IMBRSEA THESIS WORK

Thesis Guidelines
Thesis Evaluation
Thesis Timeline

This document provides an overview of all thesis regulations, documents and procedures that are implemented for the IMBRSea Master Programme

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CONTENT

1. THESIS WORK – AN INTRODUCTION

Thesis work is an integrated part of the IMBRSea Master Programme and is credited for 30 ECTS. All students are doing thesis work during their fourth semester (starting after finishing the courses at the third semester University) in one of the member institutes of the network (main or associated).

During thesis work students are focusing on a specific subject for a certain amount of time. The students work independently albeit under supervision of a thesis supervisor and promoter (promoter can be the supervisor). During thesis work, students are able to apply techniques and knowledge they gained during the courses in the three previous semesters. The final product is a written report stating the main results presented in a scientifically correct way. Thesis students also present and discuss their results at the IMBRSea Annual Symposium.

2. THESIS WORK – TIMELINE OVERVIEW *

*exact timing is subject to change on a yearly basis

- November Academic year 1:
  - Partners of the IMBRSea network are invited to send updated research lines in which they would like to receive thesis students to the IMBRSea Coordination Office (see section 3).
  - Thesis research lines are checked and approved by the Programme Board and bundled in a Thesis Research-line catalogue.
- January Academic year 1:
  - The Thesis Research-line catalogue is provided to the students which enables them to find a thesis topic that matches their interest. Students will contact potential thesis supervisors and negotiate a topic.
    This catalogue provides an overview of potential topics but students are welcome to negotiate with their supervisors a topic which is not on the list.
- July Academic year 1:
  - Students submit a thesis project to the Programme Board making use of an electronic form available on the electronic thesis platform (https://matix.imbrsea.eu) . Thesis project descriptions include a title, an abstract, a work plan, contact details of supervisor and promoter and an agreement of the promoter to welcome the student for the particular thesis subject.
  - The abstract should include:
    - A brief introduction, which will define the thesis topic and explain the purpose of the thesis. Make sure that the *background* and context of your research problem are clearly described.
    - A methodology section, which should include the research question(s), hypotheses, participants, materials, and procedures.
    - A bibliography or reference list of publications you have consulted in planning your research.
    - Evidence of ethical approval if the research involves human participants and/or animals (see Annex 1). If the evidence is not available at the time of submission of the thesis project, it must be submitted prior to the commencement of the thesis work.
  - Students can submit thesis projects at a non-IMBRSea partner, only after approval by the IMBRSea Programme Board. Therefore, students have to contact the IMBRSea Coordination Office by the deadline below, in order to discuss the feasibility of the topic, the partner, and other potential issues.
  - **The following timeline applies for the submission of thesis projects:**

    - **1st of July 16:00 CET of semester 2**

- June Academic year 1:
  - Projects are evaluated by the Programme Board by the end of August at the latest using the electronic thesis platform (https://matix.imbrsea.eu).
  - Projects can be approved, rejected or conditionally approved. In the last cases students will get time until end of September to formulate a new project or to improve the original one.
  - Thesis work can only start after approval of the project by the Programme Board.
- July-August Academic year 1:
  - Depending on the selected thesis topic, students have the possibility to prepare the thesis work by collecting samples, literature study, first practical work, etc. In this case the Coordination Office will be informed about these stays in order to ensure insurance regulations are taken care off.
- January-June Academic year 2:

    - Students work full-time on the thesis project at the respective thesis institute.
- June Academic year 2
    - By the end of the first week of June (first session exam period - the exact date may change yearly) students submit the thesis manuscript in electronic format (including raw data) on the electronic thesis platform (https://matix.imbrsea.eu). Upon submission, students receive an email of confirmation. Students who did not manage to submit the thesis manuscript by the deadline have a second opportunity early August (second session exam period).
    - Week 2 & 3 of June:
        - The Coordination Office sends the thesis manuscript and thesis evaluation forms to the Examination/Reading Committee. Each thesis is evaluated by 2 evaluators from the Committee. The members of the Examination/Reading Committee are decided by the IMBRSea Programme Board and must belong to the IMBRSea consortium partner universities.
        - The thesis promotor and supervisor is invited to evaluate the general work performance of the student.
        - At the end of week 3, students will receive written feedback from each of their 2 evaluators and their supervisor in an anonymous way.
        - All actions mentioned above are carried out through the online thesis platform (https://matix.imbrsea.eu).
    - Week 4 of June: All students come together during the Annual Symposium. At this symposium each thesis is presented through an oral presentation, followed by a defense before a Jury and a debate including the public present. Thesis presentations are evaluated by a Jury of three members.
    - End of week 4 of June: The IMBRSea Examination Board uses all presentation and thesis feedback reports to assign a final score. This score will appear on the diploma.

