



# **Capstone Project Guide**

**Prepared by**

**Postgraduate Studies and Scientific Research Unit (PSSRU)**

**Faulty of Pharmacy**

**Libyan International Medical University**

**2022-2023 (Edition)**

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## **1. Objectives:**

At the end of the capstone project, students should be able to:

1. Learn the different types of research designs and how to use them.
2. Apply the research ethics and responsible conduct in research.
3. Work collaboratively with other students, using communication skills.
4. Demonstrate high knowledge of their research topic and show ability to discuss with experts in the field and to audiences through research presentation.
5. Able to write and publish a scientific paper in national and international journals.

## **2. Students' Responsibilities:**

1. Students must take a full responsibility for conducting the capstone project and ensure that it is finished within the required period (middle of Block 20).
2. Students are expected to meet the deadlines of all forms at regular basis.
3. Students must show respect and maintain good communication with their supervisors.
4. Students are expected to complete and return monthly progress reports to their coordinator.
5. Sending the final version of their completed project to the postgraduate studies and scientific research Unite (PSSRU) before the middle of block 20.
6. Students should prepare a 15 min. presentation for their viva.
7. Students are responsible for doing all corrections for their paper, as requested during their viva.
8. Final copy of their paper – in the format of PDF file- should be sent to their supervisors.

## **3. Supervisor Responsibilities:**

1. The supervisors are expected to be accessible to the students at appropriate times.
2. Supervisors are expected to provide full guidance on the management of the capstone projects.
3. The supervisors are expected to dedicate enough time to meet their students.
4. The supervisors are expected to provide help with both general and advanced research techniques appropriate to the topics of the research of their students.
5. The supervisors are expected to introduce their students to the relevant research community.
6. Supervisors are expected to keep regular evaluation of their students' progress and to report to the PSSRU.
7. The supervisors are expected to maintain respect and good communication with their students.
8. Give verbal feedback to students when filling the student evaluation form.
9. Sending the final version of their completed project (After receiving comments from the examiner) to the PSSRU by email.

#### **4. Capstone coordinators' Responsibilities:**

1. Capstone coordinators must be a tutor, lab. technician, or another member from the faculty team.
2. The main role for capstone coordinator is administrative.
3. The coordinator is responsible for the liaison between students, the supervisor, and the PSSRU.
4. Submit all filled forms (progress report, student evaluation form, etc.) to PSSRU.
5. Prepare a file containing all important papers (such as permission letter, and google drive, etc.).
6. The coordinators are expected to be accessible to the students at appropriate times.
7. The coordinators are expected to create a Viber group or What's app. group. The group should include students, supervisor, tutor, and the head of the PSSRU.

## **5. Work Plan:**

The capstone project plan:

\* After the research proposal is approved by PSSRU and issuing approval letter, **the supervisors should submit** their proposal to <https://research-portal.limu.edu.ly/>

<b>Process step</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
<b>Submission of research proposal by supervisors</b>	By the middle of 3 <sup>rd</sup> year. submit to PSSRU then to: <a href="https://research-portal.limu.edu.ly/">https://research-portal.limu.edu.ly/</a>		
<b>Assigned students to their project and supervisors</b>	By the end of 3 <sup>rd</sup> year		
<b>Filling Registration form for capstone project</b>		Orientation week (meet your supervisor session) *	
<b>Submission of capstone project Progress Report</b>		1 progress report and 1 student evaluation form at least per month	1 progress report and 1 student evaluation form at least per month
<b>Submission form for Viva</b>			No later than mid of block 20.
<b>Submission of Viva</b>			No later than end of block 20

## **6. Progress Report:**

**One** progress report per month should be provided by the students together with their supervisor unless PSSRU asked for more reports. Coordinator should submit the filled in report to PSSRU.

Progress report is an important part because:

- A. It evaluates the student's work (Student evaluation form should be attached with the progress report).
- B. It gives indication about any challenges that faced by the supervisor or the student.

## 7. **Evaluation Marks:**

**Marks distribution for the capstone project:**

**50% Evaluation by examiners (Internal and External): (35% Viva evaluation; 15% Oral presentation evaluation).**

**50% Evaluation by the supervisor: (35% progress evaluation; 15% Oral presentation evaluation).**

## 8. **Submitted Paper:**

- Writing guidelines

Kindly, Follow Libyan International Medical University Journal (LIMUJ) guidelines (available at: <https://journal.limu.edu.ly/contributors.asp> )(Appendix A: LIMUJ checklist).

