

भारतीय समुद्री विश्वविद्यालय INDIAN MARITIME UNIVERSITY

(Central University, Govt. of India) **HEADQUARTERS**

Administrative Order No. PhD 01

No. IMU-HQ/D/11/15/2/Secretariat/2022 / 05.

09th Oct 2023

Sub: Administrative Order for Coursework, number, minimum standards for completion and composition of Course Details, Faculty, Credit and Assessment Procedures – reg.

Ref: 34th meeting of the Academic Council - agenda no. AC-2022-34-12 & AC-2022-34-13 and the Executive Council agenda no. 2023-in-Circulation No. 01.

(Ref: Clause 11 of the Ph.D. Ordinance 01 of 2023)

The administrative order for Course Work — Number of Credit requirements, minimum standards for completion and composition of Course Details, Faculty, Credit and Assessment Procedures is as given below:

- A. As part of the course work, the scholar shall complete five courses to earn minimum of 12 credits. Among them, Research Methodology (2 Credit) and Research Publications and Ethics (1 Credit) are mandatory for all scholars. The subjects for the other three course work papers will be decided by the DC of the Scholar. To the extent possible, Doctoral Committee (DC) may prescribe the subjects of relevant PG Programme for the course work.
- B. If the Course Work Subjects are adopted from IMU's Syllabi, DC may modify the course content (wherever applicable) of IMU's PG programmes according to the required intensity, depth and scope of the content and also the credit requirements of the subject.
- C. In cases, where a specialized subject is prescribed for the course work by the DC and there is no faculty in IMU to teach that subject, DC shall identify an external expert at the time of assigning the topic.
- D. All data related to scholar's course work will be forwarded to the University by the concerned Faculty through Guide/ Co-Guide as applicable and records will be maintained by the University. These records will be forwarded to Examination Section for allowing the Scholar for appearing the Examinations.
- E. All the course work must be completed within 24 months from the date of Registration. If a Ph.D. Scholar fails to clear all the course-work related assignments and exams within the prescribed time, the registration shall be liable for cancellation.

10/10/2023

East Coast Road, Semmencherry, Sholinganallur (P.O), Chennai - 600 119. Tel: (044) - 2453 9020 Fax: (044) - 2453 9026 E-mail: registrar@imu.ac.in website: www.imu.edu.in

F. Standard Courses from recognised platforms (e.g., NPTEL, Swayam etc.) may also be prescribed. Whereas the total number of credits may be higher than required, they shall never be lesser than that prescribed.

The Doctoral Committee (DC) may prescribe the required course work as follows:

S.No.	Subject	Credit	Remarks
1.	Research Methodology	2	Mandatory
2.	Research and Publication Ethics	1	Mandatory
3.	Course work subject 1	3	To be identified by the DC and may consist of
4.	Course work subject 2	3	(a) courses conducted by the University as part
5.	Course work subject 3	3	of PG Programmes
			(b) Self-Study subjects
	Total	12	(c) NPTEL Courses
			(d) Combination of a), b) and c) above
			(e) (a) or (b) or (c)

G. The assessment and examination for regular courses shall be conducted by the faculty teaching the subject through periodic assessment by using one or more methods like assignments, questionnaire, viva-voce, case study, etc.

For NPTEL etc., and self-study, the Guide/concerned faculty shall decide the mode of assessment. In all cases the Guide shall compile the assessment results from faculty and forward a consolidated mark list (s) to the University.

- H. Research Methodology paper is exempted for M.S (by Research) and M.Phil. Scholars who have already undergone the course as part of the programme.
- I. The course work Research and Publication Ethics and Research Methodology course will be conducted in regular mode (direct contact/ classroom teaching).

This issues with approval of the Competent Authority.

Deputy Registrar (CTR) i/o



भारतीय समुद्री विश्वविद्यालय

INDIAN MARITIME UNIVERSITY

(Central University, Govt. of India)

HEADQUARTERS

Administrative Order No. PhD 02

No. IMU-HQ/D/11/15/2/Secretariat/2022 / 06

09th Oct 2023

Sub: Administrative order for the engagement of research scholars in teaching – reg. Ref: 34th meeting of the Academic Council - agenda no. AC-2022-34-12 & AC-2022-34-13 and the Executive Council agenda no. 2023-in-Circulation No. 01.

(Ref: Clause 11 of the Ph.D. Ordinance 01 of 2023)

The administrative order for the engagement of research scholars in teaching is as given below:

- a) As per UGC guidelines 2022, Ph.D. scholars, irrespective of their discipline, shall be required to train in teaching /education/pedagogy/writing related to their chosen Ph.D. subject during their doctoral period.
- b) Ph.D. scholars may be assigned a maximum of 10 hours per month of teaching and other related academic work such as conducting tutorial or laboratory work and evaluations, at the nearby IMU Campus, where the scholar is pursuing Ph.D. programme or in any of the other Campuses, preferably in physical mode.
- c) The scholar in consultation with guide and HOD of the concerned Campus, may decide the date, duration, type of activity.
- d) Accordingly, the scholar shall prepare lecture topics/laboratory activity/materials related to their chosen Ph.D. subject.
- e) Attendance certificate/proof may be obtained from the HoD of the respective School of Campus and countersigned by Guide as a proof/evidence that the scholar has completed the assignment during their doctoral period.
- f) A Feedback form may be sought by the guides to ascertain quality of delivery and level of assimilation from students attending the lecture.

This issues with approval of the Competent Authority.

Deputy Registrar (CTR) i/c

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भारतीय समुद्री विश्वविद्यालय

INDIAN MARITIME UNIVERSITY

(Central University, Govt. of India)

HEADQUARTERS

Administrative Order No. PhD 03

No. IMU-HQ/D/11/15/2/Secretariat/2022 67

09th Oct 2023

Sub: Administrative Order for Doctoral Committee [DC] and its Functions- reg.

Ref: 34th meeting of the Academic Council - agenda no. AC-2022-34-12 & AC-2022-34-13 and the Executive Council agenda no. 2023-in-Circulation No. 01.

(Ref: Clause 12 of the Ph.D. Ordinance 01 of 2023)

The administrative order for Doctoral Committee and its functions is as given below:-

- A. Constitution of the Doctoral Committee:
 - i. Within one month from the date of registration, Doctoral Committee shall be constituted by the Vice Chancellor to assist and monitor the academic progress of the Ph.D. scholar on periodic basis. The Vice-Chancellor can also re-constitute the DC, if deemed fit, at the request of the guide.
 - ii. The Doctoral Committee shall consist of:
 - (a). An empanelled Guide who is expert in the area in which the Scholar intends to do research and designated as the Chairperson of the DC
 - (b). Co-Guide (where required)
 - (c). At least two experts to be nominated by the Vice Chancellor from a panel of six experts proposed by the Guide.
 - (d). There shall be at least one external expert and among the experts at least one member shall be with Ph.D. qualification on the DC.
- B. Functions of the Doctoral Committee:
 - i. The Doctoral/Monitoring Committee shall be conducted at least twice a year (one meeting before 31st December and other before 30th June of every year) to monitor the progress of the scholar. Ph.D. scholar shall appear before the Doctoral Committee to make a presentation and submit a brief report on the progress of his/her work for evaluation and further guidance.
 - ii. To decide on the topic of research and its modifications after considering factors such as alignment with IMU's broader objectives, availability of expertise and resources for the programme. The topic may be selected after taking inputs from the candidate; however, the decision of the Committee shall be binding on the candidate.

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- iii. The Ph.D. scholar will have to interact with the Guide and the details of such interactions (time & place) will be recorded by the Guide. However, in case the Guide is not a faculty of IMU, these details shall be intimated to the Co-Guide, who shall be an IMU faculty and Co-Guide shall keep record of the same and present these details at DC Meetings. DC Meetings shall be held at IMU Campuses where the Guide/Co-Guide is working.
- iv. The Doctoral Committee shall submit its recommendations along with a copy of Ph.D. scholar's progress report to the University. A copy of such recommendations shall also be provided to the Ph.D. scholar.
- v. The first meeting (after admission) and last meeting (before submission of synopsis/thesis) shall be held in physical form and rest of the meetings may be conducted in hybrid mode/online modes.

Note: DC Meetings may be preferably conducted in virtual/hybrid modes; extra meetings may also be conducted depending upon the needs, progress and other requirements as felt necessary by the DC. In all such cases for extra meetings and physical meetings, explicit approvals shall be obtained from the University.

