Guidelines for Project Courses (including Capstone) for Academic Session 2021-22 onwards

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CHAPTER 1

Introduction

1.1 Purpose-

In order to impart education to the students outside the classroom rather than just reading the theory in a conventional manner, all the students need to work on a project as a part of their program scheme where they can work practically and can implement the knowledge and skills gained during their studies to generate new knowledge. The projects must be structured to ensure that the students gain learnings that is relevant to their educational development. To ensure that the projects meet the industry standards, the final evaluation of these projects is being done by the industry experts wherever required.

1.2 Applicability-

These guidelines are applicable to all the project courses which are the part of the curriculum at U.G. and P.G. level programs from 2021-2022 onwards.

1.3 Definitions of projects-

Depending upon the nature, the projects can be categorized into following four categories

a) **Live projects-**Live projects mean working on real life problems within defined timelines. These types of projects establish an awareness of the social responsibility and can empower students to work exceptionally that make a difference to the communities they work with. These types of projects can also lead to revenue generation if done with the companies to solve their real-life problems or student can get participation certificate from the company with which they have worked. Automatic irrigation system on sensing soil moisture, density-based traffic signal, creating market strategies to gain valuable customers, developing market relation, search of starch in food, generating electricity from fruits, Solar car etc. are some of the examples of Live Projects.

b) **Consultancy projects-** In these types of projects, students provide their knowledge and intellectual inputs to various companies or organizations. It is collaboration between a company and consultants to solve the problems faced by a company. Corporate restructuring, cost reduction, merger and acquisition, development of a product or setting up an industry, process automation, patent litigations are some of the examples of consultancy projects.

c) **Entrepreneur projects-**In these types of projects, the students can work on some business ideas or can develop a product, service or event that are valued in community as they meet specific needs or meet identified need. Producing a show,

offering services to publishing house, offering analysis services, offering services for quality control or microbiological analysis are some of the examples of entrepreneur projects.

d) **General projects-** These types of projects add to knowledge enrichment. It can be individual or collaborative and involve design that is carefully planned by a project team to achieve a particular aim with a certain cost. Ways to reduce level if stress among students, Synthesis of a new compound, development of an adjustable temperature heating system, home automation system, mobile jammer are some of the examples of general projects.

1.4 Abbreviations

a) **PAC:** Project Approval Committee

b) **AOC:** Academic Operation Coordinator

c) **DAA**: Division of Academic Affairs

d) **DOE**: Division of Examination

e) **UG**: Under Graduate

f) **DPI**: Department of projects and Internships

g) **HOD/COD:** Head/Coordinator of Domain

h) **HOS/ COS**: Head/ Coordinator of School

i) **AERC**: Academic Evaluation and Reform Cell

j) **UMS**: University Management System

k) **URDI:** University Research and Development Initiative

l) **ETP**: End Term Practical

CHAPTER-2

Life cycle of a project

2.1 Scope of the project

Each project is expected to address at least one of the following:

a) Societal issues

b) Industrial issues

c) Government issues (Policy making etc.)

d) Business issues

e) Environmental issues

f) Conceptual

g) Enrich the discipline related knowledge

h) News worthy

2.2 Expected outcome from a project

Each type of project at LPU is expected to give at least one of the following outcomes:

a) Quality Publication

b) IPR generation (Patents/ Copy Rights/ Design/ prototype)

c) New innovation

d) Policy making

e) Societal contribution

2.3 Project duration

The projects at UG level can be distributed among two semesters or in one semester depending upon the requirements specific to a program scheme.

a) **One semester project-** These types of projects are offered normally in the last semester of the program and are distributed over a span of 4 months. The students are required to finalize the topic, objectives and methodology in the first month and start working on the project in the second month onwards. Therefore, the work plan must be designed keeping in view the timelines for the completion of project work. These types of projects can be short but yet targeted to solve a specific problem leading to the solution to a bigger problem.

b) **Two semester project-** These types of projects are offered normally in the last two terms of the programs. The students are expected to finalize the topic,

objectives and methodology in the first semester of the two-semester project and to work as per their plan in the second semester. The students can work on a bigger issue or a problem as the time allotted for these projects is higher. Students have sufficient time to do intense literature survey to define a problem which meet the expected outcome in one term and have other full term to work on the proposed project work to meet the expected outcomes.

Note: In case of two semester project, **o**nly those students who have cleared the first stage of the project shall be allowed to register for the next stage i.e., project-II.

2.4 Group size of a project

Depending upon the nature of the project and the type of the expertise required to complete the project, it can be allotted to minimum of 3 and maximum of 5 students. These students can be from different domains to cater the need of the interdisciplinary projects.

2.5 Different stages of the project work

a) **Formulation of online student groups by students:**
An online provision to create student groups of their choice has been provided to all the eligible students to increase the synchronization among the group members for quality output of the project work. The UMS link for the same is as following:

UMS navigation------>LMS------->Project courses group formulation

b) **Online supervisor Allocation:**

Once the student group is created, the student needs to choose a supervisor and thus can view the details of available faculty members (whose load has been punched by the AOC) and their specialization area on UMS. The details of available supervisors along with their expertise are made available to the students in the first month of start of session at the following link:

UMS Navigation-->LMS-->Project Dissertation Supervisor Information

In the above interface against the name of each faculty member an option to view the complete research profile of the supervisor is also made available to the students, so as they can choose their supervisor effectively.

