Comparative study of entrance requirements for unlimited certificates of competency for deck officers and masters

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WORLD MARITIME UNIVERSITY
MALMO, SWEDEN

COMPARATIVE STUDY OF ENTRANCE REQUIREMENTS FOR
UNLIMITED CERTIFICATES OF COMPETENCY FOR DECK OFFICERS AND MASTERS

by
Mohammed Helaluddin
Bangladesh

A paper submitted to the Faculty of the World Maritime University
in partial satisfaction of the requirements for the award of a

MASTER OF SCIENCE DEGREE
in
MARITIME EDUCATION AND TRAINING (NAUTICAL)

The contents of this paper reflect my personal views and are not necessarily endorsed by the UNIVERSITY.

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Different countries may have different standards of entrance requirements to their governmental maritime training institutions (maritime academy) in which at least the training requirements of the IMO convention on STCW-78 are to be met.

The purpose of education and training in a maritime academy is to provide a sound academic background and teach fundamentals of theoretical and practical Nautical and Marine Engineering education essential for successful career at sea. And to develop a sense of responsibility, pride of profession and devotion to duty in their service.

There is a saying that 'the nation that rules the sea, rules the wealth and the nation that rules the wealth, rules the world.' In other words, in this modern world no nation can afford to ignore shipping as an essential instrument of overall national development strategy. So, the growth of an efficient and viable national shipping industry is of paramount importance. This depends largely on properly trained and qualified mariners. This is only possible through planned and well organized Maritime Education and Training (MET), which to be constantly upgraded to keep pace with the continuous developments, change in technology in the maritime sector. Hence, Entrance Requirements are of vital importance in MET and the shipping industry as a whole.
ACKNOWLEDGEMENT.

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CHAPTER I. ENTRANCE REQUIREMENTS AT MARINE ACADEMY, CHITTAGONG, BANGLADESH.

1.0 General education requirements.

General education (G.E) means the programme of education (as in some liberal arts colleges and secondary school) intended to develop students as personalities rather than trained specialists and to transmit a common cultural heritage.

"Aims of education, may be either philosophical or psychological. The philosophical aims are based on the cultural heritage, social mores, and philosophy of government. These aims emanate from the ideal of society. These are kinds of goals of education which consists of changes in the way people look at things. Philosophical aims are sometimes referred to as the ultimate aims of education which the whole school system is expected to achieve.

The other type refers to the psychological aims of education which are found in the different courses of study in the elementary and secondary schools, colleges and universities. They are based on the nature and growth of students in terms of knowledge, habits, skills, abilities and attitudes. Psychological aims have to do with personal qualities, attitudes and skills of social interaction necessary for participation in democratic society. Psychological aim of education are sometimes referred to as the immediate objectives of education".

A candidate starts his basic school at 6 years of
age. He has to take general study for -

- 10 years at secondary school.
- 2 years at college.

Out of 10 years at secondary school, the first 8 years is completely general type common for all students. On the 9th and 10th year - along with common subjects, he has to study certain special subjects which form a separate course group, such as science, Arts, Commerce group etc. The science group (with these special subjects: Physics, Chemistry, Mathematics, and Biology) is a must for entry requirements and also for other technical studies like, Engineering, medical, etc. 10 years of education in secondary school is concluded with secondary school certificate (SSC) examination, conducted by the secondary school certificate Board.

2 years in the college i.e. the 11th and 12th year is in the same pattern of last 2 years in the school - infact a continuation of 9th and 10th year. But the special subjects are emphasized in more details in the college study, so that the students gain more advance knowledge on these subjects. The 2 years in the college is known as pre-university. At the end of the 2nd year in the college Higher secondary certificate (HSC) examination is carried out by Higher secondary Board.

The G.E. finishes at this level and later the education in the particular fields begins at the universities, technical colleges. A regular student
completes this G.E. at 18 years of age.

A candidate must possess the following minimum academic qualifications to apply:

SSC: 2nd division.
HSC (science group): 2nd division with physics and mathematics.

A candidate appearing/appeared in the HSC examination during the year of entry may also provisionally apply. But they will not be considered for final selection if they do not pass the examination fulfilling the above condition and fail to produce the requisite pass certificate along with the mark-sheet issued by the Education Board or the principal of the college concerned.

1.1 Entrance examinations.

Written examination: After scrutiny of "prescribed application forms" by the Commandant, Marine Academy, the candidate found eligible in all respects, will be required to sit for written examinations at various centres of the country. Written examinations will be held in 4 papers, namely, physics, maths, English, and general knowledge. Questions in each paper will be set in English but the candidates are allowed to answer the physics and general knowledge papers in Bengali (i.e. local language), if they so desire. The examination is carried out on two days, having two papers on each day. Each paper is of 3 hours duration and carries 100 marks, 40% will be the
qualifying marks in each paper. The question papers are set by the instructors of the academy, but marking of the answer sheets is carried out mostly by external examiners and partly by the academy instructors.

1.2 Physical health and medical fitness requirements.

1.2.1 Regulations for physical examination of candidates before admission to the academy.

1.2.1.1 To be declared physically and medically fit for entry into the academy, a candidate must be in good physical health and mental condition and free from any physical defect likely to interfere with the training or be an obstacle for a career at sea. A candidate must also conform to the following physical standards:

- Minimum height 158 cm.
- Minimum weight 46 kg.
- Minimum chest (unexpanded) 76 cm with normal expansion of 5 cm.

1.2.1.2 The following points will be particularly observed:

- That the candidates hearing in each ear is good and that there is no sign of disease of the ear.
- That the candidates speech is without impediment.
- That the candidates teeth is in good order and that he is provided with dentures where necessary for effective mastication (well filled teeth will be considered as sound).
- That the candidates chest is well formed and
lungs field is found clear by X-rays examination, and that his heart is sound.

- That there is no evidence of any abdominal disease.

- That the candidate is not ruptured.

- That the candidate does not suffer from hydrocele, a severe degree of vericocele vericose veins or piles.

- That the candidate's limbs, hands and feet are well formed and developed and there is free and perfect motion of all his joints.

- That the candidate does not suffer from any inveterate skin disease.

- That there is no congenital malformation or defect.

- That the candidate does not bear traces of acute or chronic disease pointing to an impaired constitution.

- That the candidate bears marks of efficient vaccination and

- That the candidate is free from communicable disease.

- That the candidate has not suffered from any such disease / diseases, namely arthralgia, arthritis, lumbago, etc. which may relapse due to tough and laborious training in the academy and strainous nature of job onboard the ships afterwards.

When any defect is found it must be noted in the certificate and the medical examiner should state his opinion whether or not it is likely to interfere with the training and the efficient performance of the duties which will be required
of him at sea. If the condition is remediable by operation it should be so stated.

1.2.2 Regulations for sight tests of candidates before entry into the Maritime Academy.

The purpose of these tests is to ensure that the candidate's eye-sight is sufficiently good to enable him to pick up and identify correctly the lights of distant ships at sea as deck officer. Experience has shown that for this purpose a candidate must be able to reach certain minimum standards both of form and colour vision.

A sight test comprises of a letter and colour vision test taken in that order. A candidate who, having passed the letter test, does not make any mistake in the colour vision test, will be deemed to have passed the whole test and the examiner will issue a certificate to this effect.

1.3 Psychological and personality requirements.

Psychological and personality requirements are very important before entry into a maritime academy. Because it is necessary for a candidate to adjust himself to an entirely new way of life and conditions for tough and disciplined living within the academy. Furthermore, to screen the applicant on the academic and mental capabilities to undergo the life of a seafarer. Otherwise, after joining the sea, if a candidate finds himself unable to cope with sea life and the social atmosphere onboard; it will be a total
wastage of his academic period as well as a great setback in his life.

Candidates declared successful in the written examination will then appear for Interview and Viva-voce test (for psychological and personality requirement) in Dhaka before a Board of interview constituted by the Ministry of Transport. The interview will carry 200 marks and 50% will be qualifying marks. The members of the Board will try to assess/judge the suitability of a candidate from the following points of view:

1.3.1 PERSONALITY: Smartness, general appearance and overall confidence of a candidate.

1.3.2 SPEECH & EXPRESSION: This includes whether a candidate can express himself effectively, clearly and logically also his pronunciation and accent.

1.3.3 INTELLIGENCE: This includes a candidate's presence of mind, quickness in uptake, wit, humour and common sense.

1.3.4 KNOWLEDGE: This includes a candidate's general knowledge of current national and international affairs and of general science as applicable to daily life, and also of maritime affairs. A candidate is expected to have a good background knowledge of maritime affairs, which include reading publications of nautical and engineering subjects and about ships and shipping.
1.3.5 EXTRA-CURRICULAR ACTIVITIES: This includes a candidate's proficiency in games, sports, hobbies, scouting, debating and special interest for rowing, sailing.

1.4 Other requirements.

1.4.1 Age limit: A candidate must not be more than 20 years of age on 31st August of the year of entry. The date of birth recognised is what is recorded in the candidate's SSC or equivalent examination certificate.

1.4.2 Nationality and Marital status: A candidate must be nationals of Bangladesh by birth or domicile as per current law of Bangladesh duly certified by the Deputy Commissioner/ or a class 1 officer of the district in which the candidate is a permanent resident and they must be unmarried.

1.4.3 Hostel accommodation and Messing: During two years of training, hostel residence is compulsory. Hostel accommodation and messing are provided at the academy free of charges.

1.4.4 Fees and Other expenses:

1.4.4.1 Tution Fees: Tution fees will be charged according to the annual income of parents/guardians and are payable for 12 months in the year. The average annual fees are about USD 35.
1.4.4.2 Other charges: A candidate is required to bear the following expenses:

- Cost of uniform: On first admission to the academy, the cost of uniform payable by each cadet will be approx. USD 330.

- Stationary, magazine, amenity, laundry, sports etc. annual charges is about USD 40.

1.4.5 Verification of character and antecedents: The final selection and acceptance of a candidate for cadetship in this academy is subject to thorough verification of his character and antecedents by relevant govt. agencies.

1.4.6 Indemnity Bond: Every cadet selected for admission into the academy shall be required to furnish at the time of admission an indemnity bond in prescribed form stating:

1.4.6.1 That the cadet shall not leave the academy before completion of his training / study without obtaining prior permission from the Commandant. In case of such departure, he will not be allowed to join again.