- vi. The Guide/DC shall guide the scholar for publishing of research article(s) in UGC approved journals with regard to his/her research domain.
- vii. In case of unsatisfactory performance of Ph.D Scholar, the DC shall issue a warning notice at the time of review meeting. If two consecutive notices are issued to a Ph.D. scholar and the progress continues to be un-satisfactory as reported by the DC, the registration is liable to be cancelled on the recommendations of DC.
- viii. In such cases, the scholar may choose to re-join the programme within 3 years of the cancellation. The Candidate is not required to re-do the coursework if the area of research remains the same, subject to the approval of the Vice Chancellor. However, a new DC shall be constituted.
- ix. After the lapse of 3 years of cancellation of registration, the candidate can join only as a fresh candidate in accordance with the procedures prescribed for intake of fresh admission.
- x. All programme related requests and communication of the Research Scholar shall be through Guide, Co-Guide and the DC only. Individual communications in this regard shall not be entertained.
- xi. The IMU faculty (Guide/Co-Guide) shall convene the meetings and settle the sitting fees/TA/DA of the respective external members within a fortnight from the date of conduct of the meeting.

xii. The sitting fees shall be paid by the respective IMU Campus and the Campus shall forward a consolidated summary of the processed claims of it annually (before 10th March of every year) for settlement of such claims.

This issues with approval of the Competent Authority.

Deputy Registrar (CTR) i/c



भारतीय समुद्री विश्वविद्यालय INDIAN MARITIME UNIVERSITY

(Central University, Goyt, of India) **HEADQUARTERS**

Administrative Order No. PhD 04

No. IMU-HQ/D/11/15/2/Secretariat/2022 /og

09th Oct 2023

Sub: Administrative Order for Evaluation of thesis, Assessment Methods and Minimum standards/credits for award of the degree: - reg.

Ref: 34th meeting of the Academic Council - agenda no. AC-2022-34-12 & AC-2022-34-13 and the Executive Council agenda no. 2023-in-Circulation No. 01.

(Ref: Clause 13 of the Ph.D. Ordinance 01 of 2023)

The administrative order for evaluation of thesis, Assessment Methods and minimum standards/credits for award of the degree is given as follows:

- A. Details of adjudication procedures, panel of examiners, evaluation and format for recommendation, conduct of Public defence and award of Ph.D. degree:
 - A Comprehensive examination (viva-voce) shall be conducted by oral mode by the Department within two months of passing all the course work examinations. The examination will be conducted by a committee comprising the members of the DC and experts drawn from outside (committee comprises of DC members plus two external members).
 - The candidate is expected to demonstrate his/her depth of knowledge in the ii. topic of research. The committee after satisfying itself may permit the candidate to move to the next stage.
 - If the scholar does not qualify in the comprehensive exam, he/she will have 2 iii. more attempts to clear the exam and this shall be within 3-6 months of the first attempt failing which the registration shall be liable to be cancelled.
 - Before submission of the synopsis, Ph.D. scholar should give at least one seminar presentation on the data/findings to the members of DC and other invitees chosen by DC.
 - v. The seminar presentation shall be evaluated by the DC. If the DC is not satisfied with the seminar presentation, the Ph.D. scholar will be required to deliver another presentation. If the Ph.D. scholar fails to deliver a satisfactory seminar presentation in three attempts with at least one-month interval between each attempt, the registration is liable to be cancelled.

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- vi. If the candidate wishes to resume the studies, he/she will have to register within three years. Such candidate need not undergo the coursework if the area of research remains the same, subject to the approval of the Board of Research Studies. However, a new DC will have to be constituted. Beyond a period of three years, the candidate can be admitted as a fresh candidate by following the selection process including Written Test.
- vii. A Ph.D. scholar shall submit to the University a synopsis of 10-15 pages (5 hard copies) of the proposed thesis along with the title, which is approved and duly certified by the DC. The synopsis shall also be submitted in the soft copy. No change of title or area of research shall be permitted after the approval of the synopsis.
- viii. A Ph.D. scholar should publish at least one research paper in a refereed journal as a first author and present a full paper in a reputed conference. He/she should produce evidence for the same while submitting the Synopsis. The journal must be in the approved list of UGC.
- ix. Thereafter, within six months from the date of submission of the synopsis, the Scholar shall do a plagiarism check which shall be duly certified by the Guide.
- x. Then the Ph.D. scholar shall submit 5 hard copies of the thesis.
- xi. The hard copies shall be checked and duly certified by the Guide and forwarded to the University for Adjudication. The thesis shall also be submitted in the form of soft copy.
- xii. The title page of the thesis, cover, format, etc., should strictly conform to the prescribed format and all copies of the thesis should carry a declaration by the Ph.D. scholar in the prescribed format and certificate duly signed and issued by the Guide in the prescribed format. The synopsis format is attached as Annexure-1.
- xiii. The Vice-Chancellor shall appoint a panel of Examiners for adjudicating the thesis of a Ph.D. scholar.
- xiv. The panel of Examiners shall comprise two external examiners to be nominated by the Vice-Chancellor from a panel of at least 8 members (4 from India, 4 from Abroad) suggested by the DC. The Vice-Chancellor will normally select one from each category. The two external examiners must necessarily possess Ph.D. The proforma for nomination of examiners for adjudication is attached as Annexure-2.
- xv. In case of difficulty in finding an external examiner from abroad, the Vice-Chancellor may appoint an Indian examiner and vice versa.

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- xvi. In case of difficulty in appointing external examiners from the panel suggested by the DC, the Vice-Chancellor may seek second panel. If second panel is also found to be unsatisfactory, the Vice-Chancellor can appoint an external examiner from outside the panel.
- xvii. The panel of Examiners shall evaluate the thesis and give a detailed report in the format prescribed by the University (Annexure 3). An Examiner may recommend one of the following:
 - (i) Thesis is highly commended in its present form.

[OR]

(ii) Thesis is commended in its present form.

[OR]

(iii) Thesis is commended and the degree may be awarded subject to the candidate's furnishing satisfactory clarification to my queries during the public Viva Voce examination.

[OR]

(iv) Thesis is commended and the degree may be awarded subject to the condition that the corrections/modifications suggested by me are carried out in the thesis and duly certified by the Guide before the public viva-voce examination.

[OR]

(v) Thesis needs to be resubmitted after revision for re-evaluation.

[OR]

- (vi) Thesis is not commended and the degree may not be awarded.
- xviii. If the thesis is reverted under clause (v) of **Annexure -3** above, the re-evaluation will be done by the same panel of Examiners. The University may forward these two reports to the Guide.
- xix. The two external examiners shall send their individual reports to the University in both hard copy and scanned soft copy form.
- xx. If any one of the external examiners suggests a course of action as indicated in (iv) or (v) above, the Ph.D. scholar shall comply with such suggestion and the same is to be certified by the DC.
- xxi. If any one of the external examiners does not recommend the thesis for the award of the Ph.D. degree [as in (vi) above], the Vice-Chancellor shall then refer the thesis to a third external examiner for evaluation.

- xxii. The remarks made by the external examiner who has not recommended the thesis, shall be provided to the Guide so as to advise the Ph.D. scholar to carry out any corrections / additions / alterations / modifications, if needed.
- xxiii. The third external examiner shall not be provided with the reports of the other examiners. If the third external examiner recommends the thesis for the award of the degree, the candidate shall be asked to appear for a viva-voce examination.
- xxiv. If the third external examiner also does not recommend the thesis for award of Ph.D. degree, the degree shall not be awarded to the Ph.D. scholar.
- xxv. A candidate whose thesis has not been recommended for the award of the degree may be permitted to re-submit the thesis within a period of one year. In case the thesis is not recommended again he/she will have to re-register as a fresh candidate but without having to go through the admission process again.