Depending upon the area in which the student wants to carry out his/ her project work, the student can approach the prospective supervisors so that both guide and student can discuss their project ideas and if mutual consent is made, the supervisor can register the student online on the UMS as per the below mentioned link.

UMS Navigation-->LMS-->Project-->Capstone/Dissertation Polling Interface

The prospective supervisors are advised to be very judicious and proactive in interacting with the students and formulating the groups as per the specified timelines mentioned in the announcement which are made in due course of time by DPI.

Important note-

1. The students who do not participate in the supervisor selection by approaching to the available supervisors as per the timelines mentioned in the announcement shall be allotted the available supervisors randomly at school level.

2. In case a project supervisor goes on long leave or resigns from the University, the students can approach the respective AOC for the allotment of new guide, however in case faculty member is transferred to some other department/division, the existing supervisor shall continue as guide for allocated student.

3. In-order to register in Backlog mode, students would require to get registered via Backlog Registration process announced separately by the university. The backlog students must plan ahead for interaction with faculty members to avoid any delays due to the supervisor allocations or topic approvals by PAC.

c) Supervisor interaction time slot fixing:

Once the supervisor has been allocated to the student, the next step is the fixing of time slot for interaction of group with the supervisor. Although the student can take the guidance from their supervisors any time as per their availability regarding their project work, it is mandatory for them to meet their supervisors once in a week. For this purpose, one-hour interaction slot with the supervisor is fixed which is also reflected in the timetable of supervisor as well as student. The supervisor can choose the interaction slot from the available time slots of the students as per their time table. The student can get in touch with their supervisors so that the interaction slot can be fixed which is acceptable to both student and the supervisor.

In this interaction slot, the students are expected to discuss what they have achieved till date and what is planned for future. The students can also seek guidance for the challenges faced by the students during the course of the project work.

Important Note- Supervisors are advised to motivate the student not to miss any interaction slots as regularity is one of the important parameters for award of monthly CA marks as per Chapter-4.

d) Submission of project topic

Careful selection of project topic is utmost important step for which the supervisor should continuously interact with the student group allotted to him/ her. The supervisors should ask the students to survey the literature in the proposed area of project to find the area of interest and come up with two to three proposals to discuss for finalization of the topic.

In case a student wants to do a multi-disciplinary project, the same shall be communicated to DPI and two supervisors will be allocated to the student. The process will be followed in the offline mode.

Important Note- The project topic must be selected in such a way that it addresses at least any one of the issues as mentioned in section 2.1. Project topic selected and finalized must be capable of generation of an outcome as mentioned in section 2.2.

After final discussion with their respective supervisors, the group of students needs to finalize the following:

a) Area of specialization
b) Topic of the project
c) Nature of the project (Live, General, Entrepreneur project or consultancy project)
d) Novelty of the Topic

Once the above-mentioned parameters are finalized, respective supervisor needs to punch the topic for a group along with the relevant information in the UMS interface as per the link mentioned below:

UMS Link: UMS navigation→LMS→Project→Supervisor student topic submission

The respective Supervisor is expected to punch the topic of the project and other relevant information as per the timelines which shall be communicated through UMS announcement from time to time by DPI.

Important note-
1. The announcement for punching of the project topics shall be made in the first month of the academic term in which the project course is registered in case of standalone projects and in the last month of the first academic term of the stage I of project course in case of two semester project.
2. Students are expected to check their UMS account on regular basis so that the relevant information is not missed.

e) Approval of project topic
Once the topic is punched by the respective supervisor, it is approved by the Project Approval Committee.

Approval by Project Approval Committee (PAC)

To ensure quality outcome of the projects, Project Approval Committee (PAC) is constituted at domain level in each School which is responsible for providing the recommendation on the topics punched by the supervisors and approving the same. Once the topic is punched by the supervisor, the PAC shall analyze the project topics with respect to scope, appropriateness, originality, feasibility, innovation, potential for intellectual property (patents, copyrights, and prototype), new software, model, or a refereed publication in a journal.

f) Submission of monthly progress report by the student

After approval of the project topic by the approving authority, the students can start working on their project. Each student in a group must submit their monthly progress report as per Annexure-I to their project supervisor for evaluation in the last week of every month. The monthly report must clearly define the following:
a) Work done by each student in the group.
b) Work plan for upcoming month

g) Award of monthly CA marks

The supervisor will assess the monthly progress report of the student and will award the monthly CA marks on the basis of criteria mentioned in section 4.2. The supervisor shall evaluate the progress report submit by the student group and get it scrutinized by the student group within one week of receipt of the report. The average of all the monthly CA marks, as awarded by respective supervisor shall be calculated and considered as final CA marks of a student.

h) Submission of project report

Once the students have completed their project work, they need to submit the final project report to be eligible for final End Term evaluation.
Two semester project- In case of two semester project, the students need to submit the project report for the first semester work to their respective supervisor only as they will be evaluated on the basis of final presentation given to their supervisor. But submission of the final report is required at the end of the second semester as per the timelines communicated by DPI from time to time.
One semester project- On the other hand student need to submit the final project report at the end of the semester in case of one semester project as per the timelines communicated by DPI from time to time.
The formatting and suggestive outline of the report is mentioned in detail in chapter-3. The students need to submit three files as per following:

File 1: Complete project report as per specified guidelines
File-2: Content report without student information

File-3: Plagiarism report

Plagiarism must be as per the prescribed limit set by the University from time to time. The information about the plagiarism policy in detail is available at following link:

UMS Navigation->Division of Research and Development->Researcher's Corner->Research policy.pdf

The UMS link for submitting the final report is as per following:
UMS navigation--→LMS-→Projects--→Upload project report

Supervisor can either recommend or not recommend the final project report submitted by the student. In case the report is rejected, the student needs to re-work on the report for correction of errors/mistakes and re-submit it again for recommendation from the supervisor.

