



**PROSPECTUS 2020 - 2021**  
**Three Year Residential B.Sc. (Nautical Science)**  
**(Affiliated to Indian Maritime University)**

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## **INTRODUCTION**

Ocean shipping has always been the most efficient mode of transporting goods. This fact has not changed over the centuries even though technology has made enormous strides. In fact, the maritime industry has effectively harnessed technology to become increasingly more efficient and thereby sustain its comparative advantage over other forms of transport. The growth of global trade has led to a commensurate growth in the world fleet to well over 50,000 ships plying the world's oceans today. These ships are manned by deck officers who are responsible for navigation, cargo operations and maintenance of the ship and by engineer officers who maintain and operate all the machinery on board.

A Deck Officer aboard a ship needs to function in the self-contained environment of a ship at sea and must also demonstrate additional skills such as fire fighting and damage control, boat handling and the ability to carry out rescue operations in an emergency. Further, ships are required to remain in operation 24 hours a day, 365 days a year. All this makes the Deck Officer's job extremely challenging and demanding. At the same time the opportunity to travel the world, work with global organizations and experience varied technologies make navigation and ship handling an exciting career. The demands of the career are of course compensated by excellent remuneration leading to a comfortable lifestyle at an early age.

Due to the global nature of the shipping industry, to be eligible for employment on board ships, Deck Officers must be trained in conformity with the requirements of the International Maritime Organization (IMO) and certified by a recognized authority with respect to competency level. In India, the Directorate General of Shipping (DGS) approves maritime training institutions and their curricula. The same agency also administers examinations to evaluate competency and issues appropriate Certificates of Competency. The general level of training imparted to Indian officer candidates and the standards maintained in evaluation are globally recognized and this ensures the worldwide acceptability of the Indian Officers.

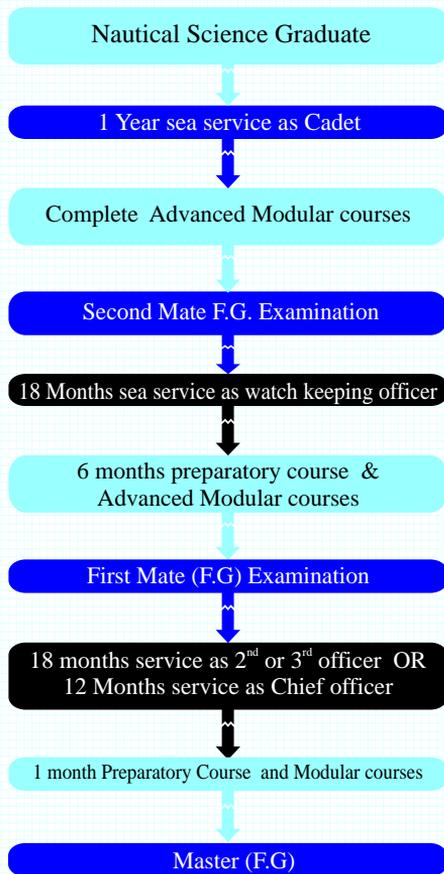
## **CAREER PATH OF A DECK OFFICER**

Upon completion of a 3 year BSc Nautical Science degree course, students will have to complete one year sea service. Thereafter upon passing the Second Mate's Examination, the students will be eligible for appointment as Third Officers on merchant navy ships. A Third Officer receives emoluments of about US\$2,200 per month plus free boarding and lodging while on board. Merchant Navy Officers are allowed to claim tax free income subject to conditions / tax regulations.

As a Deck Officer, one will progress along the chosen career path, moving up the ranks by periodically undergoing competency examinations conducted by the government. In addition to taking certain modular and preparatory courses, one will need to acquire minimum stipulated amount of sea service time before appearing for the examinations. From the rank of Third Officer,

one will progress to a Second Officer, a Chief Officer and ultimately the Captain of a ship. With promotions come substantial improvements in remuneration. A Third officer presently receives emoluments of about US\$2,200 per month net of taxes while a Captain receives about US\$9,500 per month or more net of taxes. It takes about 8 years for a Third Officer to get promoted to the rank of Captain, depending on individual capabilities and the job opportunities available.

It is not uncommon for Deck Officers to retire from sea service well before the traditional retirement age. They are then able to find numerous opportunities ashore with shipping companies and other organisations for providing services to the shipping and other allied industry.