- Plagiarism

Plagiarism means presenting someone else's work as your own work by presenting or copying it without the appropriate acknowledgment or citation of the source. Plagiarism is a type of academic theft which is strictly prohibited.

- Number of copies submitted

Supervisors should submit the final PDF file to the PSSRU using email.

## Examiner feedback:

The characteristics of different quality capstone:

<b>Quality</b>	<b>Characteristics</b>
<b>Outstanding</b>	<ul style="list-style-type: none"> <li>➤ Original and significant, clear, clever, creative, elegant, engaging, exciting, interesting, insightful, persuasive, and thoughtful.</li> <li>➤ Very well written and very well organized.</li> <li>➤ Has a point of view and a strong addresses, an important question or problem. Clearly states the problem and why it is important.</li> <li>➤ Displays a deep understanding of a massive amount of complicated literature.</li> <li>➤ Argument is focused, logical.</li> <li>➤ Has a brilliant research design.</li> <li>➤ Uses or develops new tools, methods, approaches, or new types of analyses.</li> <li>➤ Data are rich and come from multiple sources.</li> <li>➤ Analysis is comprehensive and complete.</li> <li>➤ Results are significant.</li> <li>➤ Conclusion ties the whole thing together.</li> <li>➤ Opens new areas for research.</li> </ul>
<b>Very good</b>	<ul style="list-style-type: none"> <li>➤ Well written and well organized.</li> <li>➤ Has some original ideas, insights, and observations.</li> <li>➤ Has a good question or problem that tends to be small and traditional.</li> <li>➤ Shows understanding of the subject matter.</li> <li>➤ Uses appropriate, standard theory, methods, and techniques.</li> <li>➤ Obtains solid, expected results/answers and connections.</li> <li>➤ Makes a modest contribution to the field.</li> </ul>
<b>Acceptable</b>	<ul style="list-style-type: none"> <li>➤ Shows the ability to do research.</li> <li>➤ Is not very original or significant.</li> <li>➤ Is not interesting, exciting,</li> <li>➤ Displays little creativity.</li> <li>➤ Writing is pedestrian and plodding.</li> <li>➤ Structure and organization are weak.</li> <li>➤ Displays a narrow understanding of the field.</li> <li>➤ Theory is understood at a simple.</li> </ul>

	<ul style="list-style-type: none"> <li>➤ Uses standard methods.</li> <li>➤ Analysis is unsophisticated - does not explore all possibilities and misses connections.</li> <li>➤ Results are predictable and not exciting.</li> <li>➤ Makes a small contribution.</li> </ul>
<b>Unacceptable</b>	<ul style="list-style-type: none"> <li>➤ Is poorly written.</li> <li>➤ Has spelling and grammatical errors.</li> <li>➤ Plagiarizes or deliberately misreads or misuses sources.</li> <li>➤ Does not understand basic concepts.</li> <li>➤ Question or problem trivial or weak.</li> <li>➤ Argument is weak, inconsistent, self-contradictory, unconvincing, or invalid.</li> <li>➤ Methods are inappropriate or incorrect.</li> <li>➤ Data are wrong or misinterpreted.</li> <li>➤ Analysis is wrong or inappropriate.</li> <li>➤ Results are unexplained or misinterpreted.</li> </ul>

9. **Forms:**

- 1) **Registration Form for Capstone Project.**
- 2) **Capstone Project Progress Report.**
- 3) **Student Evaluation Form.**
- 4) **Submitting the Final Copy of the Capstone Project.**
- 5) **Capstone Project Evaluation by Examiner Form**
- 6) **Presentation skills evaluation**





Form Name : Registration Form for Capstone Project

Date : / /

Form no : PharmD – Acad-28

Capstone no: Cap- ....

### Registration Form for Capstone Project

Project title: \_\_\_\_\_

Registration: 20..../20...