The following key points must be kept in mind related to final project report submission

1. Project work must be completed and compiled one month before the last day of final submission, so that report is written and submitted timely by the last week of the term as per dates prescribed by DPI through UMS announcement which is mostly in the last week of the semester.

2. While working on the final report submission, the students are advised to use online as well as offline resources available in the university. The details about the online and offline resources can be found at the following link:
   For journals: **UMS→Library→E-resources**
   For referring the reports submitted by the alumni: **UMS→Library→Dissertation/Thesis**

3. An e-copy of the report shall be uploaded by the student(s) on the UMS interface in a secured PDF format as per prescribed timelines by DPI. Each member of the group is required to upload the e-copy of the report on UMS.

4. Supervisor shall review the submitted report e-copy online and provide online recommendation and remarks. All supervisors must adhere to the timelines for completion of project work and final recommendations as per prescribed timelines by DPI.

Important Note:

Each student must ensure that he/she has signed annexure-V and the respective supervisor has signed the annexure-VI. Student must ensure to include the scanned copies of these annexures in the report to be uploaded on UMS. The report uploaded on UMS must contain the scanned copy of these annexures, otherwise the report shall not be considered for evaluation.

2.6 End Term Evaluation

After completion of the standalone project/ Project-II, the eligible students (who have submitted the project report online on UMS) are required to appear in person/online in the end term viva wherein the student shall be evaluated by the panel of faculty members as per schedule communicated by DPI. In case of Project-I of two semester project, the student shall be evaluated by the respective project supervisor only. The evaluation parameters for End Term Viva evaluation are discussed in section 4.3. The average of all the marks, as awarded by respective panel members shall be calculated and considered as final ETP viva marks of a student.

2.7 Extension in Final Report Submission beyond Last Dates

In extreme circumstances, if the project supervisor declares that the project work and final report is not fit for final submission or if a student is unable to upload the soft copy of the final project report as per timelines specified by DPI, the student can apply for an extension of maximum 2 months (refer Annexure-II).

The following are the key points for applying extension for final report submission.

1. The last date for applying for extension is the last day of report submission as per UMS announcement regarding report submission.
2. The student shall be required to pay extension fee of Rs. 1000/- via Accounts Department.
3. In case the student is not able to submit the final report even after the expiry of two months of extension period, then no further extension shall be granted and R grade as per Chapter-5, will be applicable.
4. The final ETP viva of all student(s), who have taken two months' extension, shall be conducted along with R grade viva.
5. Recommendation of the respective supervisor and PAC chairperson is mandatory for grant of extension.

Important points:

1. The project work should be the original work done by the student(s). In case students present the work of someone else as their own or copies large portion from academic or other sources without properly referencing them, even if unintentionally, it will be considered as an academic misconduct. There will be zero tolerance for academic misconduct or plagiarism. All the matters related to plagiarism will be dealt as per the University policy on academic misconduct.
2. All publications and Intellectual Property Rights arising out of project work shall be made as per the University policy guidelines issued by Division of Research and Development.

CHAPTER-3

Guidelines for final report submission

Following points should be kept in mind while preparation of the final report of the project:
- Final Project report should be submitted online on the appropriate UMS interface.
- The outer cover page should have information as mentioned in (Annexure-III)
- The plagiarism report must be the part of the final report as the last section.
- The report should be categorized in Chapters as per section 3.3 and the final chapter must be conclusion and future perspectives.
- The printing (if required) of the report should be done on both sides of page.

3.1 Sequence of introductory pages of the report
1) Cover page {as per Annexure-IV}
2) Declaration by student {as per Annexure-V}
3) Declaration by supervisors {as per Annexure-VI}
4) Acknowledgement (if any)
5) List of Tables (If any)
6) List of Figures/ Charts (If any)
7) List of Schemes (If any)
8) List of Symbols (If any)
9) List of abbreviations (If any)

3.2 Formatting of the report
1) The report should be prepared on A4 letter size.
2) The font type should be Times New Roman. The font size should be 14 for headings and 12 for normal text.
3) All the headings should be in bold and all the other matter should be normal.
4) The text should be justified throughout the report except for headings, figures, tables, schemes etc.
5) The line spacing should be fixed at 1.5 for the entire report.
6) The page numbers should be mentioned at bottom middle position.
7) The top, bottom and right margins should be 1" each whereas the left margins should be set at 2.5".
8) The chapters should be numbered as Chapter-1, Chapter-2, etc. whereas figures, charts, tables etc. should be numbered as 1.1, 2.1 etc. For example- figure 1.1 corresponds to first figure in chapter-1.
9) The report should be minimum of 40 pages and maximum of 60 pages.

3.3 Chapter outline for Final Report preparation

The report should be divided into minimum of 5 chapters. The number of chapters can be increased to maximum of 7 depending upon the requirement and nature of the work undertaken by the students. The suggestive guidelines for each chapter are as follows:

Chapter-1: Chapter-1 should be titled as "**Introduction**". It should include the aim, importance, applicability, scope, relevance etc. of the proposed work.