(This is the final qualification necessary to become the Captain of a ship)

## B.Sc. NAUTICAL SCIENCE PROGRAM

At Tolani Maritime Institute (TMI), B.Sc. Nautical Science programme is spread over a period of three years and is divided into six academic semesters. The programme is designed to provide a foundation in Navigation, Physics, Mathematics, Cargo Work, Ship Operation and Practical Workshop & Seamanship. After a training period of six semesters on campus, Students become eligible to undergo a 12 months structured training programme on board ships, which is a mandatory requirement to become eligible for Second Mate examination. The institute will provide all assistance through campus placement program for eligible students to be placed onboard ships for shipboard training without any extra fee. Those students, who do not wish to sail on board ships, can opt for any other career as deemed fit by them.

The essence of Nautical Science programme is to train students to become competent deck officers in the maritime environment, capable of managing navigational and cargo work duties. To



facilitate the unique and practical oriented training, the Institute is comprehensively equipped with a Ship in Campus with all ship board structures and equipment that is a representative of shipboard environment, Ship Maneuvering simulator, ECDIS simulator, Steering simulator and Liquid Cargo Handling simulator. Hands on experience is given in the detailed maintenance techniques and procedures for the equipment that a Student will operate as a deck officer. Shipboard environment is unique and training therefore, must be suitably tailored. At TMI, due emphasis is placed on training on simulators, in seamanship and contextual training to intimately acquaint a student with the demands of the marine environment.

The Placement Cell of TMI helps students secure onboard positions.

## EVALUATION

An academic year is divided into two semesters of 18-weeks each. During the semester, students are required to complete a prescribed set of courses as laid down by IMU.

TMI follows examination and grading system as laid down by IMU. The curriculum on campus is structured so that by the end of the third year students complete all the modular courses required for one to be employed on board a ship. In addition, the workshop training ensures that by the end of the programme the students are also reasonably skilled in the use of shipboard tools, maintenance procedures and other practical seamanship, sailing and boat handling skills.

## CODE OF CONDUCT

TMI requires a high level of discipline in terms of personal appearance and conduct, class attendance, participation in sports etc. All students wear a standard Merchant Navy uniform. Residence in the hostel is compulsory for all students for the entire programme. The Institute strives to instill discipline by encouraging students to participate in various activities that help personality development, team building and a feeling of co-operative amity. All students must participate in all scheduled activities, such as physical training, swimming, games, parades and inspections. Students are expected to abide by the institute rules at all times while on or off campus.

Consistent with the requirements of present legislation in the shipping industry, **TMI has a strict Drug and Alcohol Policy with zero tolerance.** Non-compliance is dealt with severely and may lead to expulsion. Students are expected to protect the property of the Institute at all times and conduct themselves in a manner so as not to cause any damage. The institute reserves the right to recover from errant students the cost of damage inflicted on any Institute property and to take other disciplinary action.



The institute normally operates a five and a half day work week. The workday commences with a muster at 6:00 am followed by 45 minutes of physical training. Thereafter, classes commence at 8:30 am and continue till 4:40 pm with a 60-minutes lunch break. Sports are scheduled for late afternoon and students are expected to utilize the evenings for self study, assignments and extra curricular activities.

Leave of absence is granted only upon the written request of parents. Unauthorized absence is treated as a serious breach of the rules. Minimum 85% attendance is required in classrooms, while workshop sessions require 100% participation. In the event of deficiency in workshop participation, it is necessary for students to complete the requisite workshop hours with attendance outside the normal schedule during the semester or during holiday periods.

Visits of guests are regulated. Parents, guardians and personal friends are allowed to visit students in the hostel during specified visiting hours.

**Ragging on campus is strictly prohibited. Any incidence of ragging is immediately acted upon and the guilty is liable to be dismissed from the Institute.**



## **B.Sc. (NAUTICAL SCIENCE) DEGREE CURRICULUM**

### **Semester I**

English  
Nautical Mathematics  
Nautical Physics  
Computer Science  
General Ship knowledge  
Terrestrial Navigation  
Nautical Physics (Practical)  
Computer Science (Practical)

### **Semester III**

Celestial Navigation Paper -I  
Ship Stability Paper - I  
Marine Engineering, Automation & Control  
Systems Paper –I  
Environmental Studies  
Cargo Handling & Stowage Paper –I  
Bridge Equipment & Watchkeeping Paper –I  
Seamanship Lab - I (Practical)  
Marine Engineering Workshop - I (Practical)