B. Guidelines for the conduct of Public defence and award of Ph.D. degree:

- i. Once the submitted thesis is approved, a Ph.D. scholar shall defend the thesis in the form of Viva-Voce in an open forum with an external examiner, who shall be nominated by the Vice-Chancellor from a panel of already nominated external examiners.
- ii. The viva-voce board shall consist of the Guide and at least one of the two external examiners.
- iii. The external examiner who would be administering the Viva-Voce examination shall ordinarily be one of the examiners to whom the thesis is sent for adjudication.
- iv. The viva-voce shall be open to the members of the Doctoral Committee/faculty members/research scholars and students.
- v. A candidate who is successful at the Viva-Voce examination shall be declared to have qualified for the award of Ph.D. degree by the University. The Ph.D. degree certificate shall be awarded as per the format prescribed.
- vi. A candidate, who is not successful at the Viva-Voce examination, may be permitted to take the same on two more occasions with at least a gap of one month each time between the presentations. If he/she is not successful even in the third attempt, the degree shall not be awarded and the candidate will have to re-register as a fresh candidate but without having to go through the admission process again.



vii. If for any reason the external examiner is unable to conduct the viva-voce examination even two months after the appointment, the Vice-Chancellor may make alternative arrangements for the conduct of the Viva-Voce examination.

C. Format of Thesis:

The format is attached as Annexure - 4.

This issues with approval of the Competent Authority.

Deputy Registrar (CTR) i/c



INDIAN MARITIME UNIVERSITY

(A Central University, Govt. of India)
East Coast Road, Uthandi, CHENNAI-600 119.

Guidelines for Preparation of Ph.D. Synopsis

- Synopsis should be type-written on both sides of good quarto-size/ A-4 size paper 1.5 space with sufficient margins.
- 2. Standard A4 size (297mm x 210mm) bond paper may be used.
- 3. Text should be in TIMES NEW ROMAN, Font size of Heading shall be 14 and Font size for content shall be 12.
- 4. The size of the synopsis should not exceed 15 pages reckoned from the first page to the last page including list of publications
- 5. 5 sets of hard copies of synopsis should be submitted and also soft copy in CD.
- 6. The sequence in which the Synopsis should be arranged is as follows:
 - a) Title page
 - b) Text divided into suitable Headings (numbered consecutively)
 - c) References (not more than 15)
 - d) List of Publications (those published/accepted for publication in Journals and papers presented in Conferences/Symposia). Mention Impact Factor of the Journal (if applicable).
- 7. The Synopsis should have the following page margins:

a) Top edge: 30 to 35 mm

b) Bottom edge: 25 to 30 mm

c) Left side: 35 to 40 mm

d) Right side: 20 to 25 mm

8. One or two Tables/ Figures may be included at appropriate places in the text and they should conform to the margin specifications. All page numbers (Arabic numbers) should be typed without punctuation on the upper right hand corner 20 mm from top with the last digit in line with the right hand margin. Synopsis should be bound with black calico cloth and using flexible cover of thick white art paper. The cover should be printed in black letters and the text for printing should be identical to what has been prescribed for the title page.

9. References-Format

a) Journal Article: with Single Author

Waldron, S 2008, 'Generalized Welch bound equality sequences are tight frames', IEEE Transactions on Information Theory, vol. 49, no. 9, pp. 2307-2309.

b) Journal Article: with Two Authors

Conley, TG & Galeson, DW 1998, 'Nativity and wealth in mid-nineteenth century cities', Journal of Economic History, vol. 58, no. 2, pp. 468-493.

c) Journal Article: with more than two Authors

Alishahi, K, Marvasti, F, Aref, VA & Pad, P 2009, 'Bounds on the sum capacity of synchronous binary CDMA channels', Journal of Chemical Education, vol. 55, no. 8, pp. 3577-3593.

d) Books

Holt, DH 1997, Management Principles and Practices, Prentice-Hall, Sydney.

e) E-book

Aghion, P & Durlauf, S (eds.) 2005, Handbook of Economic Growth, Elsevier, Amsterdam. Available from: Elsevier books. [4 November 2004].

f) Conference Proceeding Paper with editors

Riley, D 1992, 'Industrial relations in Australian education', in Contemporary Australasian industrial relations: proceedings of the sixth AIRAANZ conference, ed. D. Blackmur, AIRAANZ, Sydney, pp. 124-140.

g) Conference Proceeding Paper without editors

Fan, W, Gordon, MD & Pathak, R 2000, 'Personalization of search engine services for effective retrieval and knowledge management', Proceedings of the twenty-first international conference on information systems, pp. 20-34.

h) Website

Australian Securities Exchange 2009, Market Information. Available from: http://www.asx.com.au/professionals/market information/index.htm>. [5 July 2009].

i) Patent

Cookson, AH 1985, Particle trap for compressed gas insulated transmission systems, US Patent 4554399.

j) Thesis: Unpublished

Hos, JP 2005, Mechanochemically synthesized nanomaterials for intermediate temperature solid oxide fuel cell membranes. Ph.D. thesis, University of Western Australia.

k) Newspaper: Print

Ionesco, J 2001, 'Federal election: new Chip in politics', The Advertiser 23 October, p. 10.

A typical Specimen of Cover Page and Title Page

EFFICIENT AND EFFECTIVE PORT OPERATIONS AND MANAGEMENT

 <1.5 line spacing>

SYNOPSIS

Submitted by

 <Italic>

MUTHUSAMY N T

<Registration Number>

<School>

in partial fulfilment of the requirements for the degree of

 <Italic> <1.5 line spacing>

DOCTOR OF PHILOSOPHY



INDIAN MARITIME UNIVERSITY, CHENNAI 600119.

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JANUARY 2020

Sample copy EFFICIENT AND EFFECTIVE PORT OPERATIONS AND MANAGEMENT

SYNOPSIS

Submitted by

MUTHUSAMY N T

(Reg. No. 110220202020)

School of Maritime Management

in partial fulfilment of the requirements for the degree of DOCTOR OF PHILOSOPHY



INDIAN MARITIME UNIVERSITY
CHENNAI 600119

JANUARY 2020

INDIAN MARITIME UNIVERSITY

PROFORMA FOR FURNISHING THE NAMES OF EXPERTS TO EVALUATE Ph.D. THESIS AND FOR CONDUCT OF THE PUBLIC VIVA VOCE EXAMINATION.

(Note: Only this form should be used and returned with full particulars - typed version)

Name of the Candidate

Title of Thesis

Subject/Area

School				
Name of the Supervisor / Guide				
Phone / Mobile No. of the supervisor			0	
Name of the Co-guide (if -applicable)				
PANEL OF EXPERTS CONSISTING OF 8 PROPORTIONS (4- Indian & 4 - Interna		ERS FROM INDIA AND A	ABROAD IN EQ	UAL
Name of the Examiner with Designations, Address, email id., Mobile No., Landline No., Fax No. & Official University email id.	Qu resea speci Univer & year	nalification, Total rch experience with alization, URL of the sity home page, if any is of experience in the resent institution	Whether the examiner evaluated any thesis of the Supervisor. If, yes, given details	Remarks (for office use only)
(1) (2) (3) (4)				
Please list 2 publications of the above examine books published by reputed National / Foreign 1. 2.				

II. NATIONAL		
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	i e	
Please list 2 publications of the above		
Please list 2 publications of the above examiners i	n the last 5 years (journal articles in t	he UGC listed journals or
books published by reputed National / Foreign pu	iblishers) related to the discipline of t	he candidato's thosis
1.	and and applied of the	ne candidate 5 tilesis.
2.		

Certified that none of the experts suggested, including the Supervisor/Guide is relative to candidate and further certified that the panel of experts has been suggested in consultation with Doctoral Committee.

Signature of Supervisor/Guide with designation and seal

(Signature of the Examiner)



INDIAN MARITIME UNIVERSITY, CHENNAI

	Pro	forma	a for Adjudication of the Thesis by the External Examiner
1. 2. 3.	Title of the School/Dis	esis: cipline	e and Subject: ess of the Examiner:
	Recommend Applicable)	dation	s of the Examiner (Please strike out whichever is not
		i.	Thesis is highly commended in its present form. [OR]
		ii.	Thesis is commended in its present form. [OR]
		iii.	Thesis is commended and the degree may be awarded subject to the candidate's furnishing satisfactory clarification to my queries during the public viva-voce examination. [OR]
		iv.	Thesis is commended and the degree may be awarded subject to the condition that the corrections/modifications suggested by me are carried out in the thesis and duly certified by the Guide before the public viva-voce examination.
		.,	[OR]
		V.	Thesis needs to be resubmitted after revision for re-evaluation. [OR]
		vi.	Thesis is not commended and the degree may not be awarded.
No	ote:		
2.	Please enc	lose a he qua o encl	comments/required corrections in the draft copy of the Thesis. I detailed report on the thesis, including a critical review of the work Cality. I lose a list of questions, if any, to be asked at the public viva-voce
6. Any	y other Rema	arks:	
Place:			
Date:			

Address:

GUIDELINES FOR THE PREPARATION OF THESIS

The scholars are expected to read carefully the Guidelines given in the sequel and meticulously follow them in the preparation of the Thesis. Non-compliance with any of these instructions may lead to the rejection of the Thesis submitted.