3. THESIS GUIDELINES

3.1 Publication of Research topics for theses on IMBRSea website

- Each year, thesis research lines are collected by the Coordination Office. On the online thesis platform (https://matix.imbrsea.eu) research lines from IMBRSea Partner Universities and IMBRSea Associated Partners will be posted.

- Each research line must be documented with the following information:

  1. Host organisation
  2. Title
  3. Contact person for this research line
  4. Short description of the thesis research lines
  5. Evidence of ethical approval when the research involves human participants and/or animals
  6. Language requirements
  7. Specific competences required
  8. Location where the thesis research will take place
  9. Accommodation possibilities
  10. Any additional costs to be covered by the student

3.2 Responsibilities of thesis (co-) promoter / thesis supervisor

- **Promoter :**
  - professor or post-doc (depending on the local regulations of the host institute)
  - member of the host institute of the student (IMBRSea partner: main or associated)
  - fully responsible for the implementation of the thesis work (can be a supervisor as well)

- **Supervisor (s)** :
  - at least 3 years of relevant scientific experience
  - does not have to (but can) be a member of the host institute
  - responsible for the daily follow up of the thesis

- **Co-promoter** : if applicable,
  - this can be any person relevant for the thesis at the professor or post-doctorate level (can be a supervisor as well)
  - does not have to (but can) be a member of the host institute

3.3 Preparation of the Thesis

- IMBRSea students can start with the preparation of the thesis (literature study, introduction, collection of samples,…) during semesters 2 and 3. However, this must not interfere with the other courses planned in these semesters. In principle, semester 4 (January to June) is fully available for the thesis preparation and submission. These activities have to be supervised by the thesis promoter/supervisor. **The students, stimulated by their**

supervisors, will organise their thesis work in a way that enables them to submit the thesis in the first session exam period (June). Only with motivated exceptions, thesis submission is possible in August (for concrete dates see end of this document)

- During thesis work, all students are insured against the consequences of physical accidents and against liabilities towards third parties, via the insurance of Ghent University. The insurance certificate is available on the IMBRSea website (http://cohort2020.imbrsea.eu/insurance).

3.4 Thesis format

The thesis must be written in English, and should have the format of a scientific publication.
Contents:

- Executive Summary (max 400 words)
- Abstract (max 200 words)
- Introduction & Aim
- Material and Methods
- Results
- Discussion
- Conclusion
- Acknowledgements
- References

3.5 Remarks on the thesis format

The expected level and quality of the thesis should equal a scientific publication in a peer-reviewed journal. This means that the thesis is not evaluated on the basis of the number of pages, but much more on the basis of quality and conciseness of the work.

The *Executive Summary* (400 words) contains a summary of all relevant information documented in the thesis (Introduction, M&M, Results, Conclusion).

The *Abstract* (200 words) is conform the summary but without detailed information about Methods and Results.

The *Introduction* should contain the state of the art of the subject, with references to relevant recent literature; when the thesis is part of a broader research project, the content of the project can be mentioned as well.

The *Aim* of the thesis is presented clearly (if opportune together with the working hypotheses, which have to be discussed in "*Discussion*" and "*Summary*").

The *Material & Methods* section contains the design of the research: e.g. experimental design, area description, sampling methods, analysis methods, statistical design and methods,…

The *Results* section gives an overview of the most important data, both in written text, figures and tables. All the raw data have to be added in annex and submitted in a digital format on the electronic thesis platform (https://matix.imbrsea.eu). The data have to be presented in a logical order; each table, figure,… must be attended by a legend which contains all necessary information to understand the table or figure.

The *Discussion* section offers a critical analysis of the interpretation of the data, compared to the available literature.

In the *Conclusions,* a brief summary of the main findings (original data, lesson learned,…) is given.