1.4.6.2 That on completion of his training, the cadet shall serve the Bangladesh Merchant Navy or any other allied organisations as may be required of him by the government for a minimum period of 8 years. The bond will have to be furnished jointly by the cadet and the Surety in presence of two
witnesses. If the cadet fails to fulfill condition 1.4.6.1, the cadet and the Surety shall be jointly and severally liable to make payment on demand to the president of Bangladesh a penalty of about USD 200., plus all the expenses incurred for his recruitment, food, lodging etc. as determined by the Commandant.

If the cadet fails to fulfill condition 1.4.6.2, the cadet and the Surety shall be jointly and severally liable on demand to make payment to the president of Bangladesh a sum of about USD 2000, the cost incurred for the training /study of the cadet.

1.4.7 Scholarships: Scholarships are awarded to the meritorious and poor cadets depending on their performances in curricular and extra-curricular activities.
CHAPTER II: COMPARATIVE STUDY OF ENTRANCE REQUIREMENTS OF FOLLOWING COUNTRIES.

2.1 COUNTRY: AUSTRALIA.
Academy: Australian Maritime College, Tasmania.

1.0 General education and age entrance requirements.

1.1 School starting average age: 6 years.

1.2 Minimum level of general education required for entrance: Higher Secondary Education (HSE)

1.2.1 Duration of general education: 12 years.

1.2.2 Special course (e.g. science): -

1.2.3 Main Subjects required: Maths, Physics, & a science subject.

1.2.4 Rank / score (%): 4 passes at HSE.

1.3 Are exemptions possible: Yes.

1.3.1 If so, in subjects or level: Lower level school learning qualifications acceptable for diploma & associated diploma courses.
1.4 Number of applicants per year: Large numbers apply to shipping companies which sponsor about 30 deck cadets every year.

1.4.1 Number of seats (Capacity) per year: 30 as above.

1.4.1 Surplus of applicants: yes.

1.4.2 Lack of applicants: -

1.4.3 Reasons for surplus / lack: Job opportunity & sea romance.

1.5 Academy entry age (Min. / Max.): 18 / - years.

2.0 Physical fitness / medical entrance requirements.

2.1 Minimum height: These are measures for the employers (i.e.

2.2 Weight - Minimum - Maximum: shipping companies which sponsor the cadets

2.3 X-ray for infectious diseases: shipping companies which sponsor the cadets

2.4 Hearing test: shipping companies which sponsor the cadets

2.5 Dental inspection: shipping companies which sponsor the cadets

2.6 Eye sight: I
2.6.1 Letter test : I to AMC
2.6.2 Colour perception test : I

3.0 Psychological / personality requirements.

3.1 Psychological / aptitude test : As Section 2.
3.2 Interview / viva-voce : As Section 2.

4.0 Other entrance requirements.

4.1 Written examination : School learning
4.1.1 Subjects : qualifications
4.1.2 Pass marks : only.
4.2 Accommodation - Compulsory : Available but
   - Optional : not compulsory.

4.3 Expenses.

4.3.1 Tuition fees - Free : yes.
   - Student account : -
4.3.2 Uniform costs : yes (ship owners)
4.3.3 Accommodation charges : not free.
4.3.4 Food charges : not free.
4.3.5 Scholarships : some available.

4.4 Character verification by police
for any bad records : no.

4.5 Indemnity bond/undertaking to serve
Govt./Shipping company : no.

4.6 Marital status : optional.

4.7 Open to foreign nationals : yes.

4.8 Language : English.

5.0 Education and Training for unlimited certificates for Masters.

5.1 ACADEMIC PERIOD.

5.1.1 Duration : 4 years including 1.5 years sea training.

5.1.2 Sea time (controlled) :

5.1.3 Examination - Written (Yes/No) : yes.
- Orals : yes.
- Practical : no.

5.1.4 Certificate of competency awarded : Watch keeping certificate as Second Mate.

5.1.5 Academic degree awarded : Bachelor of applied science.
5.2 SEA SERVICE PERIODS.

5.2.1 Sea time for - Second Mate - Chief Mate - Master
  : 1.5 years.

5.2.2 Shore preparatory course for -
  - Second Mate - Chief Mate - Master
  : Not applicable : as certificate : of competency knowledge requirements are incorporated in degree/- diploma course.

5.2.3 Examination - Written - Orals - Practical
  : :- : yes. : :-

5.2.4 Highest Certificate of competency awarded
  : Master Class 1.
2.2 COUNTRY: BANGLADESH.
Academy: Marine Academy, Chittagong.

1.0 General education and age entrance requirements.

1.1 School starting average age: 6 years.

1.2 Minimum level of general education required for entrance: Higher Secondary Certificate.

1.2.1 Duration of general education: 12 years.

1.2.2 Special course (e.g., science): Science.

1.2.3 Main Subjects required: Maths, Physics.

1.2.4 Rank / score (%): Second division.

1.3 Are exemptions possible: no.

1.3.1 If so, in subjects or level: ?-

1.4 Number of applicants per year: About 700.

1.4.1 Number of seats (Capacity) per year: 22.

1.4.2 Surplus of applicants: yes.

1.4.3 Lack of applicants: ?-

1.4.4 Reasons for surplus / lack: Job opportunity, higher pay.
1.5 Academy entry age (Min./Max.) : 18/20 years.

2.0 Physical fitness / medical entrance requirements.

2.1 Minimum height : 156 cm.

2.2 Weight - Minimum : 46 kg.
- Maximum : -

2.3 X-ray for infectious diseases. : yes.

2.4 Hearing test : yes.

2.5 Dental inspection : yes.

2.6 Eye sight.

2.6.1 Letter test : yes.

2.6.2 Colour perception test : yes.

3.0 Psychological/ personality requirements.

3.1 Psychological / aptitude test : no.

3.2 Interview / viva-voce : yes.

4.0 Other entrance requirements.

4.1 Written examination : yes.

4.1.1 Subjects : Maths, Physics, English, General knowledge.

4.1.2 Pass marks : 40%
4.2 Accommodation - Compulsory - Optional
4.3 Expenses.
4.3.1 Tuition fees - Free - Student account :yes, according to parent's income.
4.3.2 Uniform costs :By student.
4.3.3 Accommodation charges :free.
4.3.4 Food charges :free.
4.3.5 Scholarships :yes, to meritorious & poor cadets.
4.4 Character verification by police for any bad records :yes
4.5 Indemnity bond/undertaking to serve Govt./Shipping company :yes.
4.6 Marital status :Unmarried.
4.7 Open to foreign nationals :yes, limited seats.
4.8 Language :English.
5.0 Education and Training for unlimited certificates for Masters.

5.1 ACADEMIC PERIOD.

5.1.1 Duration: 2 years.

5.1.2 Sea time (controlled): -

5.1.3 Examination - Written (Yes/No): yes.
- Orals: yes.
- Practical: yes.

5.1.4 Certificate of competency awarded: -

5.1.5 Academic degree awarded: -

5.2 SEA SERVICE PERIODS.

5.2.1 Sea time for - Second Mate: 39 months.
- Chief Mate: 18 "
- Master: 18 "

5.2.2 Shore preparatory course for -
- Second Mate: Optional.
- Chief Mate: 
- Master: 

5.2.3 Examination - Written: yes.
- Orals: yes.
- Practical: yes.

5.2.4 Highest Certificate of competency awarded: Master Class 1
2.3 **COUNTRY:** **CANADA.**
   Academy: Marine Institute, Newfoundland.

1.0 **General education and age entrance requirements.**

1.1 School starting average age: 5 years.

1.2 Minimum level of general education required for entrance: Senior High School graduation certificate.

1.2.1 Duration of general education: 13 years.

1.2.2 Special course (e.g. science): Science.

1.2.3 Main Subjects required and the level three science.

1.2.4 Rank / score (%): 60%

1.3 Are exemptions possible? Yes.

1.3.1 If so, in subjects or level? In general stream (Hawse-pipe) system.

1.4 Number of applicants per year: About 120 in general stream, 100 in Cadet/Diploma programme.

1.4.1 Number of seats (Capacity) per year: Varies.

1.4.2 Surplus of applicants: Yes.

1.4.3 Lack of applicants: -
1.4.4 Reasons for surplus / lack difficulty in shore job (Unemployment).

1.5 Academy entry age (Min. / Max.) : 17/ - years.

2.0 Physical fitness / medical entrance requirements.

2.1 Minimum height

2.2 Weight - Minimum Under consideration

2.3 X-ray for infectious diseases for

2.4 Hearing test implementation

2.5 Dental inspection

2.6 Eye sight.

2.6.1 Letter test yes.

2.6.2 Colour perception test yes.

3.0 Psychological / personality requirements.

3.1 Psychological / aptitude test :

3.2 Interview / viva-voce yes.

4.0 Other entrance requirements.

4.1 Written examination no.
4.1.1 Subjects:  

4.1.2 Pass marks:  

4.2 Accommodation - Compulsory  
- Optional: yes.

4.3 Expenses:  

4.3.1 Tuition fees - Free  
- Student account: yes.

4.3.2 Uniform costs: No uniforms.

4.3.3 Accommodation charges: Student pays.

4.3.4 Food charges: Student pays.

4.3.5 Scholarships: yes, to some.

4.4 Character verification by police  
for any bad records: Only with Canadian coast guard.

4.5 Indemnity bond/undertaking to serve  
Govt./ Shipping company: no.

4.6 Marital status: Optional.

4.7 Open to foreign nationals: yes.

4.8 Language: English.
5.0 Education and Training for unlimited certificates for Masters.

5.1 ACADEMIC PERIOD.

5.1.1 Duration: 4 years including 1.5 years sea training.

5.1.2 Sea time (controlled): years sea training.

5.1.3 Examination - Written (Yes/No): yes.
- Orals: yes.
- Practical: yes.

5.1.4 Certificate of competency awarded: Watchkeeping certificate for 3rd Mate.

5.1.5 Academic degree awarded: Diploma of technology in Nautical Science.

5.2 SEA SERVICE PERIODS.

5.2.1 Sea time for - Second Mate: 12 months.
- Chief Mate: 12 months.
- Master: 12 months.

5.2.2 Shore preparatory course for -
- Second Mate: 1
- Chief Mate: Compulsory.
- Master: 1
5.2.3 Examination  - Written  : yes.
- Orals  : yes.
- Practical  : yes.