### **Semester V**

Coastal Navigation & Collision Prevention  
Regulations  
Naval Architecture Paper – I  
Ship Maintenance and Emergencies  
Specialised Cargo Handling & Stowage  
Shipping Management  
Bridge Equipment & Watchkeeping Paper -II  
Ship Operation Technology Lab (Practical)

### **Semester II**

Applied Mathematics  
Applied Physics & Electricity  
Nautical Electronics  
Ship Construction  
Ship Operation Technology  
Chart Work & Collision Prevention Regulations  
Applied Physics & Electricity (Practical)  
Nautical Electronics (Practical)  
English Communication Lab

### **Semester IV**

Celestial Navigation Paper - II  
Life Saving & Fire Fighting Appliances  
Ship Stability Paper – II  
Cargo Handling & Stowage Paper –II  
Marine Engineering, Automation & Control  
Systems Paper –II  
Meteorology  
Seamanship Lab - II (Practical)  
Marine Engineering Workshop - II (Practical)

### **Semester VI**

Voyage Planning & ECDIS  
Naval Architecture Paper –II  
Ship Manoeuvring & Collision Prevention  
Regulations  
IMO & International Conventions  
Human Resource Management, Development &  
Leadership  
Marine Environmental Protection  
Navigation Lab (Practical)

## FEES AND ESTIMATED EXPENSES ACADEMIC YEAR 2020-21

Fees	SEM I	SEM II	1st year (Sem I & II)
Admission & Orientation Fee	21,000	NIL	21,000
Tuition Fee	89,000	89,000	178,000
Campus & Establishment Fee	114,000	114,000	228,000
<b>Total</b>	<b>224,000</b>	<b>203,000</b>	<b>427,000</b>
Less: Covid Relief	12,500	12,500	25,000
<b>Total fees</b>	<b>211,500</b>	<b>190,500</b>	<b>402,000</b>
DGS Cess @ 1% of total fees	2,115	1,905	4,020
<b>Student Services Expenses</b>			
Books	5,000	NIL	5,000
Laundry	1,950	1,950	3,900
Messing	24,000	24,000	48,000
Medical Insurance Premium	6,000	NIL	6,000
Stationery	6,000	NIL	6,000
Uniform	20,000	NIL	20,000
<b>Total Student Service Expenses</b>	<b>62,950</b>	<b>25,950</b>	<b>88,900</b>
DGS Cess @ 1% of Student Services	630	260	890
IMU fee	35,000	NIL	35,000
Caution Deposit (Interest free and Refundable)	20,000	NIL	20,000
<b>Total Payable</b>	<b>332,195</b>	<b>218,615</b>	<b>550,810</b>

*For Student enrolling in the first year of Academic Year 2020-21, the Estimated fees and Student Services for the three year programme will be approx. Rs. 16,72,995/-*

### Special Note Applicable to Students enrolling for Academic Year 2020-2021:

In view of the ongoing COVID pandemic, a " COVID Relief " is being granted to all students by the Institute. This has been reflected in the Fee Structure.

#### Note:

- a. Female students are entitled to a waiver of 50% in Tuition fee for each semester.
- b. Fees and student services expenses are indicative and are subject to change.
- c. Student Services expenses are charged on actuals.
- d. IMU Fee is payable to Indian Maritime University
- e. Caution Deposit (Interest free and Refundable) is payable on admission.
- f. Statutory taxes / levies, if any imposed, will be charged on actuals.
- g. Monies due for each semester is payable at the beginning of the semester before the due dates.
- h. Late fee @ 18% p.a. is applicable for monies received after due date.
- I. Value added courses undertaken by the students will attract additional fees.
- j. Separate charges would be levied at actual costs incurred by the Institute in respect of excursions, visits, medical expenses (to the extent not covered under insurance).
- k. Fees, Estimated Expenses and Caution Deposit are payable in either of the modes mentioned below
  - Online through the URL [www.tolani.edu](http://www.tolani.edu)
  - Demand Draft in favour of 'Tolani Maritime Institute' at any of the HDFC Bank branches



## **Refund Policy**

As mentioned on institute website [www.tolani.edu](http://www.tolani.edu)

## **LOANS & SCHOLARSHIPS**

### **Loans**

TMI degree programmes are approved by AXIS Bank, HDFC Bank, Corporation Bank, State Bank of India and Credila (an HDFC Ltd. Company). However, candidates can approach any bank for financial assistance.