The *Acknowledgements* refer to the funding agencies, field workers,...

The *Reference list* is limited to the literature cited within the text.

3.6 Data ownership

- All data belong to the institute of the thesis promoter/supervisor according to the data policy between the collaborating institute partners. Depending on this data policy, IMBRSea students might send their thesis in for publication to a peer-reviewed journal (only after consultation with the thesis promoter).

- The IMBRSea Coordination Office is not responsible for any eventual conflicts within this context.

- Each thesis should contain the following phrase on the inside of the front page : *'No data can be taken out of this work without prior approval of the thesis promoter / supervisor (*)'*

(*): this has to be discussed beforehand by the promoter/co-promoter and the thesis supervisor

3.7 Plagiarism

Plagiarism is considered to be a form of fraud and an irregularity within the IMBRSea study Programme. To commit plagiarism is to present (parts of) a source as original and your own, without adding any acknowledgements. It can relate to different forms of production, such as texts (written, oral), images (photographs, film, graphs, diagrams, figures, etc.), databases, ideas,... When fraud is detected in the Master Thesis, the full Examination Board of IMBRSea will discuss and decide about the consequences for the student.

3.8 Data policy

- All thesis output will be archived on the Marine Data Archive (MDA). This archive was developed by VLIZ to provide a backup and storage system for files (data, metadata, graphics,...) related to marine sciences and if required, to be able to share them within a context with other scientists. All files stored in the MDA 'shared', are restricted within the context and data can only be used conform the data policy of this context.

- The Data Policy-document will be generated after the thesis has been submitted completely. The student and the thesis promoter will receive a completed and signed copy after submission.

- Thesis manuscripts can also be made publicly available on the IMBRSea website. At the time of submission, students are allowed to indicate if they provide consent to do this or not.

3.9 Thesis Submission/ Presentation/Defense

- By the end of the first week of June (first session exam period - the exact date may change yearly) students submit the **thesis manuscript (PDF-file) and the raw data (preferably as ZIP-file)** in electronic format on the thesis platform (https://matix.imbrsea.eu). Raw data (or at least the metadata) must also be included in the thesis manuscript as an annex. Thesis manuscripts up to 50 MB can be uploaded, while the maximum size for the raw data is 10 GB. In case of confidential raw data, students must provide at least the

metadata and indicate how to retrieve the data in case this would be necessary. Upon submission, students receive an email of confirmation.
Students who did not manage to submit the thesis by the deadline have a second opportunity early August (second session exam period - the exact date may change yearly). **However, students (and supervisors) are strongly encouraged to finalise the thesis by June.** Note that only students submitting the thesis in June, are eligible for IMBRSea performance awards (Best thesis prize and Carlo Heip award for most deserving student).

- End of June : All students present the results of their thesis work during the IMBRSea Annual Symposium, through an oral presentation (15 minutes) followed by a defense before a Jury and a debate including the public present (15 minutes). During the presentation, interaction with people who are not physically present in the room is possible through Video Conference. All the presentations are also recorded and broadcasted in real time.

Remarks:

- Students submitting their thesis in August will go through the same evaluation process as students who submit their thesis in June. They also give a presentation during the Annual Symposium and will receive a score for this presentation. Two independent evaluators will read and evaluate the thesis manuscript. Depending on the rules of the host institute, an extra thesis presentation may be organized locally. By mid-September a final thesis score is awarded based on the reports of the readers and the earlier presentation during the Annual Symposium.

4. THESIS EVALUATION

4.1 General information

- The thesis manuscript counts for 75 % of the final grade; the oral presentation for 25%. In case students finalise their work in August, they have to present the status of their progress of the thesis in June. Even if results are still missing, the 'oral' part of the presentation will be graded and taken into account for the calculation of the final thesis score (final grading on the thesis will only take place when the thesis work has been finalized).

- Evaluation feedback from the Examination/Reading Committee, the Jury evaluating the oral presentation and promotors/supervisors will be shared anonymously with the students (comments + score for each item to evaluate (insufficient - sufficient – satisfactory – good – very good – excellent – see section 4.2 Evaluation Criteria).

- Evaluation of thesis manuscripts:

    - The **Examination/Reading Committee** of the thesis consists of two members who belong to one of the IMBRSea consortium partners. The two readers must belong to different institutions.