1. Student name: \_\_\_\_\_

Student number: \_\_\_\_\_ Student Limu email: \_\_\_\_\_

Student's signature: \_\_\_\_\_ Date: \_\_\_\_\_

2. Student name: \_\_\_\_\_

Student number: \_\_\_\_\_ Student Limu email: \_\_\_\_\_

Student's signature: \_\_\_\_\_ Date: \_\_\_\_\_

3. Student name: \_\_\_\_\_

Student number: \_\_\_\_\_ Student Limu email: \_\_\_\_\_

Student's signature: \_\_\_\_\_ Date: \_\_\_\_\_

#### **For supervisor use:**

Name of supervisor: \_\_\_\_\_ Signature: \_\_\_\_\_

Supervisor's email: \_\_\_\_\_

#### **For coordinator:**

Name of coordinator: \_\_\_\_\_ Signature: \_\_\_\_\_

Coordinator's email: \_\_\_\_\_

#### **For Research Committee use:**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

- Please attach study proposal (Title, hypothesis, aim, and methodology) with this form.



Form Name: **Capstone Project Progress Report**

Date: / /

Form no : PharmD – Acad-29

Capstone no: Cap- ....

## Capstone Project Progress Report

<b>Project Title:</b>	
<b>1. Student Name and No.</b>	
<b>2. Student Name and No.</b>	
<b>3. Student Name and No.</b>	
<b>Progress Report No.</b>	
<b>Report Submission date:</b>	
<b>Summary</b>	
Please provide a short overview of the project (hypothesis(es), the objective(s), etc...):	
<b>Activities and Progress</b>	
Report on activities (for the period covered by this report).	
<b>Next Steps</b>	
List the activities planned for the next stage of the project:	
<b>Obstacles</b>	
List changes in your plane (Why?)	
<b>Name of student:</b>	<b>Signature and date:</b>
<b>Name of student:</b>	<b>Signature and date:</b>
<b>Name of student:</b>	<b>Signature and date:</b>
<b>Supervisor Opinion:</b>	
<b>Name of supervisor:</b>	<b>Signature and date:</b>
<b>Name of Coordinator:</b>	<b>Signature and date:</b>



<b>Form Name: Student Evaluation Form</b>	<b>Date: / /</b>
<b>Form no: PharmD – Acad-30</b>	<b>Capstone no: Cap- ....</b>

## Student Evaluation Form

### Meeting date:

	Student name:	Student name:	Student name:
Attended the meeting			
Participation in ideas and planning project			
Willingness to discuss the ideas			
Cooperation with other members			
Understand the project topic			
Finish his/her task on time			
Total=			

### **Note:**

- Evaluation Scale: 1= very poor, 2= poor, 3= good, 4= very good, 5= Excellent
- This evaluation should be conveyed to students **verbally** at the end of the meeting.

**Supervisor's signature:**



Form Name: Submitting the Final Copy of the Capstone Project

Date: / /

Form no: PharmD – Acad-31

Capstone no: Cap- ....

### Submitting the Final Copy of the Capstone Project

Name of the Students		
Signatures		
Name of the Supervisor		Sign.:
Name of the Coordinators		Sing.:
Project Title		
Date of Submitting		
Proposal Examiner 1 (Internal)		
Proposal Examiner 2 (External)		

Approved by Scientific Research Committee: -----

Form Name: Capstone project evaluation by examiner form

Date: / /

Form no: PharmD – Acad-32

Capstone no: Cap- ....

### Capstone Project Evaluation by Examiner form

Thesis title: .....

#### Capstone project evaluation

	Item	Scale				
		1	2	3	4	5
<b>1</b>	<b>Academic writing</b>					
1	Did the authors use past tense, third person and active voice?					
2	Did the authors use the punctuation marks properly?					
3	Did the authors adhere to the academic writing style (vocabularies, sentence structure and paragraph structure, coherence, and cohesion)?					
4	Did authors use abbreviation properly?					
5	Did authors write numbers and numerals properly?					
6	Was the plagiarism less than 15%? *					
<b>2</b>	<b>Title</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
7	Was the title clear and summarizes the main idea (s) of the study (specific)?					
8	Was it neither short nor long (10-15 substantive words)?					
9	Was it attractive?					
<b>3</b>	<b>Abstract</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
10	Was it concise (200-300 words)?					
11	Was it structured (background, materials and methods, results and conclusion)?					
<b>4</b>	<b>Introduction</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
12	Did it summarize the current understanding and background information about the topic?					
13	Did it mention the short coming of the previous studies (research gap)?					
14	Did it state the aim of the study?					
<b>5</b>	<b>Materials/subjects and methods</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
15	Did it describe the characteristics of the studied organism(s) (plant, animal, human, etc.)					
16	Did it describe the used technique, or drugs (preparation, dose, route of administration, timing)?					
17	Did it describe the used tool and protocol for data collection?					
18	Did it describe the pre-experiment handling and care of the organisms? (When relevant)					
19	Did it describe the time (when) and setting (where) of the study was performed? (Only if location and time matter).					
20	Were manufacturer's details mentioned (when relevant)					
21	Did it describe the study design: sample size, sampling technique and studied variables?					
22	Did it describe the statistical methods (the used software & statistical tests)?					
23	Did it provide information about ethical considerations (informed consent, ethical approval)?					
<b>6</b>	<b>Results</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
24	Was it concise?					
25	Was the data presented once? (The same data should not present more than once).					