1. GENERAL

The manual is intended to provide broad guidelines to the research scholars in the preparation of the Thesis. In general, the Thesis shall report, in an organized and scholarly fashion, an account of original research work of the research scholar leading to the discovery of new facts or techniques or correlation of facts already known (analytical, experimental, hardware oriented, etc.). Thesis shall demonstrate a quality as to make a definite contribution to the advancement of knowledge and the research scholar's ability to undertake sustained research and present the findings in an appropriate manner with actual accomplishments of the work.

2. SIZE OF THESIS

The size of the Thesis shall be normally between 100 and 400 pages of typed matter reckoned from the first page of Chapter 1 to the last page of the thesis excluding reference section.

3. ARRANGEMENT OF THE CONTENTS OF THE THESIS

The sequence in which the Thesis material should be arranged and bound is as follows:

- 1. Cover Page and Title page (as shown in Annexure I)
- 2. Declaration for of Research Scholar (as shown in Annexure II)
- 3. Certificate (as shown in Annexure III)
- 4. Abstract
- 5. Acknowledgement (one page only)
- 6. Table of Contents (as shown in Annexure IV)
- 7. List of Tables
- 8. List of Figures
- 9. List of Symbols and Abbreviations (as shown in Annexure V)
- 10. Chapters
- 11. Appendices
- 12. References (Alphabetical order)
- 13. List of Publications
- 14. The Tables and Figures should be included subsequently after referring them in the text of the Thesis. The thesis from Chapters should be printed on both sides.

4. PAGE DIMENSIONS AND MARGIN

Standard A4 Size (297 mm x 210 mm) bond paper may be used for preparing the copies. The dimensions of the final bound Thesis (5 copies) report should be $290 \text{ mm} \times 205 \text{ mm}$.

The final Thesis (at the time of submission) should have the following page margins:

Top edge: 30 to 35 mm Bottom edge: 25 to 30 mm Left side: 35 to 40 mm

Right side: 20 to 25 mm

The Thesis should be prepared on good quality white paper preferably not lower than 80GSM. Tables and Figures should conform to the margin specifications. Large size Figures should be photographically or otherwise reduced to the appropriate size before insertion.

5. MANUSCRIPT PREPARATION

In the preparation of the manuscript, care should be taken to ensure that all textual matter is typewritten to the extent possible in the same format as may be required for the final Thesis. Hence some of the information required for the final typing of the Thesis is also included in this section.

The headings of all items from 2 to 12 listed in section 3 should be typed in capital letters without punctuation and centred 50 mm below the top of the page. The text should commence 4 spaces below this heading. The page numbering for all items from 1 to 8 should be done using lower case Roman numerals and the pages thereafter should be numbered using Arabic numerals.

- **5.1 Cover Page & Title Page** A specimen copy of the Cover page and Title page for the Thesis is given in Annexure II.
- **5.2 Bonafide Certificate** The Certificate shall be typed in double line spacing using Font Style Times New Roman and Font Size 13 as per the format shown in Annexure III. The certificate shall carry the Guide's signature and shall be followed by the Guide's name, academic designation (not any other responsibilities of administrative nature), department and full address of the institution where the Guide has guided the research scholar. The term 'GUIDE' must be typed in capital letters between the Guide's name and academic designation. Signature of the Co-Guide with the details specified as above should be included wherever it is applicable.
- **5.3 Abstract** Abstract should be an essay type of narration not exceeding four pages outlining the research problem, methodology used for tackling it and a summary of the findings. This shall be typed in one and a half line spacing using Font Style Times New Roman and Font Size 13.
- **5.4 Acknowledgement** It should be brief and should not exceed one page when typed in one and a half line spacing. The scholar's signature shall be made at the bottom right end above his/her name typed in capitals.
- **5.5 Table of Contents** The Table of contents should list all captions following it as well as any caption which precedes it. The title page, Certificate and Acknowledgment will not find a place among the items listed in the Table of Contents but the page numbers of which are in lower case Roman letters. One and a half line spacing should be adopted for typing the matter under this head. A specimen copy of the Table Contents for the Thesis is given in Annexure III.
- **5.6 List of Table** The list should use exactly the same captions as they appear above the Tables in the text. One and a half line spacing should be adopted for typing the matter under this head.
- **5.7 List of Figures** The list should use exactly the same captions as they appear below the Figures in the text. One and a half line spacing should be adopted for typing the matter under this head.
- **5.8 List of Symbols and Abbreviations** One and a half line spacing should be adopted for typing the matter under this head. Standard symbols, abbreviations, etc. should be used. **The list should be arranged alphabetically with respect to the contents on the right side as shown in Annexure V.**
- **5.9 Chapters** The chapters may be broadly divided into 3 parts (i) Introductory chapter, (ii) Chapters developing the main theme of the Thesis and (iii) Results, Discussion and Conclusion. The main text shall be divided into several chapters and each chapter may be further divided into several divisions and sub-divisions.
 - Each chapter should be given an appropriate title.

reference where they are cited.

• Footnotes should be used sparingly. They should be typed single space and placed directly underneath in the very same page which refers to the material they annotate.

5.10 Appendices - Appendices are provided to give supplementary information, which if included in the main text may serve as a distraction and cloud the central theme under discussion.

- a. Appendices should be numbered using Arabic numerals, e.g. Appendix 1, Appendix 2, etc.
- b. Appendices, Tables and references appearing in appendices should be numbered and referred to appropriate places just as in the case of chapters.
- c. Appendices shall carry the title of the work reported and the same title shall be included in the Table of Contents page.

5.11 List of References - Any works of other researchers, if used either directly or indirectly, the origin of the material thus referred to appropriate places in the Thesis should be indicated. The author's publications during the period of research should not be included in the references and can be separately mentioned as in 5.10. A paper, a monograph or a book may be designated by the name of the first author followed by the year of publication, placed inside brackets at the appropriate places in the Thesis.

The citation may assume any one of the following forms.

How to cite

- a. The structure of a citation is the author's surname and year of publication.
- b. Single author is cited as "Jones (2001)".
- c. Two authors are cited using "&" (Deane & Jones 1991) or Smith et. al. (1992)
- d. More than two authors are cited using "et. al." (Smith et al. 1992) or Smith et. al. (1992).

In case the information being discussed has been written in several different sources then cite them all in one set of brackets in chronological order of publication (Midgley 1994; Smith 1994; Philip 2002).

- a. If an author published several papers in 2005, the year of the first publication (in the alphabetic order of the references) is cited and referenced as 2005a, the second as 2005b and so on.
- b. A citation is placed wherever appropriate in or after the sentence. If it is at the end of a sentence, it is placed before the full stop.
- c. Complete citations and Source shall be provided in alphabetical order in reference section.
- d. All citations shall be in the same font as the main text.
- e. All-figures and charts etc., taken from other sources shall be cited beneath within brackets, author name, source followed by, year in Times New Roman, Normal, font-size: 11 points, as "(Source: Jones, et al. 2001)". If it is sourced from Web pages the citation style shall be as "(Source: www.abc.com)" and the complete URL shall be given in the reference section.

Examples of Citation

- a. An improved algorithm has been adopted in the literature (Waldron 2008).
- b. Conley & Galeson (1998) have dealt at length this principle.
- c. The problem of mechanical manipulators has been studied by Alishahi et al (2009)

The listing should be typed 4 spaces below the heading "REFERENCES" in single spacing. The reference material should be listed in the alphabetical order of the first author. The name of the author/authors

should be immediately followed by the other details and year. A typical illustrative list given below relates to the citation example quoted above.