5.2.4 Highest Certificate of competency
awarded  : Master Mariner.
2.4 COUNTRY: DENMARK.

Academy: Navigation School, Copenhagen.

1.0 General education and age entrance requirements.

1.1 School starting average age: 7 years.

1.2 Minimum level of general education required for entrance: Secondary School

1.2.1 Duration of general education: 9 years.

1.2.2 Special course (eg. science): -

1.2.3 Main Subjects required: -

1.2.4 Rank / score (%): -

1.3 Are exemptions possible: no.

1.3.1 If so, in subjects or level: -

1.4 Number of applicants per year: 30

1.4.1 Number of seats (Capacity) per year: 60

1.4.2 Surplus of applicants: -

1.4.3 Lack of applicants: yes.

1.4.4 Reasons for surplus / lack: Lacking applicants

1.5 Academy entry age (Min. / Max.): 16/20 years.
2.0 **Physical fitness / medical entrance requirements.**

2.1 Minimum height

2.2 Weight - Minimum

- Maximum

2.3 X-ray for infectious diseases

2.4 Hearing test

2.5 Dental inspection

2.6 Eye sight.

2.6.1 Letter test : yes.

2.6.2 Colour perception test : yes.

3.0 **Psychological / personality requirements.**

3.1 Psychological / aptitude test

3.2 Interview / viva-voce

4.0 **Other entrance requirements.**

4.1 Written examination : no.

4.1.1 Subjects

4.1.2 Pass marks
4.2 Accommodation - Compulsory
- Optional :yes.

4.3 Expenses.

4.3.1 Tuition fees - Free :yes.
- Student account :-

4.3.2 Uniform costs :No uniforms.

4.3.3 Accommodation charges :-

4.3.4 Food charges :Student pays.

4.3.5 Scholarships :-

4.4 Character verification by police
for any bad records :no.

4.5 Indemnity bond/undertaking to serve
Govt./Shipping company :no.

4.6 Marital status :Optional.

4.7 Open to foreign nationals :yes.

4.8 Language :Danish.

5.0 Education and Training for unlimited certificates for Masters.

5.1 ACADEMIC PERIOD.

5.1.1 Duration :3 years.
5.1.2 Sea time (controlled): 5 months in training school/vessel + 20.5 months sea-service as mate apprentice before joining Navigation school.

5.1.3 Examination - Written (Yes/ No): Yes.
- Orals: Yes.
- Practical: Yes.

5.1.4 Certificate of competency awarded: Mate 2. class.

5.1.5 Academic degree awarded: -

5.2 SEA SERVICE PERIODS.

5.2.1 Sea time for - Second Mate: -
- Chief Mate: 12 months.
- Master: 12 months.

5.2.2 Shore preparatory course for -
- Second Mate: Updating
- Chief Mate: Courses.
- Master:

5.2.3 Examination - Written: Yes.
- Orals: Yes.
- Practical: Yes.

5.2.4 Highest Certificate of competency awarded: Master.
2.5 COUNTRY: EGYPT.
Academy: Alexandria Maritime Transport Academy.

1.0 General education and age entrance requirements.

1.1 School starting average age: 6 years.

1.2 Minimum level of general education required for entrance: Higher Secondary Certificate.

1.2.1 Duration of general education: 12 years.

1.2.2 Special course (e.g., science): Science.

1.2.3 Main Subjects required: Maths, Physics.

1.2.4 Rank / score (%): First division.

1.3 Are exemptions possible: No.

1.3.1 If so, in subjects or level: -

1.4 Number of applicants per year: About 2000.

1.4.1 Number of seats (Capacity) per year: 100.

1.4.2 Surplus of applicants: Yes.

1.4.3 Lack of applicants: -

1.4.4 Reasons for surplus / lack: More salary and Suez canal job facility.
1.5 Academy entry age (Min. / Max.) : 18/21 years.

2.0 Physical fitness / medical entrance requirements.

2.1 Minimum height : 160 cm.

2.2 Weight - Minimum - Maximum:

2.3 X-ray for infectious diseases : yes.

2.4 Hearing test : yes.

2.5 Dental inspection : yes.

2.6 Eye sight.

2.6.1 Letter test : yes.

2.6.2 Colour perception test : yes.

3.0 Psychological / personality requirements.

3.1 Psychological / aptitude test : yes, by doctor.

3.2 Interview / viva-voce : yes.

4.0 Other entrance requirements.

4.1 Written examination : yes.

4.1.1 Subjects : Maths, English.
4.1.2 Pass marks: 65%

4.2 Accommodation - Compulsory: yes.
- Optional: -

4.3 Expenses.

4.3.1 Tuition fees - Free: -
- Student account: yes.

4.3.2 Uniform costs: Student pays.

4.3.3 Accommodation charges: Student pays.

4.3.4 Food charges: Student pays.

4.3.5 Scholarships: yes.

4.4 Character verification by police
for any bad records: no.

4.5 Indemnity bond/undertaking to serve
Govt./Shipping company: Only those
sponsored by Govt.

4.6 Marital status: Unmarried.

4.7 Open to foreign nationals: yes.

4.8 Language: English, Arabic

5.0 Education and Training for unlimited certificates
for Masters.

5.1 ACADEMIC PERIOD.
5.1.1 Duration
5.1.2 Sea time (controlled): 2 years including 6 months sea training.

5.1.3 Examination - Written (Yes/No)
- Orals: yes.
- Practical: yes.

5.1.4 Certificate of competency awarded: -

5.1.5 Academic degree awarded: -

5.2 SEA SERVICE PERIODS.

5.2.1 Sea time for - Second Mate: 18 months.
- Chief Mate: 18 months.
- Master: 24 months.

5.2.2 Shore preparatory course for -
- Second Mate: 6 months.
- Chief Mate: 6 months.
- Master: 6 months.

5.2.3 Examination - Written: yes.
- Orals: yes.
- Practical: yes.

5.2.4 Highest Certificate of competency awarded: Master (F.G.).
2.6 COUNTRY: FRANCE.
   Academy: ENMM, Le Havre.

1.0 General education and age entrance requirements.

1.1 School starting average age: 6 years.

1.2 Minimum level of general education required for entrance: Baccalaureat
   (General certificate of education - Advanced level).

1.2.1 Duration of general education: 12 years.

1.2.2 Special course (e.g. science): Baccalaureat C

1.2.3 Main Subjects required: Maths.

1.2.4 Rank / score (%): -

1.3 Are exemptions possible? No.

1.3.1 If so, in subjects or level: -

1.4 Number of applicants per year: Variable.

1.4.1 Number of seats (Capacity) per year: -

1.4.2 Surplus of applicants: -

1.4.3 Lack of applicants: Yes.

1.4.4 Reasons for surplus / lack: Probably due to economical circumstances.

1.5 Academy entry age (Min. / Max.): 17/23 years.
2.0 **Physical fitness / medical entrance requirements.**

2.1 Minimum height

2.2 Weight - Minimum

- Maximum

2.3 X-ray for infectious diseases : yes.

2.4 Hearing test

2.5 Dental inspection

2.6 Eye sight.

2.6.1 Letter test :yes.

2.6.2 Colour perception test :yes.

3.0 **Psychological/ personality requirements.**

3.1 Psychological / aptitude test

3.2 Interview / viva-voce

4.0 **Other entrance requirements.**

4.1 Written examination :yes.

4.1.1 Subjects : Maths, Physics, French, Technical drawing.

4.1.2 Pass marks :Variable.
4.2 Accommodation - Compulsory
- Optional :yes.

4.3 Expenses.

4.3.1 Tuition fees - Free
- Student account :yes.

4.3.2 Uniform costs

4.3.3 Accommodation charges

4.3.4 Food charges

4.3.5 Scholarships

4.4 Character verification by police
for any bad records :yes.

4.5 Indemnity bond/undertaking to serve
Govt./Shipping company :no.

4.6 Marital status :Optional.

4.7 Open to foreign nationals :yes.

4.8 Language :French.

5.0 Education and Training for unlimited certificates
for Masters.

5.1 ACADEMIC PERIOD.

5.1.1 Duration :4 years including 24 months
sea training (3 months at each department - Deck and Engine).

5.1.3 Examination - Written (Yes/No): yes.
- Orals: yes.
- Practical: yes.

5.1.4 Certificate of competency awarded: Diploma of Merchant Navy Higher Studies.

5.1.5 Academic degree awarded: -

5.2 SEA SERVICE PERIODS.

5.2.1 Sea time for - Second Mate: -
- Chief Mate: -
- Master: 36 months sea service including 13 months at each department.

5.2.2 Shore preparatory course for -
- Second Mate: -
- Chief Mate: -
- Master: -

5.2.3 Examination - Written: -
- Orals: -
- Practical: -

5.2.4 Highest Certificate of competency awarded: First class Master's certificate.
2.7 COUNTRY: FRG.
    Academy: Hochschule, Bremen.

1.0 General education and age entrance requirements.

1.1 School starting average age: 6 years.

1.2 Minimum level of general education required for entrance: Highest General Education.

1.2.1 Duration of general education: 12 years.

1.2.2 Special course (e.g., science): -

1.2.3 Main Subjects required: Maths, Physics and Chemistry.

1.2.4 Rank / score (%): -

1.3 Are exemptions possible: ? No.

1.3.1 If so, in subjects or level: ? -

1.4 Number of applicants per year: About 10/15.

1.4.1 Number of seats (Capacity) per year: -

1.4.2 Surplus of applicants: -

1.4.3 Lack of applicants: Yes.

1.4.4 Reasons for surplus / lack: General situation in FRG in shipping industry.
1.5 Academy entry age (Min. / Max.) : 15/- years.

