PDPM
Indian Institute of Information Technology, Design & Manufacturing (IIITDM) Jabalpur

Manual of Procedures and Guidelines for Project Based Internship

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Preamble

The document contains the broader guidelines and procedures for implementation of Project Based Internship (PBI). We expect this document to evolve with experience.

1. Introduction

The academic curriculum of PDPM Indian Institute of Information Technology, Design & Manufacturing (IIITDM) Jabalpur focuses very strongly on hands on experience, interdisciplinary education and project oriented learning. Its agenda is to produce graduates who are not only technically competent but also possess other skills like capability to learn through experience, critical thinking, practical aptitude and ability to synthesize the solution. It also recognizes that not all aspects of learning can be taught in the conventional way of classroom (or laboratory) teaching methodology. Realizing that there are important elements of learning in an organization, the Institute has opened its academic programme for approximately six months long project-based internship (PBI) opportunity to its students to be executed after the completion of sixth semester. The internship aims to provide on-the-job experience or exposure to ongoing research and development in an organization under the supervision of able practitioners/researchers. The internship would contribute to the development of a student's comprehension on technical skills, knowledge and practical problems.

2. Goals and Objectives

The basic goal of the Project-based Internship is to make the students gain meaningful experience so as to help them meet their future career goals. Besides, it will help the students practice the theory taught in the classrooms and to make them understand how the real world functions. The primary objectives of the internship include:

1. To satisfy curiosity and hone research potential at research organizations for the research minded students,
2. To obtain on-job experience in an industrial / commercial, research or educational environment,
3. To provide a platform to students in applying whatever learnt in theory and to integrate theory with practice,
4. To enable the students understand the functional behavior of organizations and to sensitize the students towards corporate/industrial behavior, man-machine management, entrepreneurship, industrial safety,
5. To provide opportunities to students to work with industrial practitioners,
6. To expose students to potential employers and
7. To help students develop the personality and soft skills.

3. Execution of Internship

3.1 Internship Components

The internship shall include some or all of the following components:
- Hands-on training
- Real project-based assignments

- Research-based activities
- Team-work activities
- Leadership and management skills
- Safety awareness

3.2 Duration

The period of internship would be of 25 weeks starting from May / June (but not later than first week of June) to the month of November every year. Students who have completed their Semester VI will be eligible to undergo such internships.

3.3 Approved Organizations for PBI

The Project Based Internship has to be carried out in-house (PDPM IIITDM Jabalpur) or at an institute / university of repute in India or abroad like IISc, IITs, etc.; government research labs like DRDO, ISRO, BARC, etc. or in some renowned IT, design, electronics, manufacturing, consultancy company / industry. The renowned industry / company may be generally defined (not necessary limited to these parameters) in terms of nature of work profile, employees strength, annual turnover, national/ international technology impact, registration on BSE / NSE, societal worthiness and outlook, etc. The internship may also be carried out at some strong upcoming small scale start-up company that might be contributing to real product development / design problem and provide an excellent opportunity for learning to the students. The list of the organizations where a student will undergo internship has to be formally approved by a committee (Internship Board – IB) setup for the purpose. From now on the term 'unit' shall refer to such organizations.

3.4 Internship Board (IB) and Intern Supervisors

The Internship Board will consist of five members with at least one faculty member from each of three engineering disciplines CSE, ECE and ME. Names of members of the IB will be recommended by Convener UGCS and will be approved by the Chairperson, Senate.

The intern will be required to work under at least one internal faculty member as his/her Intern / Project Supervisor and one project supervisor from the unit if the student intends to work outside the Institute. These supervisors will work as mentors for the students in achieving their project goals.

4. Responsibilities of the Institute

The Placement Cell of the Institute will seek information from each of the approved units about the number of possible internships each year and the same will be announced to the students. Applications will be invited from the students and units/Institute will offer the students a project based internship based on the merit and students past record of projects. The Institute will gradually build a list of such reputed units where a student is allowed to do PBI. All the students are required to get the place of their internship formally approved by IB latest by April 15 of the year, in which they are proceeding for

internship. This will be called "Pre-Project Approval". Normally the PBI will be pursued only at one unit. In special cases, the internship may be split up at two units depending on the project need and/or for gaining more independent experience. For example, the PBI can be divided at the site of one of the Japanese consortium partner and at some other organization / Institute) with prior approval of the IB such that the total duration of internship is approximately six months (including evaluation) and the respective time spent at the two organizations are perceived to be sufficient for meaningful interactions and output. While splitting the project in two different places, the continuity of the project has to be ensured and the duration at both the places must be significant.