    - The thesis promotor and supervisor evaluate the general performance of the student during the thesis research period but their evaluation is not taken into account for the final grade.

- Thesis readers should have a Ph.D. or at least 3 years of relevant scientific experience.

- Name and contact details of thesis readers will not be shared with students.

- Evaluation of oral presentation and thesis defense:

  - Grading of the oral presentation and defense is done by a **Jury** that will question the student during the defense. The Jury consists of three members, of which at least one member must belong to one of the IMBRSea consortium partners.

  - The Jury is composed by the IMBRSea Programme Board independently of the composition of the Examination/Reading committee. This means that members of the Examination/Reading committee can also, but not necessarily have to, be a member of the Jury.

4.2 Evaluation criteria

Following aspects are evaluated (including their respective weight in the score):

- **Thesis manuscript (Written report) :**
  - Title, Abstract, Summary : 10 %
  - Introduction, Background and context : 15 %
  - Methods : 15 %
  - Results : 20 %
  - Discussion: Interpretation within the research context : 30 %
  - Layout : 10 %

- **Oral presentation and defense :**
  - Visual appearance : 20 %
  - Content : 30 %
  - Presentation : 30 %
  - Contextual awareness and critical thinking : 20 %

In the scoring table below the score band from “insufficient” to “excellent” is explained for each of the above listed aspects.

Thesis manuscript:

Element	Weight	Grade and score band (out of 20):				
		Insufficient	Sufficient to Satisfactory	Good	Very good	Excellent
		0 - <10	10 - 13	14 - 15	16 - 17	18 - 20
Title, Abstract and Summary	10%	Omission of either Abstract or Summary.	Executive summary repeats the Abstract without discernment. Main conclusions are incompletely presented. Purpose is not clear. Ill-focussed summary and/or abstract.	Abstract and summary present the main conclusion from the study. The purpose of the study (i.e. hypothesis, objectives, questions) is specifically stated. Summaries complicated by inclusion of much superfluous material.	As for Good, but description includes some material of little relevance.	As for Very good, but only material of particular relevance are summarised. Indicative of highly developed skills in discerning and summarising the salient outcomes.
Introduction: Background and context	15%	No reference to relevant literature. No evidence of library skills. Presents insufficient understanding of the question. Aims and hypotheses are not stated.	Presents enough information to identify the topic but with little prioritising. Sparse or irrelevant referencing. Little evidence of library skills. Only some critical awareness of context is displayed. Aims and hypotheses are not stated.	Description of topic demonstrates an acceptable grasp of the subject material. Evidence of a reasonable familiarity with the relevant literature. Presents a proposal for new research, but indicates limited evidence of capacity for original and logical thinking.	Demonstrates strong grasp of the subject matter. Comprehensive referencing indicating discerning research of the topic. Identifies the strengths and limitations of previous work, and presents a logical progression to the research topic. The aims and significance of the new work are clearly stated. Displays some original insights and capacity for creative and logical thinking	Displays strong ability to organise, analyse and express ideas and arguments in an original, sophisticated and discriminating manner. Mastery of the subject matter is demonstrated through an interesting and complex account of the significance of the research topic, and the importance of the questions posed. Richly supported by relevant citation. Indicates a foretaste of an original contribution.