2.0 Physical fitness / medical entrance requirements.

2.1 Minimum height :

2.2 Weight - Minimum :
- Maximum :

2.3 X-ray for infectious diseases : yes.

2.4 Hearing test : yes.

2.5 Dental inspection :

2.6 Eye sight.

2.6.1 Letter test : yes.

2.6.2 Colour perception test : yes.

3.0 Psychological / personality requirements.

3.1 Psychological / aptitude test :

3.2 Interview / viva-voce :

4.0 Other entrance requirements.

4.1 Written examination :

4.1.1 Subjects :

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4.1.2 Pass marks

4.2 Accommodation - Compulsory : No residence
          - Optional : available.

4.3 Expenses.

4.3.1 Tuition fees - Free : yes.
           - Student account : -

4.3.2 Uniform costs : No uniforms.

4.3.3 Accommodation charges : Student pays.

4.3.4 Food charges : Student pays.

4.3.5 Scholarships : German law of education.

4.4 Character verification by police for any bad records : -

4.5 Indemnity bond/undertaking to serve Govt./ Shipping company : -

4.6 Marital status : Optional.

4.7 Open to foreign nationals : no.

4.8 Language : German.

5.0 Education and Training for unlimited certificates for Masters.

5.1 ACADEMIC PERIOD.

5.1.1 Duration : 3 years .
5.1.2 Sea time (controlled) 
Prior to academy 3 years, then 1 year training as officer assistant.

5.1.3 Examination - Written (Yes/No) 
- Orals: Yes
- Practical: No

5.1.4 Certificate of competency awarded: Deck officer/AGW Chief Mate.

5.1.5 Academic degree awarded: Bachelor Degree in Nautical Science.

5.2 SEA SERVICE PERIODS.

5.2.1 Sea time for - Second Mate:
- Chief Mate:
- Master: 2 years.

5.2.2 Shore preparatory course for -
- Second Mate:
- Chief Mate:
- Master:

5.2.3 Examination - Written:
- Orals:
- Practical:

5.2.4 Highest Certificate of competency awarded: Master - AG.
2.8 COUNTRY : GDR.
Academy : Ingenieurhochschule fur seefahrt, Warnemunde

1.0 General education and age entrance requirements.

1.1 School starting average age : 6/7 years.

1.2 Minimum level of general education required for entrance : 13 years including professional training.

1.2.1 Duration of general education : 13 years including 6 to 9 months sea training.

1.2.2 Special course (eg. science) : -

1.2.3 Main Subjects required : Natural science and English.

1.2.4 Rank / score (%) : -

1.3 Are exemptions possible ? No.

1.3.1 If so, in subjects or level ? -

1.4 Number of applicants per year : 60/85.

1.4.1 Number of seats (Capacity) per year : 100.

1.4.2 Surplus of applicants : -

1.4.3 Lack of applicants : Yes.

1.4.4 Reasons for surplus / lack : Change in fleet size.

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1.5 Academy entry age (Min. / Max.) : 21/23 years.

2.0 Physical fitness / medical entrance requirements.

2.1 Minimum height

2.2 Weight - Minimum

- Maximum

2.3 X-ray for infectious diseases : yes.

2.4 Hearing test : yes.

2.5 Dental inspection

2.6 Eye sight.

2.6.1 Letter test : yes.

2.6.2 Colour perception test : yes.

3.0 Psychological / personality requirements.

3.1 Psychological / aptitude test

3.2 Interview / viva-voce

4.0 Other entrance requirements.

4.1 Written examination

4.1.1 Subjects
4.1.2 Pass marks

4.2 Accommodation - Compulsory: yes.
- Optional: no.

4.3 Expenses.

4.3.1 Tuition fees - Free: yes.
- Student account: no.

4.3.2 Uniform costs: free.

4.3.3 Accommodation charges: 3% of financial support.

4.3.4 Food charges: 10% of DM 300.

4.3.5 Scholarships: yes.

4.4 Character verification by police for any bad records: no.

4.5 Indemnity bond/undertaking to serve Govt./Shipping company: no.

4.6 Marital status: Optional.

4.7 Open to foreign nationals: yes.

4.8 Language: German.

5.0 Education and Training for unlimited certificates for Masters.

5.1 ACADEMIC PERIOD.

43
5.1.1 Duration: 4.5 years with Diploma.

5.1.2 Sea time (controlled): 23/30 weeks sea training.

5.1.3 Examination - Written (Yes/No): Yes.
- Orals: Yes.
- Practical: Yes.

5.1.4 Certificate of competency awarded: A4 - 3rd Mate.

5.1.5 Academic degree awarded: Diploma Engineer

5.2 SEA SERVICE PERIODS.

5.2.1 Sea time for - Second Mate: 1/2 years - A4.
- Chief Mate: 2/6 years - A4.
- Master: 5 years - A6.

5.2.2 Shore preparatory course for -
- Second Mate: Refresher
- Chief Mate: Course
- Master: Every 15 years

5.2.3 Examination - Written:
- Orals: For
- Practical:

5.2.4 Highest Certificate of competency awarded: A6 - Master

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2.9 COUNTRY: GREECE.
Academy: Higher Schools of Maritime Education,
Aspropygos (near Athens).

1.0 General education and age entrance requirements.

1.1 School starting average age: 6 years.

1.2 Minimum level of general education required for entrance:
   - Secondary Certificate.

1.2.1 Duration of general education: 12 years.

1.2.2 Special course (e.g., science): Science.

1.2.3 Main Subjects required:
   - Maths, Physics, Chemistry, and English.

1.2.4 Rank/score(%): Varies according to number of candidates.

1.3 Are exemptions possible? Yes.

1.3.1 If so, in subjects or level?
   - With 6 months sea experience, Seaman & Coast guard's children.

1.4 Number of applicants per year: About 1200.

1.4.1 Number of seats (Capacity) per year: 1100.

1.4.2 Surplus of applicants: Yes.
1.4.3 Lack of applicants

1.4.4 Reasons for surplus / lack: Unemployment at sea due to reduced number of Greek registry ships.

1.5 Academy entry age (Min. / Max.): 18/30 years.

2.0 Physical fitness / medical entrance requirements.

2.1 Minimum height: 150 cm.

2.2 Weight - Minimum: -
- Maximum: -

2.3 X-ray for infectious diseases: yes.

2.4 Hearing test: yes.

2.5 Dental inspection: -

2.6 Eye sight.

2.6.1 Letter test: yes.

2.6.2 Colour perception test: yes.

3.0 Psychological / personality requirements.

3.1 Psychological / aptitude test: yes, by doctor.

3.2 Interview / viva-voce: yes.
4.0 Other entrance requirements.

4.1 Written examination

4.1.1 Subjects

4.1.2 Pass marks

4.2 Accommodation - Compulsory : Not
   - Optional : Available.

4.3 Expenses.

4.3.1 Tuition fees - Free : yes.
   - Student account : -

4.3.2 Uniform costs : No uniforms.

4.3.3 Accommodation charges : -

4.3.4 Food charges : -

4.3.5 Scholarships : yes.

4.4 Character verification by police
   for any bad records : no.

4.5 Indemnity bond/undertaking to serve
   Govt./Shipping company : no.

4.6 Marital status : Optional.

4.7 Open to foreign nationals : yes.

4.8 Language : Greek.
5.0 Education and Training for unlimited certificates for Masters.

5.1 ACADEMIC PERIOD.

5.1.1 Duration : 3 years
5.1.2 Sea time (controlled) : Including 3/8-weeks shipboard training.

5.1.3 Examination - Written (Yes/No) : yes.
   - Orals : yes.
   - Practical : yes.

5.1.4 Certificate of competency awarded :
5.1.5 Academic degree awarded :

5.2 SEA SERVICE PERIODS.

5.2.1 Sea time for - Second Mate : 12 months.
   - Chief Mate : 20 months.
   - Master : 32 months.

5.2.2 Shore preparatory course for -
   - Second Mate :
   - Chief Mate : 4.5 months.
   - Master : 4.5 months.

5.2.3 Examination - Written : yes.
   - Orals : yes.
   - Practical :

5.2.4 Highest Certificate of competency awarded : Captain 1st Class (Unlimited).
2.10 COUNTRY: INDIA.
Academy: Onboard T.S. Rajendra, Bombay.

1.0 General education and age entrance requirements.

1.1 School starting average age: 5/6 years.

1.2 Minimum level of general education required for entrance: Standard XII.

1.2.1 Duration of general education: 12 years.

1.2.2 Special course (e.g., science): Science.

1.2.3 Main Subjects required: Maths, Physics, and Chemistry.

1.2.4 Rank / score (%): -

1.3 Are exemptions possible: No.

1.3.1 If so, in subjects or level: -

1.4 Number of applicants per year: Varies.

1.4.1 Number of seats (Capacity) per year: 125

1.4.2 Surplus of applicants: -

1.4.3 Lack of applicants: Yes.

1.4.4 Reasons for surplus / lack: Lack of job opportunity at sea.
1.5 Academy entry age (Min. / Max.) : 17/20 years.

2.0 Physical fitness / medical entrance requirements.

2.1 Minimum height :

2.2 Weight - Minimum :

- Maximum :

2.3 X-ray for infectious diseases : yes.

2.4 Hearing test : yes.

2.5 Dental inspection : yes.

2.6 Eye sight.

2.6.1 Letter test : yes.

2.6.2 Colour perception test : yes.

3.0 Psychological / personality requirements.

3.1 Psychological / aptitude test :

3.2 Interview / viva-voce : yes.

4.0 Other entrance requirements.

4.1 Written examination : yes.

4.1.1 Subjects : Maths, Physics, Chemistry and English.
4.1.2 Pass marks: Competitive.

4.2 Accommodation - Compulsory: Yes.
- Optional: -

4.3 Expenses.

4.3.1 Tuition fees - Free: -
- Student account: Yes, but subsidized by Govt.

4.3.2 Uniform costs: Student pays.

4.3.3 Accommodation charges: Student pays.

4.3.4 Food charges: Student pays.

4.3.5 Scholarships: Yes.

4.4 Character verification by police for any bad records: Yes.

4.5 Indemnity bond/undertaking to serve Govt./Shipping company: No.

4.6 Marital status: Unmarried.

4.7 Open to foreign nationals: Yes.

4.8 Language: English.

5.0 Education and Training for unlimited certificates for Masters.

5.1 ACADEMIC PERIOD.
5.1.1 Duration : 2 years.

5.1.2 Sea time (controlled) : Though academic period is onboard but no sailing time.

5.1.3 Examination - Written (Yes/No) : yes.
- Orals : yes.
- Practical : yes.

5.1.4 Certificate of competency awarded :

5.1.5 Academic degree awarded :

5.2 SEA SERVICE PERIODS.

5.2.1 Sea time for - Second Mate : 27 months.
- Chief Mate : 18 months.
- Master : 18 months.

5.2.2 Shore preparatory course for -
- Second Mate :
- Chief Mate : Optional.
- Master :

5.2.3 Examination - Written : yes.
- Orals : yes.
- Practical : yes.

5.2.4 Highest Certificate of competency awarded : Master (F.G.).

N.B: This present system may change in near future.
2.11 COUNTRY: MEXICO. Academy: Nautical School, Tampico.