26	Were tables and figures used appropriately					
<b>7</b>	<b>Discussion</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
27	Was there enough and logical interpretation, comparison, and explanation of the results?					
28	Did the authors properly discuss the advantage of their study?					
29	Did the authors properly acknowledge the limitations of his study?					
30	Did the authors give any practical recommendations or make suggestions for further Research? (When relevant)					
<b>8</b>	<b>Conclusion</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
31	Was it concise and to the point?					
32	Did it summarize the thoughts and conveying the larger significance of your study?					
<b>9</b>	<b>Acknowledgment</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
33	Did authors acknowledge and any significant help did they receive? (When relevant)					
<b>10</b>	<b>Conflict of interest</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
34	Did the authors declare any conflict of interest?					
<b>11</b>	<b>References</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
35	Were authors using the proper reference style?					
36	Did authors used enough number of references?					
37	Did authors include the major references about the research topic?					
38	Were the references up to date?					
	<b>TOTAL</b>	<b>/190</b>				

\*Link for plagiarism checker: <https://www.grammarly.com/plagiarism-checker>

\*Plagiarism > 15%= 5

15-17 %= 4

18-20%= 3

21-22%= 2

23-25= 1

More than 25%: rejected

**Examiner name:**

**Date:**

<b>Form Name: Presentation skills evaluation form</b>	<b>Date: / /</b>
<b>Form no: PharmD – Acad-50</b>	<b>Capstone no: Cap- ....</b>

**Presentation skills evaluation**

**Thesis title:** .....

<b>Criteria</b>	<b>Student's Name</b>	<b>Student's Name</b>	<b>Student's Name</b>
1. Clarity of the presentation			
2. Ability of the student to explain the work			
3. Presenter skills:			
A. Body language			
B. Eye contact distribution			
C. Clarity of the voice and how loud it is			
4. Use of English language only			
5. Being committed to the time allocated (10-15 mints).			
6. Presentation organization (int., meth., results, disc., and conclusion).			
7. Presentation design: (Font size, Text color, and background).			
8. Handling questions			
<b>Total</b>	<b><u>/50</u></b>	<b><u>/50</u></b>	<b><u>/50</u></b>

**Examiner name:**

**Date:**

# **Appendix A**

## **(LIMUJ Checklist)**

### **Manuscript Title**

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#### **Covering letter**

- Signed by all contributors
- Previous publication / presentations mentioned
- Source of funding mentioned
- Conflicts of interest disclosed

#### **Authors**

- Middle name initials provided
- Author for correspondence, with e-mail address provided
- Number of contributors restricted as per the instructions
- Identity not revealed in paper except title page (e.g., name of the institute in material and methods, citing previous study as 'our study', names on figure labels, name of institute in photographs, etc.)

#### **Presentation and format**

- Double spacing
- Margins 2.5 cm from all four sides
- Title page contains all the desired information (vide supra)
- Running title provided (not more than 50 characters)
- Abstract page contains the full title of the manuscript
- Abstract provided (not more than 150 words for case reports and 250 words for original articles)
- Structured abstract provided for an original article
- Key words provided (three or more)
- Key messages provided
- Introduction of 75-100 words
- Headings in title case (not ALL CAPITALS, not underlined)
- References cited in superscript in the text without brackets
- References according to the journal's instructions.

#### **Language and grammar**

- Uniformly British English
- Abbreviations spelt out in full for the first time
- Numerals from 1 to 10 spelt out
- Numerals at the beginning of the sentence spelt out



**Tables and figures**

- No repetition of data in tables/graphs and in text
- Actual numbers from which graphs drawn, provided
- Figures necessary and of good quality (colour)
- Table and figure numbers in Arabic letters (not Roman)
- Labels pasted on back of the photographs (no names written)
- Figure legends provided (not more than 40 words)
- Patients' privacy maintained (if not, written permission enclosed)

Credit notes for borrowed figures/tables provided