Chapter-2: Chapter-2 should be entitled as **"Review of Literature"**. The chapter should discuss the extensive literature related to project. This should contain the authoritative as well as latest references in the field of proposed work. The gaps in existing work should be clearly defined in this chapter which has led to the need of the proposed work. The references should be authoritative and literature should be organised in such a way that references are cited in chronological order starting from oldest and proceeding to the latest reference till date.

Chapter-3: Chapter-3 should be entitled as "**Implementation of project**". This should contain the detailed outline of the project like objectives, experimental work, methodology/ tools/ techniques/ instrumentation, coding, circuit designs, field settings etc. used during the course of the project.

Chapter-4: Chapter 4 should be titled as **"Results and Discussions".** This chapter should contain details about the results obtained and discussions based upon the results. All the supporting information like Graphs, tables and figures, screenshots, outputs should be part of this chapter.

Final Chapter: Last Chapter should be titled as **"Conclusion and Future Scope".** The conclusion part of the project work should be properly discussed based upon the results obtained rather than the hypothesis or assumptions. This chapter should also contain the future perspectives and applicability related to the project work.

Publication Details: This section should be entitled as "**List of publications/conference papers**". This section should include the list of publications which have been the direct outcome of the project work undertaken by the student. The student must mention the list of such publications along with their status such as published, reviewer's comments received, communicated, etc. In case of published articles, the copy of same can be attached. In case the publication is in conference, details should be provided about type of conference (National/International), conference name, dates, venue, paper presentation and publication details such as volume, issue, page nos. In case the research publication is published in a reputed journal details such as name of the journal, ISSN, volume, issue, page number etc. should also be mentioned.

3.4 Guidelines for writing references

- The references should be written after publication details.
- References must be typed as Superscripted in text.
- Multiple references must be comma (,) separated.

- **While writing the reference for a paper in journal**, following order should be followed

    a) Initial and surname of the authors
    b) Title of the paper in inverted commas
    c) Name of the Journal in italics (Standard abbreviation can be used)
    c) Volume number in bold
    d) First page-last page
    e) Year of publication

For example- J. Luo, C. W. Chen, K. J. Parker, and T. S. Huang, "Artifact reduction in low bit rate DCT-based image compression,"*IEEE Trans. Image Processing*, **vol. 5**, pp. 1363–1368, Sept. 1999

- **While writing the reference of a book chapter**, following order should be followed

    a) Initial and surname of the authors
    b) Title of the book
    c) Edition of the book in round brackets
    d) Name of publisher
    e) Year of book in bold
    f) First page-last page

For example- M. Kitamura, R. Noyori in Ruthenium in Organic Synthesis (Ed.: S.-I. Murahashi), Wiley-VCH, Weinheim, **2004**, pp. 3–52.

While writing the reference for website, following order should be followed

    a) URL of the website
    b) Dated: DD/MM/YYYY

For Example-

https://www.hopkinsguides.com/hopkins/view/Johns_Hopkins_Diabetes_Guide/547042/all/DPP_IV_Inhibitors**; Dated- 16/07/2019**

3.5 List of contents

S. No.	Title	Page
1	Declaration by Supervisors	
2	Declaration by Student	
3	Acknowledgement	
4	Abstract	
5	List of Tables	
6	List of Figures/ Charts	
7	List of Schemes/Algorithms	
8	List of Symbols	
9	List of Abbreviations	
10	Chapter-1 Introduction	
9	Chapter-2 Review of Literature	
10	Chapter-3 Implementation of project	
11	Chapter-4 Results and Discussions	
12	Final Chapter- Conclusion And Future Scope	
13	Publication details	
14	References	
15	Plagiarism report	

CHAPTER-4

Evaluation parameters for capstone project courses

The project evaluation process is very crucial for the success of the project. Project evaluation is concerned with performance tracking along the life of a project and demands special attention. At the heart of this process lies a system of criteria one has to take into account when performing the evaluation. This chapter emphasizes on the course weightages and CA/ETP parameters on which the student performance shall be evaluated.

4.1 Course weightages

Component	Weightage
Continuous Assessment (CA) by the project supervisor	50%
End Term evaluation by panel members	50%
Total	**100%**

Note: In case of Project-I for a two-semester project course, ETP evaluation shall be carried out by the respective Supervisor only.

4.2 Evaluation parameters for Continuous Assessment (CA)

4.2.1 Continuous assessment parameters by supervisor for single semester project

First month CA parameter for single semester capstone project

Parameter	Sub-Parameter	Maximum Marks
Preliminary survey (5)	The student has explored some project topics relevant to his/her field/area.	2
	The student has explored some real-life problems related to which project topic can be finalized.	3
Finalization of topic (10)	Student was able to narrow down the title based upon the preliminary survey.	4
	Title proposed by the student justifies the scope of the proposed work	3
	The title was clear and comprehensive rather than broad and general	3
Detailed analysis (5)	Student has done feasibility analysis required for completion of Project Work such as cost issues, time, operational feasibility etc.	2
	The relevant risks related to the project have been considered.	1
	The student has identified all the resources/ tools/equipment/material required for completion of project work till date.	2
Regularity (5)	Attendance of the student is between 76-100%	4 to 5
	Attendance of the student is between 51-75%	3
	Attendance of the student is between 26-50%	2
	Attendance of the student is between 0-25%	0 to 1