1.0 General education and age entrance requirements.

1.1 School starting average age: 6 years.

1.2 Minimum level of general education required for entrance: Preparatory or Vocational.

1.2.1 Duration of general education: 12 years.

1.2.2 Special course (e.g., science): Engineering.

1.2.3 Main Subjects required: Maths, Physics, and Chemistry.

1.2.4 Rank / score (%): Competitive.

1.3 Are exemptions possible? No.

1.3.1 If so, in subjects or level? -

1.4 Number of applicants per year: About 200.

1.4.1 Number of seats (Capacity) per year: 45.

1.4.2 Surplus of applicants: Yes.

1.4.3 Lack of applicants: -

1.4.4 Reasons for surplus / lack: Sea attraction and more pay.
1.5  Academy entry age (Min. / Max.) : 16/22 years.

2.0  Physical fitness / medical entrance requirements.

2.1  Minimum height : 165 cm.

2.2  Weight - Minimum : As per height ratio
     - Maximum

2.3  X-ray for infectious diseases : yes.

2.4  Hearing test : yes.

2.5  Dental inspection : yes.

2.6  Eye sight.

2.6.1 Letter test : yes.

2.6.2 Colour perception test : yes.

3.0  Psychological / personality requirements.

3.1  Psychological / aptitude test : yes, by specialist

3.2  Interview / viva-voce : yes.

4.0  Other entrance requirements.

4.1  Written examination : yes.

4.1.1 Subjects : Maths, Physics,
4.1.2 Pass marks: Chemistry and English.

4.2 Accommodation - Compulsory: yes.
- Optional: -

4.3 Expenses:

4.3.1 Tuition fees - Free: Nearly free.
- Student account: very minimum.

4.3.2 Uniform costs: Student pays.

4.3.3 Accommodation charges: Free.

4.3.4 Food charges: Free.

4.3.5 Scholarships: yes.

4.4 Character verification by police for any bad records: yes.

4.5 Indemnity bond/undertaking to serve Govt./Shipping company: no.

4.6 Marital status: Unmarried.

4.7 Open to foreign nationals: yes.

4.8 Language: Spanish, English

5.0 Education and Training for unlimited certificates for Masters.

5.1 ACADEMIC PERIOD.
5.1.1 Duration : 2 years.
5.1.2 Sea time (controlled) : 1 year.

5.1.3 Examination - Written (Yes/No) : Yes.
   - Orals : Yes.
   - Practical : Yes.

5.1.4 Certificate of competency awarded :-

5.1.5 Academic degree awarded :-

5.2 SEA SERVICE PERIODS.

5.2.1 Sea time for - Second Mate : 6 months.
   - Chief Mate : 3 years.
   - Master : 3 years.

5.2.2 Shore preparatory course for -
   - Second Mate : 1
   - Chief Mate : 1 Compulsory.
   - Master : 1

5.2.3 Examination - Written : Yes.
   - Orals : Yes.
   - Practical : Yes.

5.2.4 Highest Certificate of competency awarded : Master.
2.12 COUNTRY : NETHERLANDS.
Academy : Algeme Hogeschool, Amsterdam.

1.0 General education and age entrance requirements.

1.1 School starting average age : 4 years.

1.2 Minimum level of general education required for entrance:
High Level General Education (HGE).

1.2.1 Duration of general education : 13 years.

1.2.2 Special course (eg. science) : -

1.2.3 Main Subjects required : Maths & Physics

1.2.4 Rank / score (%) : -

1.3 Are exemptions possible ? no.

1.3.1 If so, in subjects or level ? -

1.4 Number of applicants per year : Variable.

1.4.1 Number of seats (Capacity) per year : Depends on fleet situation and govt. decision.

1.4.2 Surplus of applicants : -

1.4.3 Lack of applicants : yes.

1.4.4 Reasons for surplus / lack : Due to less job prospects.
1.5 Academy entry age (Min. / Max.) : 17/22 years.

2.0 Physical fitness / medical entrance requirements.

2.1 Minimum height

2.2 Weight - Minimum

- Maximum

2.3 X-ray for infectious diseases : yes.

2.4 Hearing test : yes.

2.5 Dental inspection : -

2.6 Eye sight.

2.6.1 Letter test : yes.

2.6.2 Colour perception test : yes.

3.0 Psychological / personality requirements.

3.1 Psychological / aptitude test : -

3.2 Interview / viva-voce : -

4.0 Other entrance requirements.

4.1 Written examination : -

4.1.1 Subjects : -
4.1.2 Pass marks

4.2 Accommodation - Compulsory
- Optional: yes.

4.3 Expenses.

4.3.1 Tuition fees - Free
- Student account: yes.

4.3.2 Uniform costs: No uniforms.

4.3.3 Accommodation charges: Student pays.

4.3.4 Food charges: Student pays.

4.3.5 Scholarships: Every student gets basic financial support from the Govt.

4.4 Character verification by police
for any bad records:

4.5 Indemnity bond/undertaking to serve
Govt./Shipping company:

4.6 Marital status: Optional.

4.7 Open to foreign nationals: yes.

4.8 Language: Dutch.

5.0 Education and Training for unlimited certificates for Masters.
5.1 ACADEMIC PERIOD.

5.1.1 Duration : 4 years

5.1.2 Sea time (controlled) : Including 1 yr.
  sea training- 6 months each on Deck & Engine dept.

5.1.3 Examination - Written (Yes/No) : yes.
  - Orals : yes.
  - Practical : yes.

5.1.4 Certificate of competency awarded : S3 + A (Dual--
  Purpose Officer).

5.1.5 Academic degree awarded : BSc.

5.2 SEA SERVICE PERIODS.

5.2.1 Sea time for - Second Mate : -
  - Chief Mate : 2 years.
  - Master : 2 years.

5.2.2 Shore preparatory course for -
  - Second Mate : -
  - Chief Mate S2 : -
  - Master S1 : Updating course

5.2.3 Examination - Written : -
  - Orals : -
  - Practical : -

5.2.4 Highest Certificate of competency
  awarded : Master S1.
2.13 COUNTRY: PHILIPPINES.
Academy: Philippine Merchant Marine Academy, Manila

1.0 General education and age entrance requirements.

1.1 School starting average age: 7 years.

1.2 Minimum level of general education required for entrance: High School.

1.2.1 Duration of general education: 10 years.

1.2.2 Special course (e.g., science): General Science

1.2.3 Main Subjects required: Maths, Physics and English.

1.2.4 Rank / score (%): Upper 50% of class

1.3 Are exemptions possible? No.

1.3.1 If so, in subjects or level? -

1.4 Number of applicants per year: About 1000.

1.4.1 Number of seats (Capacity) per year: 100.

1.4.2 Surplus of applicants: Yes.

1.4.3 Lack of applicants: -

1.4.4 Reasons for surplus / lack: High educational standard and more job opportunity.
1.5 Academy entry age (Min. / Max.) : 17/21 years.

2.0 Physical fitness / medical entrance requirements.

2.1 Minimum height : 162 cm.

2.2 Weight - Minimum : 45 kg.

2.3 X-ray for infectious diseases : yes.

2.4 Hearing test : yes.

2.5 Dental inspection : yes.

2.6 Eye sight.

2.6.1 Letter test : yes.

2.6.2 Colour perception test : yes.

3.0 Psychological / personality requirements.

3.1 Psychological / aptitude test : yes, by doctor for Neuro-Psych test and also qualified candidates undergo a one-month orientation and indoctrination prior final to selection.

3.2 Interview / viva-voce : yes.

4.0 Other entrance requirements.

4.1 Written examination : yes.
4.1.1 Subjects
: Maths, Physics and English.

4.1.2 Pass marks
: Upper 100 taken

4.2 Accommodation - Compulsory
: yes.
- Optional
: -

4.3 Expenses.

4.3.1 Tuition fees - Free
: Nearly free.
- Student account
: Very minimum.

4.3.2 Uniform costs
: Free.

4.3.3 Accommodation charges
: Free.

4.3.4 Food charges
: Free.

4.3.5 Scholarships
: Yes.

4.4 Character verification by police
for any bad records
: National security clearance.

4.5 Indemnity bond/undertaking to serve
Govt./Shipping company
: No.

4.6 Marital status
: Unmarried.

4.7 Open to foreign nationals
: No.

4.8 Language
: English/Pilipino
5.0 **Education and Training for unlimited certificates for Masters.**

5.1 **ACADEMIC PERIOD.**

5.1.1 **Duration**: 4 years
5.1.2 **Sea time (controlled)**: Including 1 yr. shipboard training.

5.1.3 **Examination** - Written (Yes/No): Yes.
- Orals: Yes.
- Practical: Yes.

5.1.4 **Certificate of competency awarded**: 3rd Mate.

5.1.5 **Academic degree awarded**: BSc in Marine Transportation.

5.2 **SEA SERVICE PERIODS.**

5.2.1 **Sea time for** - Second Mate: 1 year.
- Chief Mate: 1 year.
- Master: 2 years.

5.2.2 **Shore preparatory course for** -
- Second Mate: I
- Chief Mate: I (Not compulsory
- Master: I

5.2.3 **Examination** - Written: Yes.
- Orals: -
- Practical: -

5.2.4 **Highest Certificate of competency awarded**: Master.
2.14 COUNTRY: PAKISTAN.
Academy: Pakistan Marine Academy, Karachi.