Methods	15%	Poor analytical skills. Methods are used inappropriately for the particular research question. Formulaic application of methods demonstrates very poor understanding of the procedures used. Level of detail is insufficient to allow a reader to repeat the procedure.	Materials and Methods are presented without context. Methods are sometimes used inappropriately for the particular research question. Formulaic application of methods demonstrates little understanding of the procedures used. Sufficient detail is presented to allow repetition of the procedure.	Sufficient detail is presented to allow repetition of the procedure. Materials and Methods chosen are presented in context. Appropriateness of the methods chosen is established. Use of the methods is mainly correct.	As for Good, but methods are consistently used correctly. Succession of methods employed demonstrates a clear understanding of strengths / limitations of each procedure.	As for Very good, but also demonstrates innovative adaptation of methods and procedures, as appropriate to the peculiarities of the research question. Selection and adaptation of methods indicates highly-developed analytical capacity.
Results	20%	Results of marginal relevance predominate. Errors in the presentation of results. Random and undisciplined demonstration of the results. Limited structure.	Tables & Figures are presented without context. Some superfluous results are included. Errors in the presentation of results. Presentation of results demonstrates only a basic understanding of relevance to the topic. Unclear presentation of results, random layout, with some omissions or inaccuracies.	Appropriate Tables & Figures are presented. Important results are highlighted in the text of the Results section. Correct presentation of Tables & Figures (e.g. Title, axis labels, units given, appropriate captions). Few factual errors in the presentation of the results. Intellectually competent interpretation of results.	As for Good, but without errors in the interpretation of results. Presentation is distilled to exclude superfluous results. Logical sequence to presentation demonstrates a well-developed capacity to analyse issues, organise material, and present results clearly and cogently.	As for Very good, plus capacity for critical analysis is further demonstrated through presentation of the results in a manner that builds the scientific argument. The results section establishes the basis for discussion without itself becoming discursive.
Discussion: Interpretation within the research context	30%	Failure to place the topic in context resulting in a largely irrelevant discussion. Inadequate knowledge displayed related to the research question(s). Very serious omissions / errors in logic and/or major inaccuracies included in interpretation.	Some relevant points presented, but discussion is descriptive rather than argumentative / analytical. Basic or confused grasp of the context. Somewhat lacking in focus and structure. Conclusions are not well argued or poorly substantiated. Lacking evidence of capacity for original and logical thinking.	Basic contextual understanding indicating average critical awareness and analytical skills. Pros and cons are recognised but without resolution. Ideas are stated rather than developed and are insufficiently supported by evidence and relevant citation. A convincing scientific argument is not made. Weak conclusion or jumps to a conclusion.	Context well understood. Research outcomes are placed within the scientific context. Well supported by synthesis of evidence and relevant citation. Uses appropriate structure to resolve issues in a convincing argument. Conclusions are balanced and well-reasoned.	Displays penetrative insight, originality and creativity to make original arguments in own voice. Arguments are amply supported by evidence and relevant citation, reflecting deep and broad knowledge and critical insight. Evidence of extensive reading demonstrated through discerning selection and synthesis of relevant literature. Conclusion generates original issues for subsequent study.
Layout	10%	A random layout / underdeveloped structure. Insufficiently planned. Lack of clarity. Confused expression. Poor spelling and grammar.	Ineffective presentation. References incorrectly formatted. Report not completely written in accordance to standard scientific practice. Little evidence of proof reading.	Report written according to standard scientific practice. Most references are correctly formatted. Writing of sufficient quality to convey meaning but some lack of fluency and command of suitable vocabulary. Few typographic errors.	As for Good, but with consistently correct referencing format, and clear evidence of proof reading.	Presentation indicative of an excellent ability to organise, analyse and present arguments fluently and lucidly with a high level of critical analysis. Strong evidence of care in presentation. Free of grammatical errors and typographic errors. Scholarly prose and writing style.

