge activity so as to bridge about an appropriate balance between his authority and the assertiveness of the bridge team members	
	12.3 demonstrate that the bridge team members, including the pilot shall seek to achieve an appropriate balance between assertiveness and authority	

<b>13</b>	<b>Management on the bridge</b>	1.5 Hrs
	13.1 demonstrate that the master shall encourage officers to ask for challenging duties	
	13.2 demonstrate that the master shall encourage officers to ask for challenging duties	
	13.3 demonstrate that the bridge team members, including the pilot shall:	
	13.4 demonstrate the ability to work with managers of different styles, so as to maintain safe working conditions, without threatening the command or leadership roles	
<b>14</b>	<b>Workload and stress</b>	
	14.1 demonstrate that the master shall set priorities to escape from an overload situation	
	14.2 demonstrate that the bridge team members shall maintain workload at a reasonable level of activity avoiding a false feeling of confidence and habitual thing	
	14.3 demonstrate that the pilot shall support the bridge team in maintaining a reasonable workload	
<b>15</b>	<b>Anchoring and single-buoy mooring</b>	0.75 Hrs
	15.1 select the position to anchor in a given area	
	15.2 take account of advice contained in sailing directions, of the wind and of current or tidal stream in the approach to the anchorage	
	15.3 using the ships manoeuvring data, prepare an anchoring plan	
	15.4 maintain a record of engine movements and make appropriate entries in the log-book	
	15.5 when anchoring is complete, fix the ships position and check bearings in the log-book	
	15.9 prepare a planned approach to a single-buoy mooring, taking account of relevant factors	
<b>16</b>	<b>Human Factor in Error</b>	
	16.1 demonstrate that the master shall:	
	16.2 take the initiative to apply bridge Resource Management throughout each Voyage	
	16.3 establish specific preventive measures to guard against external and internal errors	
	16.4 demonstrate that the bridge team members, including the pilot, shall support the master in all aspects above	
<b>17</b>	<b>Decision Making</b>	1.5 Hrs
	17.1 demonstrate that the master shall:	
	17.2 assess the quality of information- verify its relevance and accuracy	
	17.3 involve bridge team members in the process	
	17.4 demonstrate that the bridge team members, including the pilot, shall actively participate in the process if time permits	
<b>18</b>	<b>Crisis Management</b>	
	18.1 demonstrate that the master shall:	
	18.2 monitor his/her own and officers stress level during crises	
	18.3 make sure that bridge team members are aware of the dangers of extreme stress and set standards procedures in place that allow bridge team members to cover for a fellow team member	
<b>19</b>	<b>Planning and carrying out a voyage in normal and emergency situations</b>	1.5 Hrs
	19.1 prepare a complete passage plan from harbor to harbor, taking account of the following: navigational publications, draught, squat and depth of water, tide and current, weather	
	19.2 make use of checklists for departure, for arrival and for coastal waters	
	19.3 carry out the planned passage and monitor the progress	
	19.4 demonstrate skill in approaching or leaving berths under various conditions of wind and tide	
<b>20</b>	<b>Practical</b>	1.5 Hrs
<b>21</b>	<b>Introduction(Leadership &amp; Teamwork)</b>	0.75 Hrs

	21.1 Course overview 21.2 Describe the topics and emphasis of the course 21.3 Administration	
<b>22</b>	<b>Working knowledge of shipboard personnel management and training</b>	<b>3.0 Hrs</b>
	22.1 organization of crew, authority structure, responsibilities 22.2 cultural awareness, inherent traits, attitudes, behaviour, cross-cultural communication 22.3 shipboard situation, informal social structures on board 22.4 human error, situation awareness, automation awareness, complacency, boredom 22.5 leadership and team working 22.6 training, structured shipboard training programs 22.7 knowledge of personal abilities and behavioural characteristics	
<b>23</b>	<b>Need for international maritime conventions, recommendations and national legislation</b>	<b>0.75 Hrs</b>
	23.1 international maritime conventions – SOLAS, MARPOL, STCW, MLC, – role of IMO, ILO 23.2 Recommendations and national legislation	
<b>24</b>	<b>Ability to apply task and workload management</b>	<b>2.25 Hrs</b>
	24.1 planning and coordination 24.2 personnel assignment 24.3 human limitations 24.4 personal abilities 24.5 time and resource constraints 24.6 prioritization 24.7 workloads, rest and fatigue 24.8 management (leadership) styles 24.9 challenges and responses	
<b>25</b>	<b>Knowledge and ability to apply effective resource management</b>	<b>1.5 Hrs</b>
	25.1 effective communication on board and ashore 25.2 allocation, assignment and prioritization of resources 25.3 decision making reflecting team experience 25.4 assertiveness and leadership, including motivation 25.5 obtaining and maintaining situational awareness 25.6 appraisal of work performance 25.7 short and long term strategies	
<b>26</b>	<b>Knowledge and ability to apply decision-making techniques</b>	<b>2.25 Hrs</b>
	24.1 situation and risk assessment 24.2 identify and consider generated options 26.3 selecting course of action 26.4 evaluation of outcome effectiveness 26.5 decision making and problem solving techniques 26.6 authority and assertiveness 26.7 judgement 26.8 emergencies and crowd management	
<b>27</b>	<b>Conclusion</b>	<b>.75 Hrs</b>
	27.1 evaluation of course, individual assessments and advice	
<b>28</b>	<b>Assessment</b>	<b>0.75 Hrs</b>
	<b>Total</b>	<b>22.5 Hrs</b>

## 6. Entry Standard, Selection Criteria of Students:

Trainees or students wishing to gain entry into this course should possess the following requirements:

- Age: be not less than 18 years of age.
- Education & Training: must have valid seafaring documents.