Second month CA parameter for single semester capstone project

Parameter	Sub-Parameter	Maximum Marks
Formulation of solution to the problem (10)	The steps/action plan/blueprint/algorithm/methodology formulated by the student is appropriate to solve the problem	4
	The student has sufficient knowledge regarding the tools/equipment to be used in the project.	3
	The student has gathered all the relevant tools/ resources/material required for completion of the project in stipulated timelines	3
Execution/experimentation/implementation (10)	The student has started the real implementation of the project work	3
	The results obtained by the student are encouraging and supports the proposed work	4
	The student was able to overcome/handle the problems/ challenges encountered during implementation	3
Regularity (5)	Attendance of the student is between 76-100%	4 to 5
	Attendance of the student is between 51-75%	3
	Attendance of the student is between 26-50%	2
	Attendance of the student is between 0-25%	0 to 1

Third month CA parameter for single semester capstone project

Parameter	Sub-Parameter	Maximum Marks
Execution/ experimentation/ implementation (10)	The student has completed the real implementation of the project work	4
	Testing of the project has been successfully done by the student	3
	The project has been completed and is in presentable form	3
Formulation of written report (10)	The flow of the written report was well organized and structured.	2
	The categorization of chapters was appropriate and relevant	2
	The plagiarism of the report was as per the prescribed limit.	2
	The report was well written and was free from grammatical errors	2
	Plan of work was well defined and was realistic to be achieved in stipulated timelines	2
Regularity (5)	Attendance of the student is between 76-100%	4 to 5
	Attendance of the student is between 51-75%	3
	Attendance of the student is between 26-50%	2
	Attendance of the student is between 0-25%	0 to1

4.2.2 Continuous assessment parameters by supervisor for first semester of two semester project

First month CA parameter for Capstone-I

Parameter	Sub-Parameter	Maximum Marks
Preliminary survey (10)	Literature review involved the relevant and quality sources or publications	2
	The student was well aware of the databases and tools for literature survey	2
	The student has sufficiently explored project topics relevant to his/her field/area.	2
	The student has explored some real-life problems related to which project topic can be finalized.	2
	The literature survey conducted by the student was appropriate and as per the need	2
Identification of project topic (10)	Student was actively involved in discussion with supervisor for identification of the broad areas of project topic	2
	Student has worked on identifying the project title/topic and supported his proposal with relevant documentation.	3
	Student was well aware of the recent trends and developments in the proposed area of project topic	3
	Student was well aware of the facilities and challenges to carry out the proposed project work	2
Regularity (5)	Attendance of the student is between 76-100%	4 to 5
	Attendance of the student is between 51-75%	3
	Attendance of the student is between 26-50%	2
	Attendance of the student is between 0-25%	1

Second month CA parameter for Capstone-I

Parameter	Sub-Parameter	Maximum Marks
Comprehensive literature survey (15)	The student has done the extensive literature survey to further narrow down the broad area of project work	5
	Literature review was appropriate, relevant and included quality sources	5
	The student was able to compile the literature review to find out gap in the proposed area of work	5
Finalization of topic (15)	Student was able to narrow down the title based upon the literature survey	5
	Title proposed by the student justifies the scope of the proposed work	5
	The title was clear and comprehensive rather than broad and general	5
Objectives of the proposed work (15)	Student drafted the objectives based upon the gaps identified during literature survey	4
	Objectives proposed by the student were mutually exclusive	4
	The objectives were in sequence as per the conceptual framework	4
	Objectives were realistic to be achieved in stipulated time frame	3
Regularity (5)	Attendance of the student is between 76-100%	4 to 5
	Attendance of the student is between 51-75%	3
	Attendance of the student is between 26-50%	2
	Attendance of the student is between 0-25%	1

Third month CA parameter for Capstone-I

Parameter	Sub-Parameter	Maximum Marks
Finalization of methodology (15)	The steps/action plan/blueprint/algorithm/methodology formulated by the student is appropriate to solve the problem	4
	The data analysis techniques, tools/ equipment proposed by student were relevant	4
	Variables to be studied were sufficient and appropriate to the study	4
	The sample design and size/ data to be collected was relevant and appropriate for the defined scope	3
Plan of the proposed work (15)	Student has done feasibility analysis required for completion of Project Work such as cost issues, time, operational feasibility etc.	5
	The relevant risks related to the project have been considered.	5
	The student has identified in house facility or outside facility to carry out the proposed work	5
Formulation of written report (15)	The flow of the written report was well organized and structured.	3
	The categorization of chapters was appropriate and relevant	3
	The plagiarism of the report was as per the prescribed limit.	3
	The report was well written and was free from grammatical errors	3
	Plan of work was well defined and was realistic to be achieved in stipulated timelines	3
Regularity (5)	Attendance of the student is between 76-100%	4 to 5
	Attendance of the student is between 51-75%	3
	Attendance of the student is between 26-50%	2
	Attendance of the student is between 0-25%	1