Presentation and defense:

Element:	Weight:	Grade and score band (out of 20):				
		Insufficient	Sufficient to Satisfactory	Good	Very good	Excellent
		0 - <10	10 - 13	14 - 15	16 - 17	18 - 20
Visual appearance	20%	• Poor planning, organisation and flow- logical order is not clear. • Text size is too small to view comfortably by a conference audience. • Graphics/media are not used, OR, superfluous, irrelevant graphics/media are used. • Too much text: The slides demand an overwhelming amount of reading, OR, • Not enough text: The audience cannot readily understand the relevance of the graphics/media. • Many errors in grammar, punctuation, and spelling.	• Title poorly refined, not explicitly informative of topic. • Presentation is not immediately visually appealling or engaging. • Unnecessary graphics/media are included, complicating the interpretation of crucial ideas. • Little logical order is apparent in the organisation and flow. • Main text size is OK, but some text remains too small to read by a conference audience. • Use of Text, Graphics and Media are somewhat out of balance. • Limited evidence of proof reading - Many errors remain in grammar, punctuation, and spelling.	• Informative title presents the main argument of the presentation. • Overall appearance is visually appealing and interesting. • Organisation and flow are implicit: Headings or other devices imply organization and flow. • All text is easy to read by a conference audience. • Text, Graphics and Media are well-balanced. • Graphics and Media generally relate to the text and oral presentation. • There is evidence of some proof reading, but several errors remain in grammar, punctuation, and spelling.	As for Good, and: • Organisation and flow are explicit text, numbers or graphic devices direct flow. • Use of color, space and design helps to communicate the purpose, and to attract attention to major ideas. • Only clear and relevant Graphics and Media are used to complement the text and presentation. • Presentation indicative of a sound ability to present arguments clearly in oral paper format. • There is clear evidence of proof reading - very few errors exist in grammar, punctuation, and spelling.	As for Very good, and: • Appropriate and relevant audio-visual aids are used to enhance visual presentation. • Visual appearance indicates an exceptional ability to organise and present information for oral presentation. • There is strong evidence of care in presentation, prose and writing style. • Free of grammatical & typographic errors.
Content	30%	• Author is not identified. • Does not clearly identify the question being addressed. • The aims of the project are not identified. • Irrelevant information is included. • Basic understanding of the topic is not demonstrated.	• Author identification is incomplete: There is insufficient information presented to contact the author. • Concept and ideas are loosely connected, but the content lacks clear transitions, flow and organisation. • Enough information is presented to identify the question but little critical awareness of the context is displayed. • The aims of the project are identified, but only implicitly. • Important details are omitted, OR, • There are so many details that the main idea is lost.	• Author identification is complete: There is sufficient information to contact the author without further research. • Content is mostly presented in a logical sequence and generally very well organised. • The objectives of the project are identified. • Main conclusions or assertions are made, but only implicitly.	As for Good, and: • A strong grasp of the research question is demonstrated. • The objectives of the project are identified explicitly. • Main conclusions or assertions are made explicitly.	As for Very good, and: • The organisation is logical: a clear flow of ideas links one section to the next. • The relevance and importance of the project objectives are made extremely clear. • Key assertions or conclusions are given prominence, yet the presentation is free of unnecessary detail.
Presentation	30%	• Presentation is grossly too long OR too short. • Audience cannot understand presentation because there is no logical sequence of information. • Often inaudible or too loud. • No eye contact with the audience, speaker reads off note cards or directly from the screen.	• Presentation is made within a minute of the allotted time. • Audience has difficulty following presentation because the sequence is disjointed. • The significance and relevance of the project are mentioned without emphasis. • Mostly presented facts with little or no imagination. • Sometimes inaudible, OR too loud. • Little eye contact with audience, speaker often reads from the screen	• Presentation is made within the allotted time. • Audible and clear articulation but not polished. • Presentation follows a logical sequence which the audience can follow. • The presentation was reliant on notes, OR made to the screen rather than to the audience.	As for Good, and: • Articulation is audible and clear, with some enthusiasm or expression. • The audience was engaged with eye contact and energy - infrequent reading or use of notes. • Props used during presentation sometimes aid understanding.	As for Very good, and: • Oral presentation was logical, calm and persuasive. • The audience was engaged with eye contact and energy - the presenter was not reliant on notes. • Relevant props always aid the presentation.
Contextual awareness and critical thinking	20%	• The context of the topic is not presented resulting in a largely irrelevant presentation. • Inadequate knowledge displayed related to the research question(s). • Very serious omissions / errors in logic and/or major inaccuracies included in the presentation. • Response to questions demonstrates poor preparation and anticipation, and a poor grasp of information: student cannot answer questions about subject.	• Some relevant points presented, but the presentstion is descriptive rather than argumentative / analytical. • Basic or confused grasp of the context. • Somewhat lacking in focus and structure. • Conclusions are not well argued or poorly substantiated. • Response to questions demonstrates little preparation or anticipation: Student is uncomfortable with information & can only answer rudimentary questions.	• Basic contextual understanding indicating average critical awareness and analytical skills. • Ideas are stated rather than developed and are insufficiently supported by evidence from the research context. • Response to questions demonstrates some preparation and anticipation: Student is at ease with expected answers to all questions, but fails to elaborate.	• Context well understood. • Research proposal and/or outcomes are placed within the scientific context. • Well supported by synthesis of evidence and relevant citation. • A convincing argument supports sound conclusions. • Response to questions demonstrates good preparation and anticipation, and some knowledge of the subject, and its context.	• Displays penetrative insight, originality and creativity. • Use of evidence and relevant contextual reference demonstrates deep and broad knowledge and critical insight. • Response to questions demonstrates substantial preparation, anticipation, knowledge of the subject, and its context: Student can answer all class questions with explanations and elaboration.