5.12 References

a. Journal Article: with Single Author

Waldron, S 2008, 'Generalized Welch bound equality sequences are tight frames', IEEE Transactions on Information Theory, vol. 49, no. 9, pp. 2307-2309.

b. Journal Article: with Two Authors

Conley, TG & Galeson, DW 1998, 'Nativity and wealth in mid-nineteenth century cities', Journal of Economic History, vol. 58, no. 2, pp. 468-493.

c. Journal Article: with more than two Authors

Alishahi, K, Marvasti, F, Aref, VA & Pad, P 2009, 'Bounds on the sum capacity of synchronous binary CDMA channels', Journal of Chemical Education, vol. 55, no. 8, pp. 3577-3593.

d. Books

Holt, DH 1997, Management Principles and Practices, Prentice-Hall, Sydney.

e. E-book

Aghion, P & Durlauf, S (eds.) 2005, Handbook of Economic Growth, Elsevier, Amsterdam. Available from: Elsevier books. [4 November 2004].

f. Conference Proceeding Paper with editors

Riley, D 1992, 'Industrial relations in Australian education', in Contemporary Australasian industrial relations: proceedings of the sixth AIRAANZ conference, ed. D. Blackmur, AIRAANZ, Sydney, pp. 124-140.

g. Conference Proceeding Paper without editors

Fan, W, Gordon, MD & Pathak, R 2000, 'Personalization of search engine services for effective retrieval and knowledge management', Proceedings of the twenty-first international conference on information systems, pp. 20-34.

h. Website

Australian Securities Exchange 2009, Market Information. Available from: http://www.asx.com.au/professionals/market information/index.htm>. [5 July 2009].

i. Patent

Cookson, AH 1985, Particle trap for compressed gas insulated transmission systems, US Patent 4554399.

j. Thesis: Unpublished

Hos, JP 2005, Mechanochemically synthesized nanomaterials for intermediate temperature solid oxide fuel cell membranes. Ph.D. thesis, University of Western Australia.

k. Newspaper: Print

lonesco, J 2001, 'Federal election: new Chip in politics', The Advertiser 23 October, p. 10.

6. LIST OF PUBLICATIONS

The list of publications (those already published/accepted for publication in Journals and papers presented in Conferences/Symposia) made by research scholar during the period of research shall be reported in the Table of Contents. Mention Impact Factor of the Journal (if applicable).

7. TABLES AND FIGURES

"Table" means tabulated numerical data in the body of the Thesis as well as in the appendices. All other non-verbal material used in the body of the Thesis and appendices such as charts, graphs, maps, photographs and diagrams may be designated as Figures.

- a. A Table or Figure including caption should be accommodated within the prescribed margin limits and appear on the page following the page where their first reference is made.
- b. Tables and Figures on half page or less in length may appear on the same page along with the text. However, they should be separated from the text both above and below by triple spacing.
- c. All Tables and Figures should be prepared on the same paper or material used for the preparation of the rest of the Thesis.
- d. Two or more small Tables or Figures may be grouped if necessary in a single page.
- e. Wherever possible, the photograph(s) shall be reproduced on a full sheet of photographic paper or standard A4 size paper.
- f. More than one photograph can be included in a page.
- g. Samples of Fabric, Leather, etc., if absolutely necessary may be attached evenly in a page and fixed/pasted suitably and should be treated as Figures.

8. TYPING INSTRUCTIONS

8.1 General

This section includes additional information for final typing of the Thesis. The impressions on the typed/printed copies should be black in colour.

A sub-heading at the bottom of a page must have at least two full lines below it or else it should be carried over to the next page.

The last word of any page should not be split using a hyphen. One and a half line spacing should be used for typing the general text. The general text shall be typed in Font Style Times New Roman and Font Size 12. Single spacing should be used for typing:

- a. Long Tables
- b. Long quotations
- c. Foot notes
- d. Multiline captions
- e. References

All quotations exceeding one line should be typed in an indented space – the indentation being 15 mm from either side of the margin.

8.2 Chapters

The format for typing Chapter headings, Division headings and Sub-division headings are explained by the following illustrative examples.

Chapter heading:

CHAPTER 1

INTRODUCTION

Division heading:

1.1 OUTLINE OF THESIS

Sub-division heading: 1.1.1 Literature Review

1.1.1.1 Synthetic aperture radars on satellites

The word CHAPTER without punctuation should be centered 50 mm down from the top of the page. Two spaces below, the title of the chapter should be typed centrally in capital letters. The text should commence 4 spaces below this title, the first letter of the text starting 20 mm inside from the left hand margin.

The division and sub-division captions along with their numberings should be left justified. The typed material directly below division or sub-division heading should commence 2 spaces below it and should be offset 20 mm from the left hand margin. Within a division or sub-division paragraphs are permitted. Even paragraph should commence 3 spaces below the last line of the preceding paragraph, the first letter in the paragraph being offset from the left hand margin by 20 mm.

9. NUMBERING INSTRUCTIONS

9.1 Page Numbering

All page numbers (whether it be in Roman or Arabic numbers) should be typed without punctuation on the upper right hand corner 20 mm from the top with the last digit in line with the right hand margin. The preliminary pages of the Thesis (such as Title page, Acknowledgement, Table of Contents, etc.) should be numbered in lower case Roman numerals. The title page will be numbered as (i) but this should not be typed. The page immediately following the title page shall be numbered as (ii) and it should appear at the top right hand corner as already specified. Pages of main text, starting with Chapter 1 should be consecutively numbered using Arabic numerals.

9.2 Numbering of Chapters, Divisions and Sub-Divisions

The numbering of chapters, divisions and sub-divisions should be done using Arabic numerals only and further decimal notation should be used for numbering the divisions and sub-divisions within a chapter. For example sub-division 4 under division 3 belonging to chapter 2 should be numbered as 2.3.4. The caption for the sub-division should immediately follow the number assigned to it.

Every chapter beginning with the first chapter should be serially numbered using Arabic numerals. Appendices, included if any, should also be numbered in an identical manner starting with Appendix 1.

9.3 Numbering of Tables and Figures

Tables and Figures appearing anywhere in the Thesis should bear appropriate numbers. The rule for assigning such numbers is illustrated by an example. Thus, if a Figure in Chapter 3, happens to be the fourth then assign 3.4 to that Figure. Identical rules apply for Tables except that the word Figure is replaced by the word Table. If Figures (or Tables) appear in appendices then Figure 3 in Appendix 2 will be designated as Figure A 2.3. If a table to be continued into the next page this may be done, with unfinished Table, continued into the next page, with title Table 2.1 (continued) placed centrally.

10.BINDING SPECIFICATIONS

Thesis (5 copies) side pinning/stitching, covered with wrapper printed on 300 gsm white art card and outer side gloss laminated, adhesive binding. The cover should be printed in black letters and the text for printing should be identical to what has been prescribed for the title page.

ANNEXURE I

A typical Specimen of Cover Page and Title Page

EFFICIENT AND EFFECTIVE PORT OPERATIONS AND MANAGEMENT

 <1.5 line spacing>

A THESIS

Submitted by

 <Italic>

MUTHUSAMY T

<Registration Number>

<School>

in partial fulfilment of the requirements for the degree of

 <Italic> <1.5 line spacing>

DOCTOR OF PHILOSOPHY



INDIAN MARITIME UNIVERSITY

CHENNAI 600119

<1.5 line spacing>

JANUARY 2020

EFFICIENT AND EFFECTIVE PORT OPERATIONS AND MANAGEMENT

A THESIS

Submitted by

MUTHUSAMY T

(Reg. No. 110220202020)

School of Maritime Management

in partial fulfilment of the requirements for the degree of

DOCTOR OF PHILOSOPHY



INDIAN MARITIME UNIVERSITY CHENNAI 600119

JANUARY 2020

ANNEXURE II

A typical Specimen of Declaration form INDIAN MARITIME UNIVERSITY

CHENNAI 600119

I declare that the thesis titled	submitted by me for the degree of Doctor
of Philosophy (Ph.D) is the record of research wor	k carried out by me during the period from
	and that this work has not formed the basis for
	, Fellowship or other titles in this university or any
other university or institution of Higher Learning.	, , , , , , , , , , , , , , , , , , , ,
am aware of and understand the University's polic	ey on plagiarism and I certify that the thesis submitted
by me is my own work, except where indicated by	by referencing, and has not been copied from other
sources or been previously submitted for award of	or assessment. If plagiarism related to this thesis is
proved, in future, I am aware that the University w	ill initiate disciplinary action against me.
	Signature of the Research Scholar
	Name

ANNEXURE III

A typical Specimen of Certificate

INDIAN MARITIME UNIVERSITY

CHENNAI 600119

<1.5 line spacing>
BONAFIDE CERTIFICATE

The research work embodied in the present Thesis entitled "EFFICIENT AND EFFECTIVE PORT OPERATIONS AND MANAGEMENT" has been carried out in the << Name of the Guide's Department>>, << Name of the institution/university>>, << Place>>>. The work reported herein is original and does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion or to any other scholar.