1.0 General education and age entrance requirements.

1.1 School starting average age: 5 years.

1.2 Minimum level of general education required for entrance: Higher Secondary Certificate.

1.2.1 Duration of general education: 12 years.

1.2.2 Special course (e.g., science): Pre-Engineering

1.2.3 Main Subjects required: Maths, Physics and English.

1.2.4 Rank / score (%): Second division

1.3 Are exemptions possible? No.

1.3.1 If so, in subjects or level: -

1.4 Number of applicants per year: 200.

1.4.1 Number of seats (Capacity) per year: 20.

1.4.2 Surplus of applicants: Yes.

1.4.3 Lack of applicants: -

1.4.4 Reasons for surplus / lack: More pay, job opportunity.
1.5 Academy entry age (Min. / Max.) : 17/20 years.

2.0 Physical fitness / medical entrance requirements.

2.1 Minimum height : 158 cm.

2.2 Weight - Minimum : as per height ratio

- Maximum : -

2.3 X-ray for infectious diseases : yes.

2.4 Hearing test : yes.

2.5 Dental inspection : yes.

2.6 Eye sight.

2.6.1 Letter test : yes.

2.6.2 Colour perception test : yes.

3.0 Psychological / personality requirements.

3.1 Psychological / aptitude test : -

3.2 Interview / viva-voce : -

4.0 Other entrance requirements.

4.1 Written examination : no.

4.1.1 Subjects : -
4.1.2 Pass marks

4.2 Accommodation - Compulsory :yes.
   - Optional :-

4.3 Expenses.

4.3.1 Tuition fees - Free :-
   - Student account :yes.

4.3.2 Uniform costs :Student pays.

4.3.3 Accommodation charges :Student pays.

4.3.4 Food charges :Student pays.

4.3.5 Scholarships :yes.

4.4 Character verification by police for any bad records :yes.

4.5 Indemnity bond/undertaking to serve Govt./Shipping company :-

4.6 Marital status :Unmarried.

4.7 Open to foreign nationals :yes.

4.8 Language :English.

5.0 Education and Training for unlimited certificates for Masters.

5.1 ACADEMIC PERIOD.
5.1.1 Duration : 2 years.
5.1.2 Sea time (controlled) : -

5.1.3 Examination - Written (Yes/No) : yes.
- Orals : yes.
- Practical : yes.

5.1.4 Certificate of competency awarded : -

5.1.5 Academic degree awarded : BSc in Maritime Studies.

5.2 SEA SERVICE PERIODS.

5.2.1 Sea time for - Second Mate : 39 months.
- Chief Mate : 18 months.
- Master : 18 months.

5.2.2 Shore preparatory course for -
- Second Mate : 4 months.
- Chief Mate : 4 months.
- Master : 4 months.

5.2.3 Examination - Written : yes.
- Orals : yes.
- Practical : yes.

5.2.4 Highest Certificate of competency awarded : Master Class 1.
2.15 COUNTRY: PANAMA.
Academy: Nautical School, Panama.

1.0 General education and age entrance requirements.

1.1 School starting average age: 6 years.

1.2 Minimum level of general education required for entrance: Higher Secondary Certificate.

1.2.1 Duration of general education: 12 years.

1.2.2 Special course (e.g. science): Science/Industrial

1.2.3 Main Subjects required: Maths, Physics and Chemistry.

1.2.4 Rank / score (%): Min. score 3.

1.3 Are exemptions possible? No.

1.3.1 If so, in subjects or level? -

1.4 Number of applicants per year: 100.

1.4.1 Number of seats (Capacity) per year: 60

1.4.2 Surplus of applicants: Yes.

1.4.3 Lack of applicants: -

1.4.4 Reasons for surplus / lack: More pay, job security and Panama canal job.
1.5 Academy entry age (Min. / Max.) : 16/21 years.

2.0 Physical fitness / medical entrance requirements.

2.1 Minimum height

2.2 Weight - Minimum

- Maximum

2.3 X-ray for infectious diseases : yes.

2.4 Hearing test : yes.

2.5 Dental inspection : yes.

2.6 Eye sight.

2.6.1 Letter test : yes.

2.6.2 Colour perception test : yes.

3.0 Psychological/ personality requirements.

3.1 Psychological / aptitude test : yes, by doctor.

3.2 Interview / viva-voce : yes.

4.0 Other entrance requirements.

4.1 Written examination : yes.

4.1.1 Subjects : Maths, Physics, Chemistry and Maritime terms.

70
4.1.2 Pass marks : 71%

4.2 Accommodation - Compulsory : yes.
- Optional : -

4.3 Expenses.

4.3.1 Tuition fees - Free : -
- Student account : yes.

4.3.2 Uniform costs : Student pays.

4.3.3 Accommodation charges : Student pays.

4.3.4 Food charges : Student pays.

4.3.5 Scholarships : yes.

4.4 Character verification by police for any bad records : yes.

4.5 Indemnity bond/undertaking to serve Govt./Shipping company : no.

4.6 Marital status : Unmarried.

4.7 Open to foreign nationals : yes.

4.8 Language : Spanish & English

5.0 Education and Training for unlimited certificates for Masters.

5.1 ACADEMIC PERIOD.
5.1.1 Duration
5.1.2 Sea time (controlled)
5.1.3 Examination - Written (Yes/No)
   - Orals
   - Practical
5.1.4 Certificate of competency awarded
5.1.5 Academic degree awarded

5.2 SEA SERVICE PERIODS.
5.2.1 Sea time for - Second Mate
   - Chief Mate
   - Master
5.2.2 Shore preparatory course for -
   - Second Mate : ☑
   - Chief Mate : ☑Compulsory.
   - Master : ☑
5.2.3 Examination - Written
   - Orals
   - Practical
5.2.4 Highest Certificate of competency awarded

: 4 years
: Including 1 yr.
: sea training.
: yes.
: yes.
: yes.
: 3rd Mate.
: Bachelor in Nautical Science.
: 1 year.
: 1 year.
: 2 years.
: 
: 
: 
: Master.
2.16 COUNTRY: POLAND.
   Academy: Merchant Marine Academy, Gdynia.

1.0 General education and age entrance requirements.

1.1 School starting average age: 6/7 years.

1.2 Minimum level of general education required for entrance: A - Level.

1.2.1 Duration of general education: 12 years.

1.2.2 Special course (e.g., science): -

1.2.3 Main Subjects required: Maths, Physics and Language.

1.2.4 Rank / score (%): -

1.3 Are exemptions possible? No.

1.3.1 If so, in subjects or level? -

1.4 Number of applicants per year: 200.

1.4.1 Number of seats (Capacity) per year: 90.

1.4.2 Surplus of applicants: Yes.

1.4.3 Lack of applicants: -

1.4.4 Reasons for surplus / lack: Attractive to see the world and very good pay.
1.5 Academy entry age (Min. / Max.) : 16/- years.

2.0 Physical fitness / medical entrance requirements.

2.1 Minimum height : 170 cm.

2.2 Weight - Minimum : -

- Maximum : -

2.3 X-ray for infectious diseases : yes.

2.4 Hearing test : yes.

2.5 Dental inspection : yes.

2.6 Eye sight.

2.6.1 Letter test : yes.

2.6.2 Colour perception test : yes.

3.0 Psychological/ personality requirements.

3.1 Psychological / aptitude test : yes, 4 weeks tests onboard sailing vessel after entrance examination to the Academy.

3.2 Interview / viva-voce : yes.

4.0 Other entrance requirements.

4.1 Written examination : yes.
4.1.1 Subjects: Maths, Physics, and Language.

4.1.2 Pass marks: Varies.

4.2 Accommodation - Compulsory: 1st year is compulsary for all but students usually prefer accommodation.

4.3 Expenses:

4.3.1 Tuition fees - Free: yes.
- Student account: -

4.3.2 Uniform costs: Free.

4.3.3 Accommodation charges: Free.

4.3.4 Food charges: Free.

4.3.5 Scholarships: Yes.

4.4 Character verification by police for any bad records: No.

4.5 Indemnity bond/undertaking to serve Govt./Shipping company: No.

4.6 Marital status: Unmarried.

4.7 Open to foreign nationals: Yes, about 10%.

4.8 Language: Polish.
5.0 Education and Training for unlimited certificates for Masters.

5.1 ACADEMIC PERIOD.

5.1.1 Duration : 5 years
5.1.2 Sea time (controlled) : Including 14/18 months sea training.

5.1.3 Examination - Written (Yes/No) : Yes.
- Orals : Yes.
- Practical : Yes.

5.1.4 Certificate of competency awarded :

5.1.5 Academic degree awarded : Master of Science

5.2 SEA SERVICE PERIODS.

5.2.1 Sea time for - Second Mate : 6 months.
- Chief Mate : 2 years.
- Master : 1.5 years.

5.2.2 Shore preparatory course for -
- Second Mate :
- Chief Mate : 2 months.
- Master : 5 months.

5.2.3 Examination - Written : Yes.
- Orals : Yes.
- Practical : Yes.

5.2.4 Highest Certificate of competency awarded : Master Mariner.
2.17 COUNTRY: SWEDEN.
   Academy: Chalmers University of Technology, Goteborg

1.0 General education and age entrance requirements.

1.1 School starting average age: 7 years.

1.2 Minimum level of general education required for entrance: High School, DU-Line.

   1.2.1 Duration of general education: 11 years.

   1.2.2 Special course (eg. science): DU-Line.

   1.2.3 Main Subjects required: Maths, Physics and English.

   1.2.4 Rank / score (%): -

1.3 Are exemptions possible? No.

1.3.1 If so, in subjects or level?: -

1.4 Number of applicants per year: 100.

   1.4.1 Number of seats (Capacity) per year: 150.

   1.4.2 Surplus of applicants: -

   1.4.3 Lack of applicants: Yes.

   1.4.4 Reasons for surplus / lack: Less ship, less jobs.
1.5 Academy entry age (Min. / Max.) : 18/- years.

2.0 Physical fitness / medical entrance requirements.

2.1 Minimum height :

2.2 Weight - Minimum :

- Maximum :

2.3 X-ray for infectious diseases : yes.

2.4 Hearing test : yes.

2.5 Dental inspection :

2.6 Eye sight.

2.6.1 Letter test : yes.

2.6.2 Colour perception test : yes.

3.0 Psychological / personality requirements.

3.1 Psychological / aptitude test :

3.2 Interview / viva-voce :

4.0 Other entrance requirements.

4.1 Written examination :

4.1.1 Subjects :

78
4.1.2 Pass marks

4.2 Accommodation - Compulsory
    - Optional

4.3 Expenses

4.3.1 Tuition fees - Free
    - Student account

4.3.2 Uniform costs

4.3.3 Accommodation charges

4.3.4 Food charges

4.3.5 Scholarships

4.4 Character verification by police
    for any bad records

4.5 Indemnity bond/undertaking to serve
    Govt./ Shipping company

4.6 Marital status

4.7 Open to foreign nationals

4.8 Language

5.0 Education and Training for unlimited certificates for Masters.

5.1 ACADEMIC PERIOD.
5.1.1 Duration: 2 years.
5.1.2 Sea time (controlled): 36 months sea service necessary before joining Nautical College.