### **Scholarships**

Liberal scholarships are available every semester to the deserving students. The details of scholarships are as follows-

#### **Merit Scholarships**

The institute awards generous merit scholarships to attract the very best talent and promote sustained achievement. For each Nautical Science semester, 12 merit based scholarships are offered. The student who stands first in merit receives the Capt. J C Anand Scholarship of Rs.30,000/- and other rank holders receive scholarships on a sliding scale.

In the first semester on admission, the new entrants are ranked on the basis of the merit list prepared for admission to the Institute. In subsequent semesters, students' performance during the previous semester determines the ranking for the purpose of scholarships. The Institute's Scholarship Committee administers the above scholarships.

#### **Need Cum Merit based Scholarships**

Need cum Merit based Scholarships have been instituted for the students undergoing UG programs at TMI as follows:

#### **Tolani Education Foundation (TEF)**

Tolani Education Foundation awards scholarships each year to ME and NS degree course students for every semester. The objective is to provide financial support to the identified students undergoing UG programmes at TMI, Induri. The Scholarship amount of Rs. 15,000/- per semester once awarded continues till the end of the last year of the programme subject to the performance and conduct of the student conforming to the laid down rules.

### **Mrs. Papu Tolani Need cum Merit Scholarship**

Mrs. Papu Tolani, wife of Dr. N P Tolani has instituted a scholarship of Rs.10,000/- per semester. Once a scholarship is awarded, it continues till the end of the last year of the programme subject to performance and conduct of the student conforming to the laid down rules.

### **Menghraj Karna Need-cum-Merit based Scholarship for Girls**

Menghraj Karna scholarship is instituted only for girl students undergoing UG programmes at TMI, Induri. The scholarship amount is Rs.10,000/- per semester and once the scholarship is awarded, it continues till the end of the third year of the programme subject to performance and conduct of the student conforming to the laid down rules.

TMI awards the above merit-cum-need based scholarship on the basis of the student's annual family income and other resources. TMI will require documentary evidences as well as family details and an explanation of how they intend to meet the total cost of education at TMI.

### **Industry Sponsored Scholarships**

To promote meritorious students, leading shipping companies NYK, K-Line, Dockendale etc. have instituted scholarships for the students selected by them in the first/second year of the programme.

### **Concession in Fee for Girl students**

TMI is committed to encouraging girls' participation in the maritime industry. To this end, in addition to the eligibility for the scholarships mentioned above they are given a reduction of 50% in Tuition fees per semester.



## ELIGIBILITY

Unmarried candidates, of either sex, born on or after 1st October 1999 are eligible to apply for admission in 2020. The date of birth as recorded on the applicant's School Leaving Certificate will be considered for this purpose. For female candidates there is a relaxation of the age limit up to 2 years.

Candidate must have successfully completed the Senior Secondary Examination (10+2) or its equivalent having secured at least 60% marks in Physics, Chemistry and Mathematics (P-C-M) and at least 50% marks in English either in Class X or Class XII.

Candidates must meet the minimum physical fitness and medical standards as laid out in the Merchant Shipping (Medical Examination) Rules, 2009 as amended from time to time. It is important to note that any deficiency in this respect would disqualify a candidate from a career at sea.

**Qualifying in IMUCET is mandatory for admission.**

**Eyesight: 6/6 vision in better eye and 6/9 in other eye without glasses at the time of admission. Normal colour vision is to be tested by Ishihara test chart.**

**Having passport is mandatory at the time of admissions**

## APPLICATION PROCESS

Step I : Fill the application form on TMI website [www.tolani.edu](http://www.tolani.edu). Last date for availability of forms - as declared on website

Step II : Pay the **non-refundable** application and online test fees through the website using credit / debit card / internet banking OR by a Demand Draft / Pay Order for Rs. 1200/- in favour of "Tolani Maritime Institute", payable at Pune.

Step III: Print duly filled application form and the summary generated. Send the same along with the transaction receipt, if paid online, OR Demand Draft/Pay Order to TMI. Please write your form no. and contact details on the reverse of the draft.