I understand the University's policy on plagiarism and declare that the thesis and publications are my own work, except where specifically acknowledged and has not been copied from other sources or been previously submitted for award or assessment.

ANNEXURE IV

A typical Specimen of Table of Contents

TABLE OF CONTENTS

CHAPTER NO.	TITLE	PAGE NO.
	ABSTRACT	iii
	LIST OF TABLES	xvi
	LIST OF FIGURES	xviii
	LIST OF SYMBOLS AND ABBREVIATIONS	xxvii
1	INTRODUCTION	1
	1.1 GENERAL	1
	1.2 OBJECTIVES OF THE RESEARCH	3
	1.3 LITERATURE REVIEW	4
	1.3.1 Operations	6
	1.3.2 System Details	19
	1.3.3 Design Techniques	29
2	DEVELOPMENT OF NON-LINEAR SIX DEGRE	EES- OFFREEDOM
	AIRCRAFT MODEL	45
	2.1 GENERAL	45
	2.2 BUILDING AN AIRCRAFT	54
	2.2.1 Configuration Script	54
	2.2.1.1 First Stage Details	58
	2.2.1.2 Design Section	60
	2.2.1.3 Comparison	63
	2.2.1.4 Operation section	66

ANNEXURE V

LIST OF SYMBOLS AND ABBREVIATIONS



भारतीय समुद्री विश्वविद्यालय INDIAN MARITIME UNIVERSITY

(Central University, Govt. of India)

HEADQUARTERS

Administrative Order No. PhD 05

No. IMU-HQ/D/11/15/2/Secretariat/2022 /oq,

09th Oct 2023

10/10/2023

Sub: Administrative order for Migration/Transfer of scholars into/from IMU's Ph.D. Programme – reg.

Ref: 34th meeting of the Academic Council - agenda no. AC-2022-34-12 & AC-2022-34-13 and the Executive Council agenda no. 2023-in-Circulation No. 01.

(Ref: Clause 20.a.of the Ph.D. Ordinance 01 of 2023)

The administrative order for migration of research scholars into/from IMU's Ph.D. Programme is as given below:

- A. Migration/Transfer from Other Universities to IMU:
 - Migration/transfer of applications shall be considered when applications are called for every year.
 - ii. Irrespective of the time of application/admission, the scholar can be admitted only at the commencement of the following Academic Year, as defined by Academic calendar of IMU. Scholar will have to pay the fees as applicable to the year of joining along with a registration fee before commencement of the next Academic Year.
 - iii. Scholars pursuing a Ph.D. from any centrally funded institutions like IITs, NITs, IISC or Central/State Universities or any other University created by an Act of Parliament or Deemed to be University under UGC Act may apply for migration/transfer to IMU.
 - iv. The relevant coursework subjects conducted by the Deemed University must have been recognized by the UGC, AICTE etc.
 - v. Scholars applying for migration/transfer must have passed the relevant coursework subjects or else, they shall have to undergo the coursework classes and they shall be assessed also. A 'pass' status must be secured.
 - vi. Scholars seeking transfer/migration should submit their applications to IMU along with No Objection Certificate issued by the institution in which they are currently registered. NOC should be in the prescribed format of IMU and explicitly indemnify IMU from any violations relating to copyright/data/IPR etc.

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- vii. On receipt of an application, a committee will be formed by the Vice Chancellor to scrutinize the application on the following lines with regard to the review of the following: (i) Status of Course work done, (ii) Progress in Research work and (iii) the year to which the scholar will be assigned (within the permitted programme duration of Ph.D. programme).
- viii. If the scrutiny committee finds the Scholar fit to pursue Research in IMU, it will also act as the Departmental committee and appoint a suitable Guide/Co-Guide.
- ix. The nomination of the other members to Doctoral Committee (DC) will be as per the existing regulations of IMU. There shall be no bar on nominating previous guide as a member of the DC.
- x. Once a scholar is migrated/transferred and admitted to IMU for further research, he/she shall follow the Ph.D. regulations of IMU.
- xi. The migrant/transferred scholars will be permitted to submit the thesis only on completion of a minimum period of two years at IMU from the date of registration.
- B. Migration/Transfer from IMU to other Universities:
 - i. Scholars seeking transfer/migration from IMU to other Institution should submit their application to IMU with the recommendations of the Doctoral Committee.
 - ii. This migrant scholar will be permitted to migrate only on completion of a minimum period of six months at IMU from the date of registration.
 - iii. A NOC shall be issued, after collecting all dues etc., from the scholar.
 - iv. The transcript/NoC will indicate the status of completion of the course work, if any.

This issues with approval of the Competent Authority.

Deputy Registrar (CTR) i/c



भारतीय समुद्री विश्वविद्यालय INDIAN MARITIME UNIVERSITY

(Central University, Govt. of India)

HEADQUARTERS

Administrative Order No. PhD 06

No. IMU-HQ/D/11/15/2/Secretariat/2022 / No.

09th Oct 2023

10

Sub: Administrative order for the Integrated Ph.D. Programme – reg.

Ref: 34th meeting of the Academic Council - agenda no. AC-2022-34-12 & AC-2022-34-13 and the Executive Council agenda no. 2023-in-Circulation No. 01.

(Ref: Clause 20 b. of the Ph.D. Ordinance 01 of 2023)

The administrative order for Integrated Ph.D. Programme are is as given below:

- A. Procedure for admission to the Integrated Ph.D. Programme:
 - i. The admission shall be based on the criteria notified by the University and considering the reservation policy of the Government of India from time to time.
 - ii. The eligibility for the Integrated Ph.D. Programme shall be as prescribed as follows:

Graduate (U.G) degree (or equivalent) in a relevant discipline with at least 55% marks or equivalent Cumulative Grade Point Average (CGPA), except in the case of Mariners for whom a Master/MEO Class I Certificate of Competency would suffice.

A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/Differently-abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Government of India from time to time.

- iii. The procedure for admission, application of registration, allocation of Guide for the Integrated Ph.D. shall be as per the MS (By Research) programme.
- iv. The formation of Doctoral Committee shall be as per the Ph.D. regulations of IMU.
- v. A fresh candidate for Integrated Ph.D. programme shall take course work as per regulations for M.S (by Research).
- B. Procedure for exiting Integrated Ph.D. Programme
 - i. If the candidate wants to exit from the Integrated Programme, he/she may submit the M.S (By Research) thesis and fulfil the requirements to become eligible to receive the degree as per M.S (By Research) programme calendar.

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10/10/2023

- ii. Once the scholar has exited from the Programme, he/she may join as a fresh candidate only if he/she desires to pursue the Integrated Programme again.
- iii. However, the credits earned from completion of coursework subjects may be considered by the Doctoral Committee depending on the relevance of the research topic chosen.
 - iv. The other formalities such as seminar presentation, synopsis submission, thesis submission, adjudication of thesis, public defence, viva-voce and award of Ph.D. Degree etc., shall be as prescribed for the Ph.D. Programme.
- c. Procedure for conversion of MS (By Research) Programme to the Integrated Ph.D. Programme:
 - i. An existing M.S (by Research) scholar is also eligible for transfer into the Ph.D. programme on completion of course work in the first year and one-year (second year) research on the selected topic, subject to the recommendations of the Monitoring Committee and approval of the Vice-Chancellor.
 - ii. To become eligible for the transfer to Ph.D. Programme, the M.S scholar shall meet the minimum standard in the course work subjects, set by the Vice Chancellor and the same shall be placed for ratification by the Executive Council.
- iii. Upon conversion, candidate shall continue to fulfil Ph.D. requirements without any break.
- iv. After the transfer into Ph.D. programme, a Doctoral Committee (DC) shall be constituted as per the Ph.D. programme regulations.
- v. Ideally, the DC may be composed of Members from the earlier Monitoring Committee. Any addition or replacements may be made as per Ph.D. Regulations.
- vi. The newly formed DC will place the scholar into the Ph.D. on the second year of the PhD programme and assess the additional course requirements if any.
- vii. The course work credits of M.S shall be transferred to Ph.D. program along with additional credits if any, as mandated by the DC while transferring to the Integrated Ph.D. programme.
- viii. Some of the requirements of Ph.D. programme such as comprehensive viva and Seminars may be waived off by DC after due assessment. However, there shall be no waiver with respect to publications in journal and conference as required by Ph.D. regulations.