5.1.3 Examination - Written (Yes/No): -
- Orals: -
- Practical: -

5.1.4 Certificate of competency awarded: Watchkeeping Officer-2nd Mate

5.1.5 Academic degree awarded: -

5.2 SEA SERVICE PERIODS.

5.2.1 Sea time for - Second Mate: -
- Chief Mate: 24 months.
- Master: 12 months.

5.2.2 Shore preparatory course for -
- Second Mate: -
- Chief Mate: -
- Master: -

5.2.3 Examination - Written: -
- Orals: -
- Practical: -

5.2.4 Highest Certificate of competency awarded: Captains' Class
2.18 COUNTRY: UNITED KINGDOM.
Academy: College of Maritime Studies, Southampton.

1.0 General education and age entrance requirements.

1.1 School starting average age: 5 years.

1.2 Minimum level of general education required for entrance: GCSE - General Certificate of Secondary Education.

1.2.1 Duration of general education: 12 years.

1.2.2 Special course (e.g., science): A-Level.

1.2.3 Main Subjects required: Maths & Physics

1.2.4 Rank / score (%): 50%

1.3 Are exemptions possible? Yes.

1.3.1 If so, in subjects or level: GCSE, O-Level.

1.4 Number of applicants per year: 70/80.

1.4.1 Number of seats (Capacity) per year: -

1.4.2 Surplus of applicants: -

1.4.3 Lack of applicants: Yes.

1.4.4 Reasons for surplus / lack: Less ships, less jobs.
1.5 Academy entry age (Min. / Max.) : 16/20 years.

2.0 Physical fitness / medical entrance requirements.

2.1 Minimum height :-

2.2 Weight - Minimum : <25% than standard will fail.
- Maximum : >25% I fail.

2.3 X-ray for infectious diseases :-

2.4 Hearing test :-

2.5 Dental inspection :-

2.6 Eye sight.

2.6.1 Letter test : yes.

2.6.2 Colour perception test : yes.

3.0 Psychological / personality requirements.

3.1 Psychological / aptitude test : no.

3.2 Interview / viva-voce : yes.

4.0 Other entrance requirements.

4.1 Written examination : yes.

4.1.1 Subjects : Maths & Science
4.1.2 Pass marks : Varies.

4.2 Accommodation - Compulsory : -
- Optional : yes.

4.3 Expenses.

4.3.1 Tuition fees - Free : -
- Student account : yes.

4.3.2 Uniform costs : By sponsoring Co.

4.3.3 Accommodation charges : Student pays.

4.3.4 Food charges : Student pays.

4.3.5 Scholarships : no.

4.4 Character verification by police for any bad records : no.

4.5 Indemnity bond/undertaking to serve Govt./Shipping company : no.

4.6 Marital status : Optional.

4.7 Open to foreign nationals : yes.

4.8 Language : English.

5.0 Education and Training for unlimited certificates for Masters.

5.1 ACADEMIC PERIOD.

83
5.1.1 Duration: 4 years
5.1.2 Sea time (controlled): Including 22 months sea training.

5.1.3 Examination - Written (Yes/No): Yes.
   - Orals: Yes.
   - Practical: Yes.

5.1.4 Certificate of competency awarded: Class 3 - 2nd Mate

5.1.5 Academic degree awarded: National Diploma in Nautical Science.

5.2 SEA SERVICE PERIODS.

5.2.1 Sea time for -
   - Second Mate: -
   - Chief Mate: 18 months.
   - Master: 18 months.

5.2.2 Shore preparatory course for -
   - Second Mate: -
   - Chief Mate: 4.5 months.
   - Master: 4.5 months.

5.2.3 Examination -
   - Written: Yes.
   - Orals: Yes.
   - Practical: Yes.

5.2.4 Highest Certificate of competency awarded: Class 1 - Master
2.19 COUNTRY: USA.
   Academy: Merchant Marine Academy, New York.

1.0 General education and age entrance requirements.

1.1 School starting average age: 5 years.

1.2 Minimum level of general education required for entrance: High School.

1.2.1 Duration of general education: 13 years.

1.2.2 Special course (e.g., science): -

1.2.3 Main Subjects required: Algebra, Geometry, Trigonometry, Physics and Chemistry.

1.2.4 Rank / score (%): Top 10% of class

1.3 Are exemptions possible?: Yes.

1.3.1 If so, in subjects or level?: Comprehensive examination.

1.4 Number of applicants per year: About 600.

1.4.1 Number of seats (Capacity) per year: 133.

1.4.2 Surplus of applicants: Yes.

1.4.3 Lack of applicants: -

1.4.4 Reasons for surplus / lack: Excellent education, more diverse and more job facilities.
1.5 Academy entry age (Min. / Max.) : 17/25 years.

2.0 Physical fitness / medical entrance requirements.

2.1 Minimum height Man / Woman : 62 / 60 Inches.

2.2 Weight - Minimum Man / Woman : 103 / 94 lbs.

- Maximum Man / Woman : 267 / 205 lbs.

2.3 X-ray for infectious diseases : yes.

2.4 Hearing test : yes.

2.5 Dental inspection : yes.

2.6 Eye sight.

2.6.1 Letter test : yes.

2.6.2 Colour perception test : yes.

3.0 Psychological / personality requirements.

3.1 Psychological / aptitude test : no.

3.2 Interview / viva-voce : no.

4.0 Other entrance requirements.

4.1 Written examination : no.

4.1.1 Subjects : -
4.1.2 Pass marks

4.2 Accommodation - Compulsory :yes.
   - Optional :-

4.3 Expenses.

4.3.1 Tuition fees - Free :yes.
   - Student account :-

4.3.2 Uniform costs :Free.

4.3.3 Accommodation charges :Free.

4.3.4 Food charges :Free.

4.3.5 Scholarships :yes.

4.4 Character verification by police for any bad records :Subject to Naval verification.

4.5 Indemnity bond/undertaking to serve Govt./Shipping company :yes, for 3 years

4.6 Marital status :Optional.

4.7 Open to foreign nationals :yes.

4.8 Language :English.

5.0 Education and Training for unlimited certificates for Masters.
5.1 ACADEMIC PERIOD.

5.1.1 Duration : 4 years
5.1.2 Sea time (controlled) : Including 12 months sea training.

5.1.3 Examination - Written (Yes/No) : Yes.
- Orals : No.
- Practical : Yes.

5.1.4 Certificate of competency awarded : 3rd Mate Marine Transportation.

5.1.5 Academic degree awarded : BSc plus Commission in Navy.

5.2 SEA SERVICE PERIODS.

5.2.1 Sea time for - Second Mate : 2 years.
- Chief Mate : 2 years.
- Master : 2 years.

5.2.2 Shore preparatory course for -
- Second Mate : Optional.
- Chief Mate : Optional.
- Master : Optional.

5.2.3 Examination - Written : Yes.
- Orals : No.
- Practical : No.

5.2.4 Highest Certificate of competency awarded : Master.
2.20 COUNTRY : USSR.
Academy : Higher Marine Nautical School, Leningrad.

1.0 General education and age entrance requirements.

1.1 School starting average age : 6/7 years.

1.2 Minimum level of general education required for entrance : Secondary School

1.2.1 Duration of general education : 10 years.

1.2.2 Special course (e.g. science) : no.

1.2.3 Main Subjects required : Maths, Physics and Literature.

1.2.4 Rank / score (%) : -

1.3 Are exemptions possible ? yes.

1.3.1 If so, in subjects or level ? In Marine School

1.4 Number of applicants per year : 2000.

1.4.1 Number of seats (Capacity) per year : 600.

1.4.2 Surplus of applicants : yes.

1.4.3 Lack of applicants : -

1.4.4 Reasons for surplus / lack : Natural attraction of the profession and also romantic.

89
1.5 Academy entry age (Min. / Max.): 17/22 years.

2.0 Physical fitness / medical entrance requirements.

2.1 Minimum height: -

2.2 Weight - Minimum: -
   - Maximum: -

2.3 X-ray for infectious diseases: yes.

2.4 Hearing test: yes.

2.5 Dental inspection: yes.

2.6 Eyesight.

2.6.1 Letter test: yes.

2.6.2 Colour perception test: yes.

3.0 Psychological / personality requirements.

3.1 Psychological / aptitude test: yes, written
   500 questions to answer in "Yes/No" basis, then
   put into computer to analyse.

3.2 Interview / viva-voce: yes.

4.0 Other entrance requirements.

4.1 Written examination: yes.

4.1.1 Subjects: Maths, Physics
4.1.2 Pass marks: About 50%

4.2 Accommodation - Compulsory: yes.
   - Optional: no.

4.3 Expenses.

4.3.1 Tuition fees - Free: yes.
   - Student account: no.

4.3.2 Uniform costs: Free.

4.3.3 Accommodation charges: Free.

4.3.4 Food charges: Free.

4.3.5 Scholarships: yes.

4.4 Character verification by police for any bad records: no.

4.5 Indemnity bond/undertaking to serve Govt./Shipping company: For extra group

4.6 Marital status: Optional.

4.7 Open to foreign nationals: yes.

4.8 Language: Russian.

5.0 Education and Training for unlimited certificates for Masters.

5.1 ACADEMIC PERIOD.
5.1.1 Duration : 5.5 years
5.1.2 Sea time (controlled) : Including 15 months shipboard training.

5.1.3 Examination - Written (Yes/No) : yes.
- Orals : yes.
- Practical : yes.

5.1.4 Certificate of competency awarded : 3rd Mate.

5.1.5 Academic degree awarded : Diploma in Navigation.

5.2 SEA SERVICE PERIODS.

5.2.1 Sea time for -
- Second Mate : 1.5 years.
- Chief Mate : 1.5 years.
- Master : 2.0 years.

5.2.2 Shore preparatory course for -
- Second Mate : 2.5 months.
- Chief Mate : 2.5 months.
- Master : 2.5 months.

5.2.3 Examination -
- Written : yes.
- Orals : yes.
- Practical : yes.

5.2.4 Highest Certificate of competency awarded : Captain (Deep Water).
CHAPTER III: DEVELOPMENT AND ROLE OF ENTRANCE REQUIREMENTS.