5. AGENDA FOR THESIS SUBMISSION AND DEFENSE FOR COHORT 2020

5.1 First session exam period

- Manuscripts of the thesis (in pdf format) should be submitted to the IMBRSea Coordination Office by **June 6th, 2022, 4 pm (CET)**. Guidelines on the submission procedure will be communicated by May 16th, 2022.
- Oral presentation and defense is organized during the Annual Symposium (usually last week of June, exact data to be determined).

5.2 Second session exam period

- Manuscripts of the thesis should be submitted by **August 1st , 2022, 4 pm (CET).**
- Oral presentation of the preliminary results of the thesis are presented during the Annual Symposium (usually last week of June, exact data to be determined) together with all first session students.

ANNEX 1: ETHICAL APPROVAL OF RESEARCH

1. All promoters/supervisors engaging in research for their IMBRSea MSc thesis that involves human participants and/or animals must provide evidence of ethical approval/exemption in writing from either:

   Their promotor/Supervisor's host institution

   Or

   The host institution where the research will be performed

   prior to commencement of the research.

2. IMBRSea MSc thesis supervisors/promotor are required to complete ethical approval processes prior to submitting thesis topics for student selection. Students and promotors/supervisors will be required to make a declaration that evidence of ethical approval will be submitted to the IMBRSea Educational Board - prior to commencement of the research.

   This stipulation is required to ensure that IMBRSea MSc thesis research is conducted in accordance with ethical standards in research.

3. Students and their promoters/supervisors are expected to conduct their research without creating a risk to the health, welfare, dignity and rights of human participants and themselves.

4. Students and their promoters/supervisors are required to ensure that the IMBRSea MSc thesis research is conducted in line with any terms of their ethical approval.

5. Where an IMBRSea MSc thesis student promoter/supervisor presents ethical approval from a local host (non IMBRSea partner), this must be submitted to the IMBRSea Educational Board for approval. Supervisors/promoters will be required to submit (in confidence) the application and subsequent approval received from a local (non IMBRSea) host. Where local approval either cannot be obtained or is deemed insufficient by the Educational Board, ethical approval from an IMBRSea partner must be obtained.

6. All research involving animals, whatever its nature, carried out in the context of IMBRSea MSc thesis research must consider the 3Rs;
   - Replacement (use of animal cells or if possible non-animal alternatives)
   - Reduction (using fewer animals)
   - Refinement (minimise pain and enhance welfare throughout an animal's life)

7. As a minimum, EU Directive 2010/63/*EU* applies to any species of living vertebrate or cephalopod where an intervention is likely to cause the animal pain, suffering, distress or lasting harm equivalent to, or higher than, that caused by the introduction of a needle in accordance with good veterinary practice. It also applies to embryonic and foetal forms of mammals, birds and reptiles once they have reached the final third of their gestation. Larval forms of fish and amphibians are also protected once they are capable of feeding independently.

8. The following is a non-exhaustive list of the types of procedures that might be performed in the context of being 'sub threshold' i.e. **not** "*likely to cause the animal pain, suffering, distress or lasting harm equivalent to, or higher than, that caused by the introduction of a needle in accordance with good veterinary practice"* and therefore (having regard to clause 6) not require ethical approval

    - research involving invertebrates (apart from cephalopods, other local regulations may include other invertebrates as requiring ethical approval);
    - mammals, birds and reptiles within the first two-thirds of gestation;
    - larval forms of fish and amphibians before they are capable of independent feeding;
    - ringing, tagging or marking animals primarily for identification purposes if the method causes no more than momentary pain and no lasting harm;
    - non-experimental practices for the purposes of recognised animal husbandry as long as they comply with other animal welfare legislation or regulations;
    - Euthanasia of animals by approved methods;
    - Non-invasive observation of unrestrained animals, or any research intervention that is unlikely to cause the animal pain, suffering, distress or lasting harm equivalent to, or higher than, that caused by the introduction of a needle in accordance with good veterinary practice .

9. In all instances, promoters/supervisors should be guided by their own institutional ethical requirements. IMBRSea Educational Board has appointed an academic staff member who can provide guidance if required.