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- ix. The topic may be modified with the approval of the DC after taking into consideration the work done, resources/expertise available and the time required.
- x. A minimum of two years will be required to submit the Ph.D. thesis after the conversion from M.S (By Research) to Integrated Ph.D. Programme.
- xi. The registration date of the M.S (by Research) scholar shall remain unaltered even after admission / transfer to Ph.D. programme.
- xii. Transfer to Ph.D. programme shall be aligned with the academic year commencement.
- xiii. After transfer, the applicable fees as per the Integrated Ph.D. programme shall be paid by the scholar in the year of entry into Ph.D. programme.
- xiv. The other formalities such as seminar presentation, synopsis submission, thesis submission, adjudication of thesis, public defence, viva-voce and award of Ph.D. Degree etc., shall be as prescribed for the Ph.D. Programme.

D. Duration:

Candidates with Engineering/Technology/Architecture/Planning	Four (04) years
Candidates with B.Sc/B.Com/BBA/B.A and others	Five (05) Years

E. Evaluation, Assessment methods and minimum standards for award of M.S (Research)/ Ph.D degree:

As prescribed in Ordinance and relevant administrative order applicable to Ph.D. Programme and MS (by Research) as the case may be.

This issues with approval of the Competent Authority.

Deputy Registrar (CTR) i/c



भारतीय समुद्री विश्वविद्यालय INDIAN MARITIME UNIVERSITY

(Central University, Goyt, of India)

HEADQUARTERS

Administrative Order No. PhD 07

No. IMU-HQ/D/11/15/2/Secretariat/2022/1

09th Oct 2023

Sub: Administrative order for grant of extension beyond maximum permissible limits - reg.

Ref: 34th meeting of the Academic Council - agenda no. AC-2022-34-12 & AC-2022-34-13 and the Executive Council agenda no. 2023-in-Circulation No. 01.

(Ref: Clause 5 of the Ph.D. Ordinance 01 of 2023)

The administrative order for maximum permissible limits for completion of Ph.D are as follows:

- A. Ideally, thesis submission must be completed within the stipulated period and the processes for award of Doctoral Degree shall also be completed within the maximum stipulated time as per Ordinance.
- B. Ph.D. Programme shall be for a minimum duration of three (3) Years, including course work and a maximum duration of six (6) years from the date of admission to the Ph.D. programme.
- C. A maximum of an additional two (2) years can be given through a process of reregistration as per the administrative order of IMU issued from time to time; provided, however, that the total period for completion of a Ph.D. programme should not exceed eight (8) years from the date of admission in the Ph.D. programme.
- D. Provided further that, female Ph.D. scholars and Persons with Disabilities (having more than 40% disability) may be allowed an additional relaxation of two (2) years; however, the total period for completion of a Ph.D. programme in such cases should not exceed ten (10) years from the date of admission in the Ph.D. programme.
- E. There shall be no further extension beyond stipulated time periods (i.e., maximum period of 8/10 years, as the case may be). If a research scholar fails to submit his/her thesis within the stipulated time period, his/her registration shall stand cancelled.
- F. However, in case the scholar is unable to submit his/her thesis/synopsis due to an unexpected or unprecedented delay, the scholar may submit the proof for the same.
- G. This may be considered for additional extension, which shall be subject to payment of annual fees and fulfilment of the following conditions:

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Tel: (044) - 2453 9020 Fax: (044) - 2453 9026 E-mail: registrar@imu.ac.in website: www.imu.edu.in

- (i). Satisfactory performance in minimum 50% of the DC meetings conducted.
- (ii). Completion of Course Work, Seminar Presentation, Conference Paper Presentation & Comprehensive Viva
- (iii). Submission of a full paper to the Journal (UGC approved) at least before 6 months before from the deadline to submit thesis/synopsis.
- (iv). Submission of draft Synopsis to DC.
- (v). Recommendations of the DC for further extension beyond maximum duration allowed.

H. The extension approval shall be at the discretion of the Vice Chancellor.

This issues with approval of the Competent Authority.

Deputy Registrar (CTR) i/c



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(Central University, Govt. of India)

HEADQUARTERS

Administrative Order No. PhD 07

No. IMU-HQ/D/11/15/2/Secretariat/2022/に

09th Oct 2023

Sub: Administrative order for Plagiarism Check, exclusions and level of Acceptance – reg.

Ref: 34th meeting of the Academic Council - agenda no. AC-2022-34-12 & AC-2022-34-13 and the Executive Council agenda no. 2023-in-Circulation No. 01.

(Ref: Clause 13 of the Ph.D. Ordinance 01 of 2023)

The administrative order for Plagiarism Check, exclusions and level of Acceptance is as given below:-

A. Controlling Plagiarism:

- i. To ensure plagiarism-free documents during the final submission of thesis, a technology-based mechanism using plagiarism detection software shall be used by IMU.
- ii. An undertaking by every student during the submission of a thesis or any such documents to the University will mention that the document was originally prepared by the scholar as well as duly checked through a plagiarism tool approved by University.
- iii. The approved policy shall be available on the University website homepage.
- iv. A certificate shall be submitted by each Supervisor/Guide, which indicates that the scholar's/student's work done under by his/her supervision and is free from plagiarism (within the permissible level for acceptance).

B. Major exclusions from Plagiarism check

- i. All quoted work with the necessary permission/attribution.
- ii. References, Bibliography, table of content, preface and acknowledgments.
- iii. The generic terms, laws, standard symbols and equations.

C. Level of Acceptance

Generally, the level of similarity may be pegged at 20%. It would be acceptable if it is less than 20% and if it is above 20% similarity, the scholar may be asked to revise the thesis and submit again.

10/10/2023

East Coast Road, Semmencherry, Sholinganallur (P.O), Chennai - 600 119. Tel: (044) - 2453 9020 Fax: (044) - 2453 9026 E-mail: registrar@imu.ac.in_website: www.imu.edu.in

- D. If the submitted thesis fails the plagiarism check twice, then the submission shall not be allowed and the Scholar will be asked to redo the programme without appearing for Entrance test, interview etc.
- E. However, the formation of Committees and selection of topics shall follow the University's regular procedures.
- F. The course work credits earned earlier may be taken into consideration when a scholar redoes the Ph.D programme, providing the Doctoral Committee constituted for the new registration accepts its relevance.

This issues with approval of the Competent Authority.

Deputy Registrar (CTR) i/c



भारतीय समुद्री विश्वविद्यालय INDIAN MARITIME UNIVERSITY

(Central University, Govt. of India)

HEADQUARTERS

Administrative Order No. PhD 09

No. IMU-HQ/D/11/15/2/Secretariat/2022/13.

09th Oct 2023

Sub: Administrative order for admissions of International Students (Foreign International/Non Residential Indian (NRI) to Ph.D. programme at IMU – reg.

Ref: 34th meeting of the Academic Council - agenda no. AC-2022-34-12 & AC-2022-34-13 and the Executive Council agenda no. 2023-in-Circulation No. 01.

(Ref: Clause 9 of the Ph.D. Ordinance 01 of 2023)

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The administrative order for admission of International Students (Foreign International/Non-Residential Indian (NRI) to Ph.D. programme at IMU is as given below:

A. Guidelines for Admission of International Students

The procedure for the admission of International students to Ph.D. programmes in IMU will be adopted based on the General Guidelines issued by the University Grants Commission (UGC) and Association of Indian Universities (AIU). The procedure will be updated/modified from time to time based on the Statutory and Regulatory Directives of IMU.

B. The Office

IMU will provide necessary guidance to International students for admission into Ph.D. Programmes. All official letters, relating to international students, should be addressed to **The Registrar/Dean**, IMU. Informal enquiries can be made to the University for Necessary Guidance on securing admission.