3.0 DEVELOPMENT:

Entrance requirements are the main steering elements of different types of Maritime Education and Training (MET) systems such as dual purpose, front-end, sandwich type etc. With higher general education and stringent application of entrance requirements, the training period may be reasonably shorter and hence less expensive. On the other hand, with lower general education, the training period is normally longer and more expensive. At the same time the candidate has more potential ability to cope up with the skill and complex technology training which is necessary to handle the modern automated ships of today and tomorrow.

Furthermore, to train a candidate for dual-purpose officer, higher academic qualification is of utmost necessity. France is the first country being successful in introducing a bivalent (dual-purpose) approach. It entitles the holder to serve on ships of all sizes worldwide as master or chief engineer. This is only possible on such a higher level because of the higher entrance qualification (Baccalaureat in Mathematics).

The academic course is of 4 years duration. A brief summary is given below:

"First year of studies at ENMM (30 weeks from October to May) and at least 1 month shipboard training."
Examination.
Second year of studies at ENMM (30 weeks from October to May) and shipboard training which completes the shipboard service of the 1st year to 4 months.

Examination.

Third year of studies at ENMM (30 weeks from October to May).

Major Examination. Diploma as merchant marine cadet (Diplôme d'Eleve officer de la Marine Marchande). This is not a certificate of competency, 10 months shipboard service as cadet.

Certificate of competency as dual-purpose watch-officer (Brevet d'officer de la Marine Marchande).
10 months shipboard service as 4th and 3rd officer on deck or in the engine including at least 3 months in each of the two departments.

Fourth year of studies at ENMM (30 weeks from October to May).

Major Examination for ENMM Diploma for higher studies of the Merchant Marine (Diplôme d'Etudes supérieures de la Marine Marchande). Which entitles the holder to sail as chief mate or second engineer. This is not a certificate of competency.

The dual purpose (Brevet de Captaine de 1ère classe de la Navigation Maritime) will be obtained after 36 months of effective seafaring (of which at least 16 months each have to be spent on deck and in the engine). It entitles the holder to serve on ships of all sizes worldwide as master or chief engineer.
The high qualification of graduates facilitates easier shore jobs within maritime industry though it is a problem for the shipping companies which might be interested in recruiting shipboard officers for longer periods.
The advent of advanced technology onboard ships has also confirmed the appropriateness of the decision to go bivalent and to educate and train an officer with a good knowledge in technical subjects."

3.1 ROLE:
The important role is to set proper standards and duration of studies, syllabuses. May be many developing countries will set up a level of training to meet the requirements of STCW-78 and IMO recommendations. It will be prudent to look in the future as well, to try to identify possible future developments and re-structure maritime education programmes.

"Modern technology will emphasize the importance of information processing and the operation of a ship will develop closer to the control of a complex process. Information acquisition, processing, integration and displaying will increasingly be taken over by modern technology. The portion of the shipboard tasks, which can be expected to be dealt with in this form, will increase. This will require knowledge, comprehension, analytic and evaluative capabilities from shipboard officer, as well as competence for and in decision making. Modern, advanced and highly sophisticated equipment will influence shipboard operations, the work in shipping companies, forwarding companies, brokers' offices, ports and other sectors of maritime industry and
will have an impact on MET.

The curricula should be revised to keep pace with modern technology. More time to be spent on basic science subjects. A number of subjects can be trained more effectively by the use of modern teaching equipments such as audiovisual aids, computers and simulators.

MET have to adapt to the new role of educating and training for a certificate of competency and an academic degree. A higher academic and professional standards of future MET will best ensure the future attraction of a maritime career at sea and ashore as well.

France gives a good example that seafaring can be a well recognized profession and that it can become rather easy to attract well qualified graduates from senior high schools (Baccalaureat) to a merchant marine academy. Serving onboard in a position of responsibility can still be rewarding for quite a number of well qualified young people in countries like USA, France and some others."
CHAPTER IV : CONCLUSION AND RECOMMENDATIONS

4.1 CONCLUSION:

4.1.1 The primary objective for the development of an MET system and facilities should be in conformity with the following:-

- The 1978 STCW Convention, the associated Conference Resolutions and IMO Recommendations.

- The international and national Maritime Safety Regulations for the shipping and the fishing industry.

- Commercial and managerial aspects beyond the Marine Safety and Environmental aspects - for both the shipping and fishing industries.

- On-shore positions in the industry i.e. technical management etc.

- Other maritime industries e.g. Off-shore, and port industries and authorities.

In order to achieve the above goals/aims, consideration should be given to renew or re-structure maritime education programmes. The major difficulty for most developing countries is access to adequate funds (for equipments and qualified staff) which should be procured from within the country and via foreign aid-programmes. 

"Reasonable changes in acceptable periods of time and the maintaining of a basic continuity require a
close co-operation between shipping companies, maritime and educational authorities and MET institutions. The latter will have to play a more active role than they were willing to accept in the past. MET-institutions should even take the lead in planning and implementation of changes. MET-institutions with a professionally and equally qualified staff enjoy the respect of shipping companies and close relations with the administrations. This is an excellent pre-requisite for bringing about a change in a smooth and widely accepted form.

As in all maritime affairs, the human element plays the crucial role, having the right personalities designing the objectives, concepts and details of a national MET is the best insurance for a satisfactory outcome."

4.1.2 Entrance requirements play a very important role in MET system. Every country should adopt entrance requirements which are suitable and appropriate to its educational and social systems.

4.1.3 Certificates of Competency:

The seafaring and academic qualifications required for the award of certificate of competency in various categories are prescribed by the 1978 STCW Convention. And IMO's role is to ensure that the developing countries have access to the type and quality of training required by the Convention.

Having successfully completed their basic training, graduates of maritime training centres undertake prescribed periods of sea service as cadets and officers onboard ships in order to improve their professional qualifications and experience and after
appropriate examinations, to obtain the requisite certificates of competency.

4.2 RECOMMENDATIONS.

I think the standard of entrance requirements in Bangladesh is high considering some of the other countries. This standard should be maintained in view of the percentage of the number of applicants versus the number of seats (capacity) per year. But the system of MET in Bangladesh is traditional and prepares the candidate to cope with shipboard duties only. Neither a certificate of competency nor an academic degree is given after completion of two years academic period. And they are not adequately taught and trained for commercial and managerial aspects for shipping industries ashore. As a result the Master or Chief Engineer after sailing for a considerable period of time, when they want to seek a job ashore, they find themselves insufficiently prepared and have often little chances for a suitable job ashore.

It is therefore, Recommended that the MET system of Bangladesh should be re-structured or re-organized inorder to prepare ship officers for shore based employment which they may seek after several years at sea.

A scheme of Cadet training (same for both Deck and Engine for dual-purpose Watchkeeping officer) programme for 3.5 years duration should be introduced in the Marine Academy, Chittagong.

The training period may be divided into 3 Phases :-
Phase I: 6 months (1 term) at the academy for basic theoretical knowledge and safety courses.

Phase II: 18 months planned and supervised shipboard training, out of which minimum 6 months each on deck and engine and also at least 6 months either on bridge or in engine watchkeeping duties under the supervision of a qualified officer. This is for dual-purpose watch officer (3rd mate/4th engineer) certificate.

It may be noted here that there is occasional conflict/misunderstanding between deck and engine department onboard some ships. This dual-purpose watch officer system may hopefully give better understanding and reduce this departmental conflicts. At the same time the cadets get used to the sea life. Those who feel that they do not have the sea-legs or do not like the sea life, may quit at this stage.

Phase III: 18 months (3 terms) Advanced studies at the academy.

At the end of the academic period, the candidate will directly sit for examination under the administration. After successful result, he will be awarded a certificate of competency as "dual-purpose watch officer" (equivalent to 3rd Mate/4th engineer) and also an academic degree as "BSc in Maritime Studies". 2 years at the academy (phase I + phase III) should be treated as 1 year as sea service. This system will give thorough understanding, know-
ledge and ability to a candidate and will be a link between ship’s officer and companies, industry and institutions in the maritime sector. In this way each individual can qualify for various positions in the field.

To achieve this goal, the syllabuses should be revised to combine theoretical knowledge, technology and practical experience in a systematic programme incorporating the fundamental knowledge requirements for the Master Class 1 certificate of competency, together with the technological, commercial and managerial knowledge required by the Master of a modern merchant ship.

The Course content should be as follows:

Phase I - Fundamental studies: Mathematics, physics, chemistry, basic economics/sociology, seamanship/shiphandling, communications, survival craft, medical care, nautical english, marine engineering, electricity.

Phase II - Shipboard training: Seamanship, chartwork, navigation - practical and electronic, stability/construction/carbo work, meteorology/oceanography.

Phase III - Advanced studies: Maritime economics, ship management, maritime law, ship technology (including simulator training: radar/ARPA + shiphandling), ship master’s business, workshop practice, propulsion systems, electrical engineering.

N.B: A proposed MET system chart is shown at the next page.
PROPOSED MET SYSTEM AT MARINE ACADEMY, CHITTAGONG.

Class 1 (Master - F.G.)

6m course + Oral Exam.

Sea service : 18 m (m=month)

Class 2 (Chief Mate)

5m course + Oral Exam.

Sea service : 18 m

Class 3 (2nd Mate)

3m course + (Written + Oral) Exam.

Sea service as Dual watch officer: 12m

Dual watch officer certificate + BSc in Maritime Studies

Written + Oral + Practical Exam.

Academy Period : 18 m

Sea training : 18 m

Academy period : 6 m

Entrance to Academy

General education: 12 years (Science)
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