4.2.3 Continuous assessment parameters by supervisor for second semester of two semester project

First month CA parameter for Capstone-II

Parameter	Sub-Parameter	Maximum Marks
Progress of the proposed work (10)	The student has started the requisite lab work for attainment of objectives within timelines	4
	The student was able to implement any innovative step, process or procedure to achieve any of the objectives	4
	The student has regularly updated the review of literature	2
Implementation of the project (methodology used) (10)	The student was able to implement the methodology as per the timelines	4
	The student was able to overcome the problems/ challenges faced during experimentation by proposing the alternatives	3
	The student was having in depth knowledge of the data analysis techniques and tools required to compile the data and justify the results	3
Regularity (5)	Attendance of the student is between 76-100%	4 to 5
	Attendance of the student is between 51-75%	3
	Attendance of the student is between 26-50%	2
	Attendance of the student is between 0-25%	1

Second month CA parameter for Capstone-II

Parameter	Sub-Parameter	Maximum Marks
Progress of the proposed work (10)	Adequate data has been collected for the completion of the project work within timelines	2
	Collection of data was precise, accurate and highly relevant to the proposed work	2
	The work done has potential for publication/ IPR generation (patents, copyrights, trademarks, design, prototypes etc.)	4
	The student was able to achieve the required number of objectives to complete the work as per the timelines	2
Progress in written report (10)	The literature review was updated till date with identification of gap in the relevant field/area.	2
	The student was able to compile the data as per satisfactory level	3
	The result obtained were properly discussed with justifications in the report	3
	The formatting and flow of the draft report was as per the satisfaction level	2
Regularity (5)	Attendance of the student is between 76-100%	4 to 5
	Attendance of the student is between 51-75%	3
	Attendance of the student is between 26-50%	2
	Attendance of the student is between 0-25%	1

Third month CA parameter for Capstone-II

Parameter	Sub-Parameter	Maximum Marks
Progress of the proposed work (10)	All the objectives are achieved by the student	3
	The project work has resulted in any kind of publication or IPR generation (Patents, copyrights, trademarks, design, prototypes etc.)	4
	The student was able to submit any paper or participate in oral/ paper/ poster presentation in any Scopus indexed conference	3
Written report (10)	The overall formatting of the report is as per the prescribed guidelines.	2
	The introductory pages and annexures (list of tables, figures, abstract, index, ethical committee approvals, published materials, COA etc.) are included in the written report.	2
	The content mentioned in the report is accurate and free from errors/grammatical mistakes.	1
	The plagiarism in the final report is as per the prescribed policy	2
	Conclusion part was based upon results obtained rather than the hypothesis	2
	Adequate references/bibliography are included in the report and are in proper format.	1
Regularity (5)	Attendance of the student is between 76-100%	4 to 5
	Attendance of the student is between 51-75%	3
	Attendance of the student is between 26-50%	2
	Attendance of the student is between 0-25%	1

4.3 Evaluation parameters for End Term Practical viva

4.3.1 ETP viva evaluation parameters for first semester of two semester project by supervisor

Parameter	Sub-Parameter	Maximum Marks
Literature review (15)	The literature survey is relevant, adequate and include quality references or sources	3
	Literature in support and in contrast to the proposed work are included	4
	The novelty in the project is well defined and discussed	5
	The literature review is updated till date	3
Quality of written report (15)	The categorization of the chapters is relevant and logical	3
	The flow of report is well organized and project report is free from grammatical errors	4
	Introductory pages and annexure (List of tables, figures, abstract, index etc.) are included and well placed in the report	4
	The figures, tables, charts, schemes etc. are placed at relevant places and are well discussed	4
Response to questions (20)	The candidate was well aware about the recent development and trends in the proposed area of work	5
	The candidate was confident and was able to answer the queries/ question raised with proper justifications	5
	Candidate has foreseen the procedural, resource specific, statuary challenges to carry out the proposed work	5
	The candidate was open to the observations and pertinent suggestion formulated during presentation/ Discussion	5

4.3.2 ETP viva evaluation parameters for second semester of two semester project and one semester project by internal expert

Parameter	Sub-Parameter	Maximum Marks
Innovation and applicability of proposed work (15)	The Project work has addressed any of the following a) Societal Issues b) Industrial issues c) Government issues (Policy making etc.) d) Business issue e) Environmental issues f) Conceptual g) Enrich the discipline h) News worthy i) any other (Please fill the category in reason section)	4
	The candidate has been able to generate any of the following as the outcome a) IPR generation (Patents/Copyrights/design/prototype) b) New innovations c) Quality publications d) Societal Contributions e) Policy Making * Marks can be allocated depending upon the status of publication as submitted, under review, reviewers comments received or published	8
	The project work will solve the problem at any of the following a) State level b) National Level c) International Level d)Organization	3
Execution of proposed plan of work (10)	The student was able to achieve all the formulated objectives of the proposed work	4
	All the results obtained from experimentation are significant and supports the project work	3
	All the required data has been collected and analysed properly	3
Written report (15)	The overall formatting of the report is as per the prescribed timelines	3

	The introductory pages and annexures (list of tables, figures, abstract, index, ethical committee approvals, published materials, COA etc.) are included in the written report.	3
	The content mentioned in the report is accurate and free from errors/grammatical mistakes.	3
	The plagiarism in the final report is as per the prescribed policy	3
	Adequate references/bibliography are included in the report and are in proper format.	3
Presentation (10)	The candidate is well updated about the recent developments and trends in the proposed area of project	3
	The candidate is confident while answering the questions and has an ability to remain calm under pressure.	3
	The presentation includes the relevant information and is price, correct and comprehensive	2
	The candidate is open to the observations and pertinent suggestions formulated during the presentation/ discussion	2