- C. International Students Admission
 - i. IMU allots a certain number of seats for international students with the approval of the Vice-Chancellor. This includes Foreign Citizens, Person of Indian Origin (PIO), Overseas Citizen of India (OCI), Non-Resident Indian (NRI) and NRI-sponsored candidates (the sponsor must be a foreign national or hold NRI status).
 - ii. Admissions to the Ph.D. Programme will be considered for aspiring foreign students/applicants who may qualify under various support programmes of GoI and its various collaborations with other countries (e.g., BIMSTEC; ASEAN etc.).
 - iii. The admission of international students into the Ph.D. Programme shall be in full time/part time mode.

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- iv. In part time mode, the scholar must be physically present in India for the first 6 months and last 6 months (after submission of thesis) of the Ph.D. Programme failing which the scholar's registration to the Ph.D. Programme shall be cancelled.
- v. However, the enrolled foreign student is advised to visit the University and take up academic works every year, when possible.
- vi. The Doctoral Committee (DC) may encourage such visits and shall monitor the same. The DC may allot teaching assignments also as appropriate.
- vii. During the mandated visit periods, the scholar may attend the requisite Course Work classes and undertake other academic activities prescribed by the Doctoral Committee and the University.
- viii. In addition to the above, the Doctoral Committee shall decide when the physical presence of the scholar in India is required and if so, the scholar has to make necessary arrangements for his physical presence before the Doctoral Committee/Guide failing which the scholar's registration is likely to be cancelled.

D. Ph.D. Programme

 The students should submit an online application along with Statement of Purpose (SOP) (maximum 500 words)

Note: Irrespective of the time of application, the admissions will be considered in line with other regular research programmes of IMU which commences around July/August every year.

- ii. The SOP shall be perused by a Departmental Committee constitutes as per the Ordinance.
- iii. No entrance examination for the International Students who have completed their Master's degree. The Degree must be recognised by UGC/AICTE/AU in their respective countries and such students shall directly apply for Ph.D.
- iv. The students should submit their resume or curriculum vitae along with Letters of Recommendation (minimum two letters are required).
- v. It is preferable that the Letters of Recommendation are from the last academic institution the applicant had attended and from a person of academic standing.

E. Eligibility

International students who have completed their Master's programme (two years)
within India should appear for the written entrance examination for admission to
the Ph.D. programme (Entrance examinations are conducted during June/July
months, every year).

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- ii. The International students applying for PhD programme should get an Equivalence certificate from the Association of Indian Universities (AIU). For more details visit www.aiu.ac.in.
- iii. Degree certificates and the year-wise academic transcripts should be duly authenticated by the Indian Embassy in the Country or Foreign Mission in India.

F. Admission Procedure

- i. The International Students seeking admission in IMU should apply in the preceding academic year to that of the year when the registration is sought.
- ii. The International Students should submit their application through online admission portal available in IMU website (https://www.imu.edu.in).
- iii. After verifying the application and other documents, the University will issue a Conditional letter of Selection for the programme by ensuing Academic Year commencing from 1st August.
- iv. The students should pay all the prescribed fees for the complete programme. The candidate shall pay all the prescribed annual fee for the programme within 15 days from the date of issue of conditional letter of selection. The provisional admission letter will be sent only after the payment of fees is verified and confirmed. The fee can be paid either through SWIFT transfer or E-payment.

Bank Details of IMU:
Name - Indian Maritime University
Bank - State Bank of India, Branch - Uthandi
IFSC Code - SBIN0011771
Account Number - 31700113394
SWIFT Code - SBININBB298

Note: Charges for fee payment, if any, shall be borne by the applicant.

- v. All the necessary documents and the equivalence certificate(s) should be submitted. All documents must have been duly authenticated.
- vi. After verifying the application along with the required documents and after confirming payment of the prescribed fee, a provisional admission letter will be issued to the candidate by 1st July which will also include the name of the IMU Campus where the candidate is supposed to report for verification and admission. This letter may be used to apply for visa and complete other formalities.
- vii. Candidates should report to the allotted IMU Campus within 15 days before the commencement of the Academic Session (i.e. before 15th July). He/She must produce the original certificates for verification. The original certificates will be returned to the student after making necessary checks and endorsements.

Note: No admission shall be confirmed without the verification of their original certificates, medical fitness test and payment of required fees.

- viii. The candidate should register in the Foreigner Regional Registration Office (FRRO) of the local police after arrival in India
- ix. He/she must produce the original certificates for verification the photocopies etc. The original certificates will be returned to the student after making necessary checks and endorsements.
- x. No admission shall be confirmed without the verification of their original certificates, medical fitness test and payment of required fees.
- xi. Those applicants who send requests for admission to Ph.D. programme should get a research visa similarly endorsed for the entire duration of the concerned programme.
- xii. Applications for admission to the Ph.D. programmes shall be placed before the concerned Research Committee for processing.

G. Fees Structure

i. All selected International students for Ph.D. programme will be required to pay a prescribed fee of US\$ 2000 per year + other expenses as given in the table below. In special cases, payment of fees in the equivalent Indian Rupees may be considered.

S.No.	Particulars	Periodicity	Amount in US \$
1.	Caution Deposit (refundable)	One time	200
2.	Application for Ph.D. Registration and Processing Fee	One time	50
3.	Examination fee for Ph.D. thesis Evaluation/subsequent evaluation	One time	1000/200
4.	Examination fees for course work	One time	50 per paper
5.	Hostel and Mess Fee (per semester)	Every Semester	500
6.	Medical Fee	Per Year	50
7.	General Mediclaim Insurance Policy	To be arranged by the student for the full duration of stay at the University.	

- ii. The fees are subject to revisions from time to time/approval of the Finance Committee of the IMU.
- H. VISA Process and No Objection Certificate:
 - i. Only persons with the intent of studying in India and entering the country on RESEARCH VISA shall be eligible to apply for admission to a Ph.D. programme.

- ii. Foreign students seeking admission to Ph.D. programmes must obtain RESEARCH VISA from Government of India, Ministry of Home Affairs. The candidates (students) should submit a copy of their Passport and Visa to the University at the time of joining in the University.
- iii. The student should also obtain a No Objection Certificate (NOC) from the Ministry of External Affairs, Government of India.

I. Medium of Instruction:

- i. The medium of instruction shall be in ENGLISH. It is preferable that the candidates have undergone studies with the medium of instruction as English at University levels.
- ii. A self-declaration may be given by the applicant assuring that his fluency and comprehension of English language is good for the Doctoral Programme.

J. Examination and Award of Degree:

The procedure for examinations, payment of examination fee and award of degree remains same for all the scholars/students of University.

K. Discipline:

The International students should follow the Academic Calendar and have to complete the course as per the prescribed deadline. All students should abide by the rules and regulations and the code of conduct of University.

L. Removal of Difficulties:

In case of differences in the interpretation of the rules for the International Students the University's decision shall be final.

M. Summary:

Procedure for admission is summed up below:

- Step 1: Students who seeking admission to Ph.D. programme shall visit the IMU website for detailed admission procedures and guidelines.
- Step 2: Fill up the eligibility form for international students and submit along with the copies of certificates listed in the eligibility form and the required fees. This should be done well in time so that the student is able to obtain the visa and NOC before the due date for admission.
- Step 3: Get the provisional admission letter from the University, in order to obtain the research visa.
- Step 4: Produce the document of provisional admission to the Indian Embassy in the respective country and get a research visa endorsed for admission to the institution (IMU). NRI students do not require a visa.
- Step 5: Report to the institution for admission. Fill the permanent admission form and submit it along with the following documents (in original along with a xerox copy):



- a. Mark / Grade Statement (s) of the qualification examination
- b. Transfer / School leaving Certificate from the Institute last attended,
- c. Nationality Certificate in case of N. R. I / P.I.O / F. N. Nationality Certificate of Guardian in case of P. I. O
- d. A copy of the passport duly attested by the Embassy.
- e. Physical fitness certificate from a registered Physician.
- N. For extension of Ph.D. programme beyond the maximum duration of 6 years of the Ph.D. programme, the relevant provisions given in the administrative order (circular No.2309) will be applicable provided that,
 - i. The scholar shall request the University through the Guide for the required period of extension, beyond their maximum duration of 6 years.
 - ii. Scholar may justify the reasons for the extension and will be required to pay the admissible re-registration fee.

This issues with approval of the Competent Authority.

Deputy Registrar (CTR) i/c