**Hard copy of Brochure and Prospectus is available for Rs. 300/-**

Please note that you will be required to upload the following documents in soft copy while filling the form online and also send one photocopy of each document along with hard copy of the form.

1. Recent passport size photograph
2. Class X mark sheet
3. Class XII mark sheet (Candidates appearing for Class XII exam in 2020 may submit these copies after declaration of results.)
4. Leaving / Transfer Certificate / Birth Certificate (For age proof)
5. Downloaded copies of class XII mark sheet from internet (Candidates appearing for Class XII exam in 2020 may submit these copies after declaration of results.)

***Necessary documents to be sent to TMI with all applications:***

1. Printed copy of the application form and the summary generated after an application is made through this website
2. Two identical recent passport size photographs with name & form no. written at the back
3. Self attested Copies of certificates and / or mark sheets of your 10th and 12th examinations (or its equivalent). Applicants who have not received 12th marksheet may submit a bonafide certificate from the head of the school or college where they appeared for these exams
4. Self attested Copy of Birth Certificate (for proof of age and place of Birth)
5. Downloaded copies of class XII marksheet (on receipt) from internet attested by school Principal
6. Copies of certificates for sports and any other extra curricular activities, if available (Std. VIII and above only)
7. Online transaction receipt, if paid online, OR Demand Draft payable at Pune for Rs. 1200/- favouring Tolani Maritime Institute. *Please write your form no. and contact details including mobile phone no. on the reverse of the Demand Draft.*

All applicants are advised to ensure that:

- (1) A copy of the application form is retained with them.
- (2) Name, form number and contact number are written on the reverse of the DD also.
- (3) Their addresses and telephone numbers are complete and correct on the application form.
- (4) Subsequent correspondence refers to the applicant's name exactly as entered on the application and quotes the Dossier Id that appears on the form.

For further instructions on Do's and Don'ts please refer to the institute website page:

<http://www.tmi.tolani.edu/admission/b-tech-marine-engineering/how-to-apply/>

**LATERAL ENTRY**

TMI also provides lateral entry into second year of B.Sc. Nautical Science. The criteria for admission are as follows:

**Eligibility:**

- ♦ Unmarried candidates of either sex, less than 24 years of age
- ♦ Candidates must have successfully completed Diploma in Nautical Science offered by IMU

**Application Procedure:**

- ♦ Apply online from TMI website [www.tolani.edu](http://www.tolani.edu)
- ♦ Send duly filled Application Form to the institute along with the documents as mentioned in the application form
- ♦ Appear for TMI admission test and interview

Course commencement: As declared on website



## **SELECTION PROCESS**

Tolani Maritime Institute's selection process will test candidates by taking into account candidate's 10+2 PCM marks, rank in IMUCET, result of the TMI online entrance exam, performance in an interview and satisfactory medical tests.

Due COVID restrictions, the online test (TMISAT) and interview will be conducted online commencing June 2020.

### **TMI Online Scholastic Aptitude Test (TMISAT)**

The Online Test has Main Test with 80 Questions in four sections and a Behavioral Assessment.

The on-line test has a multiple-choice format covering Physics, Mathematics, Analytical and Logical Reasoning. The questions are of 10+2 level. There is one section each with negative marking in Physics and Mathematics. Duration of the test is 90 minutes.

On completion of the Main test consisting of above four sections there will be a behavioral assessment for 30 minutes.

### **Medical Test**

The medical examination shall be conducted by DGS approved examiners to ensure that candidates are fit for sea service. Candidates are required to pay fees to cover the cost of the medical examination. List of Medical Practitioners approved by D G Shipping is available on institute's website.

### **Personal Interview**

The interviewing panel of the Institute, which comprises of faculty and external experts, will make an evaluation of the candidates' suitability for a sea faring career. All the candidates tested and interviewed will be ranked on the basis of application information, tests and interview. This ranking by the institute will be final and binding. Candidates will be offered seats strictly on basis of merit list.

Admission is confirmed after the fee has been paid by the due date as intimated through Admission Letter. Failure to make the required payment or to report for the course by the stipulated dates will result in the admission being cancelled.

Candidates accepting admission shall be required to submit the certificates in original together with set of photocopies as intimated in the Admission Letter.

Please note that all photocopies are to be in A4 portrait format. These photocopies are required for Directorate General of Shipping, Govt. of India documentation.