4.3.3 ETP evaluation parameters for final semester of two semester project and one semester project by external expert

Parameter	Sub-Parameter	Maximum Marks
Innovation and applicability of proposed work (15)	The project work has addressed any of the following a) Societal Issues b) Industrial issues c) Government issues (Policy making etc.) d) Business issue e) Environmental issues f) Conceptual g) Enrich the discipline h) News worthy i) any other (Please fill the category in reason section)	4
	The candidate has been able to generate any of the following as a project outcome a) IPR generation (Patents/Copyrights/design/prototype) b) New innovations c) Quality publications d) Societal Contributions e) Policy Making * Marks can be allocated depending upon the status of publication as submitted, under review, reviewers' comments received or published	8
	The project work will solve the problem at any of the following a) State level b) National Level c) International Level d) Organization level	3
Quality of the project done (20)	The student has achieved all the objectives of the proposed work	4
	The project has technological capabilities and is as per the market needs and requirements	4
	The project has capability to be commercially viable in terms of scale up and cost effectiveness	4
	The project work includes skill-based learning outcomes	4
	The depth and quality of the project is as per the expectation from UG level	4
Presentation (15)	The student is well aware with the latest trends of development in the proposed area of work	4
	The candidate was confident and was able to answer the queries/ question raised with proper justifications	4

The candidate was open to the observations and pertinent suggestion formulated during presentation/ Discussion	4
The presentation includes the relevant information and is precise, correct and comprehensive	3

4.4 Mandatory condition for Publishing Research Paper :

It is mandatory for all the students to have publication in the last stage of their projects as per the following table to be eligible to appear in final ETP evaluation.

Table 1: Eligibility criteria for publication in the last stage of project to be eligible to appear in final ETP viva

School/ department Name	Eligibility criteria for publication
All schools except for school of Business, school of Agriculture	Research publication in WoS (Web of Science core collection excluding ESCI)/Scopus indexed journal/conference.
School of Business	Book Chapter
School of Agriculture	Research publication in WoS (Web of Science core collection excluding ESCI)/Scopus indexed journal/conference, NAAS rated journals with rating greater than or equal to 5
Fine Arts, Multimedia, Law, Performing Arts, Film production	Publication is not mandatory

The student also needs to upload the relevant details of publication on UMS at the following link:

UMS navigation------>LMS------->Upload research project--->Publication/copyright details

The students shall not be allowed to appear for ETP viva exam for the last stage of the project without publishing research paper and uploading the same on UMS as mentioned above.

Important point:
1. Only those publication or book chapters shall be considered towards the minimum eligibility criteria to appear in the final ETP which are affiliated to Lovely Professional University and the name of the students as well as the supervisor is mentioned in the list of authors in the publication.

2. The research publication must be related to the project work undertaken by the students. Research paper published which is not in sync with project topic shall not be considered towards mandatory condition of publication or for academic benefits.

3. Irrespective of the stage of project ({Project-I or Project-II), student shall always communicate paper with consent of his/her project supervisor.

4. Research paper communicated must be original work of student. At any point of time, if a student is found to be presenting the project research work of someone else it shall be treated as case of academic misconduct and can be treated accordingly. All matters related to academic misconduct will be dealt as per the university policy on academic misconduct.

4.5 Additional Academic benefit for students having publications in intermediate stages of their project courses

It is not mandatory for the students to have research publications in the intermediate stages of their project courses. However, in case a student is able to have research publication in WoS (Web of Science core collection excluding ESCI)/Scopus indexed journal/conference, NAAS rated journals with rating greater than or equal to 5 in the intermediate stages of the project, an additional academic benefit shall be awarded to the student.

Important points
1. Academic benefits shall be added to overall final marks subject to condition that maximum marks attained shall not exceed 100 marks.
2. In case more than one research paper is published in a single project term, the academic benefits as mentioned above shall remain same and will not be multiplied according to count of research papers.

CHAPTER-5

Award of grades for project courses

5.1 Award of passing grades

The student shall be awarded pass grade (O, A+, A, B, C, D) on the basis of satisfying the following criteria:

a) Submission of final report in offline/online mode as required and communicated by DPI.
b) 50 or greater than 50 marks in CA and ETP taken together and
c) Minimum of 40 percent marks in ETP evaluation.

5.2 Award of 'R' grade and online 'R' grade registration

There is no provision of award of E grade in project courses. The student can either be awarded as R grade or F grade in case student is not able to pass the course.

"R" grade stands for resubmission. In case a student is awarded this grade, then one is required to re-submit the report and reappear for ETP viva again as per the UMS announcement made time to time.

a. In case where the student has not appeared in either of the final ETP or the R grade viva due to some reasons like medical issues etc. one extra chance to appear in the R grade shall be given to the students. However, in all such cases, the students need to pay the fee as applicable for F grade. If the student misses even the 3rd chance to appear in ETP, no further chance will be given and the grade shall be converted into F grade.

A student will obtain "R" grade in the following cases:

a. In case the student fails to submit the report in all the permissible time limits.
b. In case a student is unable to secure enough marks to meet the passing condition.
c. In case a student is absent in ETP Viva.