## 7. Intake limitation, with specific mention Instructor-student ratio:

The number of trainees should not exceed 24 and the practical training should be undertaken in small groups of not more than eight.

## 8. Qualification and experience of instructors:

Minimum qualification of any instructor or assessor must be Class- I Deck Officers with relevant certificate and knowledge.

## 9. Qualification and experience of assessors:

Minimum qualification of any instructor or assessor must be Class- I Deck/Engine Officers with tanker knowledge.

## 10. Details Facilities & Equipment, materials and resources available for the training; Visual aids lecture Notes, Library facilities, Rental documents, Workshops Training Equipment: Navigational, Engineering, Communication, Seamanship etc:

- Projectors and slides
- Multimedia and videos
- Advanced audio visual systems
- Bridge Simulator
- Deck Model Room
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## 11. Conduct of Training with number of classroom lectures, practical work use of simulator, video etc:

Period → Day ↓	0900-0945	0945-1030	1030-1115	1115-1145	1145-1230	1230-1315	1315-1400	1400-1500	1500-1545	1545-1630	1630-1715	1715-1800		
1 <sup>st</sup> Day	Introduction	Need for international maritime conventions, recommendations and national legislation		Tea Break	Working knowledge of shipboard personnel management and training			Launch Break	Ability to apply task and workload management		Knowledge and ability to apply decision-making techniques			
2 <sup>nd</sup> Day	Working knowledge of shipboard personnel management and training				Knowledge and ability to apply decision-making techniques		Conclusion		Knowledge and ability to apply decision-making techniques					
3 <sup>rd</sup> Day	Ability to apply task and workload management				Knowledge and ability to apply effective resource management		Knowledge and ability to apply decision-making techniques		Assessment					

**12. Total duration of Training; Duration of Practical's:**

Training period is of 03 days, (22.5 Hours)

- a. Theory – 20.25 Hours
- b. Practical – 1.5 Hours
- c. Assessment- 0.75 Hours

**13. Assessment procedure, whether independent of instruction or continuous performance evaluation:**

Course end assessment shall be carried out to ensure adequate knowledge, understanding & competence of the candidate.

A variety of source of evidence are used which include evidence of candidate's ability, under realistic condition. Short answers, multiple choice, fill in the blanks and true/false type questions in a written test are used for assessment includes direct observation, oral questioning and role play.

**14. Formats of certificate to be issued with correct reference to STCW and reference to approval and authorization by the Department of Shipping and contact point of the issuing institution for verifying authenticity:**



Cert No: 2016.02.064.0000781

DoS Reg. No: 2016.02.064.0022028

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার

GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH



ন্যাশনাল মেরিটাইম ইন্সটিটিউট  
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Course Completion Certificate

BRIDGE RESOURCE MANAGEMENT AND APPLICATION OF LEADERSHIP AND  
MANAGERIAL SKILLS

This is to certify that, Mr. MD. MOZIBUR RAHMAN Son of Mr. MOHAMMED RUHUL AMIN, Date & Place of Birth 01-10-1973 & CHITTAGONG, C.D.C.No. C/O/3117 has successfully completed course on **BRIDGE RESOURCE MANAGEMENT AND APPLICATION OF LEADERSHIP AND MANAGERIAL SKILLS** conducted from **18-09-2016** to **24-09-2016** at the National Maritime Institute, Chittagong, Bangladesh

**Issue Date: 25-09-2016 and Expiry Date 25-09-2021**

Has been duly qualified and satisfied the condition in accordance with the provisions of Regulation A-11/2 of Annex to the international convention on standards of training, certification and watch keeping for seafarers(STCW),1978 as amended.



Signature of the Holder



CERTIFIED  
TRAINING INSTITUTE

Principal

Principal

to verify this certificate visit- [www.nmi.gov.bd](http://www.nmi.gov.bd)



**15. Maintenance of records in Data-base for facilitation of checking including assessments:**

NMI will maintain a data-base of all the students who have completed the course. The following records for each individual will be kept so as to ensure that the certificate is issued to a candidate who has met the requirements as laid down by the governing authority regarding issuance of a certificate on Bridge Resource Management.

- Application form
- Assessment papers after completion of course
- Attendance Sheet
- Attested Xerox copy of the issued certificates & licenses
- A registered data-base in hard copy and soft form

**16. Internal Quality Standard System if any. Students Impressions, past results:**

The institute maintains quality standard system ISO 9001:2008, Certified by DNV GL

**17. Course notice served, course conducted as per course notice, progression report served:**

Will be complied as per DOS Instruction.

**18. Attendance of Students and Instructors:**

Students and Instructor attendance sheet attached.



## Annex- 03

### NATIONAL MARITIME INSTITUTE

#### TRAINING RECORD

Instructor:

Venue:

Subject:

Brief description on training material:

#### Attendance:

Name & rank	Sign	Name & rank	Sign	Name & rank	Sign

Signature  
Management Representative

Signature  
Principal