The following should be kept in mind for the applicability of R grade:

1) Registration for R Grade shall be conducted online via UMS interface for R Grade Registration provided by Examination as per prescribed timelines by DPI.
2) After award of "R" grade, student will be required to pay a resubmission fee of Rs. 1000 within 15 days of declaration of result.
3) R grade ETP viva shall be taken as per schedule prescribed by DPI.
4) If the student is unable to pass in the R grade Viva at first instance, then one additional chance to reappear in R grade ETP viva shall be given to student subject to section 5.2a.
5) Students who require hostel facility to pursue project work during summer vacation or due to pendency of their ETE (reappear) or due to any other reason will be required to pay the prescribed hostel charges.

6) In case a student obtains "F" grade in Capstone-I in a particular term, then the student shall be automatically de-registered from Capstone-II in the upcoming next term and shall be allowed to complete capstone-I in that term.

7) In case "R" grade is awarded due to non-submission of report in all the permissible time limits, the student will get one chance to clear the "R" grade and it will be within one month from declaration of result in case of both Autumn as well as Spring Term. If the student does not submit the report as per prescribed timelines or does not appear in the exam or fails it, "F" grade will be awarded.

8) "R" grade will be awarded to student not to the group as a whole. Thus, Resubmission fee shall be paid by each student (who has been awarded R grade) individually not by group as a whole.

9) Late fee of INR 2000/- shall be applicable for all R-grade registration done beyond the prescribed timelines as specified by DPI up to one week from the last date of registration without fine.

5.3 Award of 'F' grade and online 'F' grade registration

F grade shall be awarded to the student in the following cases:

a) The student could not pass the R grade viva.

b) The student did not appear in R grade viva.

c) The student did not submit his project report after award of "R" grade.

d) The student did not register himself/herself in for R Grade for appearing in R grade viva as per prescribed timelines by DPI.

In case of "F" Grade the student is required to re-register for the course in the next term. The student is required to repeat the project and rewrite the report.

Any school/department that seeks to deviate from this policy for Capstone Project courses, will need to take due approval from competent authorities.

In case of any concern, please contact Mr. Manu Prakram (COC- Academic Evaluation Cell) or through e-mail at: aerc@lpu.co.in

Annexure-I

Monthly progress report format

Registration No: _____ Name of student: _____

Title of capstone project: _____

Period of progress report: From _____ to _____

Total scheduled classes in the month_____ Total classes attended in month_____

Target activities of the period:

1. _____

2_____

Achieved target activities:

1. _____

2_____

Description of activity: _____

List of tasks carried out to achieve the target.

1. _____

2_____

Can you relate the target activities to components of capstone project report? (Please tick correct option)

Yes ☐   No ☐

If yes list the capstone project report components.

1. _____

2_____

Specific outcomes of the target activities of period:
_____

Percentage of activity completion: _____%

Any Challenges/issues faced during period: _____

Planned activities for next month:

1. _____

2. _____

Signature of student:

Remarks by Supervisor: _____

Signature of supervisor

Annexure-II

Request for extension in final report submission

Student Name _____

Registration Number _____

Program Code _____

Program Name _____

Batch Year _____

Session & Term _____

Course Code _____

Course Title _____

Name of the Project Supervisor _____

UID of the Project Supervisor _____

Project Topic & Specialization _____

Original Submission Date _____

Requested Extension till Date _____

Date of Submitting Extension Request _____

Reason for Extension Request _____

Signature of Student: _____

Remarks of project Supervisor along with signature:_____

Remarks of Academic Operation Coordinator: Date:

Remarks of Chairperson of PAC (HOS)   Date:

Remarks of Division of Examination: Date:

Decision of Higher Authorities:

Decision (Granted/Rejected)	
Extended Submission Date	
Signature of Higher Authorities	Date:

Note: The student must be informed about the decision within 3 days of outcome by respective AOC.

Hard bound cover

Title of the work

A project report

Submitted in partial fulfilment of the requirements for the award of degree of

Name of Programme

(Specialization)

Submitted to

LOVELY PROFESSIONAL UNIVERSITY

PHAGWARA, PUNJAB

From MM/DD/YY to MM/DD/YY

SUBMITTED BY

Name of student   **Name of Supervisor**

Registration Number   **UID of Supervisor**

Title of the work

A project report

Submitted in partial fulfilment of the requirements for the award of degree of

Name of Programme

(Specialization)

Submitted to

LOVELY PROFESSIONAL UNIVERSITY

PHAGWARA, PUNJAB

From MM/DD/YY to MM/DD/YY

SUBMITTED BY

Name of student	**Name of Supervisor**
Registration Number	**UID of Supervisor**
Signature of student	**Signature of Supervisor**

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Annexure-V

Declaration by student

To whom so ever it may concern

</div>

I, **Name of the student, Registration Number of the student,** hereby declare that the work done by me on "**Topic of the project**" under the supervision of **Name of the supervisor**, **Designation,** Lovely professional University, Phagwara, Punjab, is a record of original work for the partial fulfilment of the requirements for the award of the degree, **Programme name.**

Name of the Student (Registration Number)

Signature of the student

Dated:

Annexure-VI

Declaration by the supervisor

To whom so ever it may concern

This is to certify that **Name of the student**, **Registration Number** from Lovely Professional University, Phagwara, Punjab, has worked on "**Topic of the Project**" under my supervision from. It is further stated that the work carried out by the student is a record of original work to the best of my knowledge for the partial fulfilment of the requirements for the award of the degree**, Programme name**.

Name of Supervisor

UID of Supervisor

Signature of Supervisor