The Institute will also make efforts to enter into agreement with some of the reputed units for providing project based internships to students. Each year a list of such units and number of internships available will be announced by the Institute in the month of February and applications from concerned students will be invited by the Institute. Based on the academic performance, interest and the previous projects done by students, they will be selected to do project based internship at a particular place. Consent of the faculty to become internal project supervisor in case of external project based internships will also be obtained in advance by the academic office.

Apart from this, 3-5 topics will be invited from the faculty also for in-house project based internships and the same will be announced to the students by the UGCS convener well in advance.

The Institute would also fix the dates of the continuous project assessment in advance and specified in the academic calendar every year

5. Responsibilities of Intern

The student joining as an intern in any organization has to work towards (a) enhancing her/his technical competency. The primary objective of the intern is to derive a learning experience to match her/his career goals and/or academic interests and (b) satisfy the professional expectations of the organization providing internship from the intern. Students are advised to seek new types of on-job educational experiences and get actively involved by the mentors at their respective units. Besides, the student's responsibilities would include:

1. Ensuring that the student completes the PBI within the stipulated time and manages arising matters and all issues pertaining to the internship either with the Institute or with the host organization.
2. Submission of a short "Fortnightly Work Experience Report (FWER)" to his/her Intern Supervisor(s) within a week from the completion of each fortnight of his/her internship.
3. Submission of detailed final written report to the Internship Evaluation Board (defined later in this document in section 9) through Intern Supervisor(s) at the end of her/his internship.
4. Presentation of a seminar and participation in oral examination to be held in the Institute. The Internship Evaluation Board will assign the date, time and place for the seminar.
5. Submission of a confidential evaluation report from intern's immediate project supervisor(s) at the host unit regarding his internship performance.

If a student wishes to withdraw from an external PBI due to some genuine difficulty; although not encouraged in general, may be considered in exceptional circumstances. In such case, the student would be asked to submit his application for withdrawal within one week of the start of internship and the decision on such application will be taken by the Convener, UGCS in consultation with the Chairperson, Senate. A student working on an external project may be called back by the Institute if the external supervisor(s) gives an unsatisfactory report up to mid-term. The student will be required to complete rest of the internship at the Institute under the internal project supervisor of the student.

6. Responsibilities of Supervisor(s)

The supervisor(s) will keep track of the progress of the internship by way of e-communication or direct communication and discussions and by evaluating the FWER on regular basis. They will guide the students in conceiving and refining the ideas and their implementations and technical advancements. As mentioned before the supervisors will act as mentors of the interns. They will also be responsible for submitting two interim and one midterm review and evaluation of the student's internship. The documents submitted by the supervisor(s) will be called interim evaluation report.

7. Responsibilities of the Host Unit

The major responsibility of the host unit is to provide a suitable position for the intern, preferably on an ongoing or futuristic turnkey/ research/ developmental project being carried out by the unit. Although the Institute would certainly appreciate the payment of compensation for the services rendered by the student intern to the host organization, it is understood that this is a prerogative of the host unit and all aspects related to TA/DA/internship amount should be mutually decided by the student and the host. The host organizations are requested to:

1. Provide an immediate project supervisor who is willing to mentor the intern on a relevant project and keep a track of the performance. The supervisor/host organization must give his/her consent in writing to the Institute.
2. Agree to allow on-site visit by the Intern Supervisor from IIITDM.
3. Guide the intern in obtaining his/her internship objectives in continuous and uninterrupted manner.
4. Complete the intern's evaluation report at the conclusion of the internship.
5. Provide a confidential assessment report on the work done by the intern at the conclusion of her/his internship. The report should preferably be on unit's letterhead.

8. Interim and Midterm Reports

The purpose of the intern's interim and midterm reports is to do documentation of his/her experiential learning during each fortnight and to continuously assess the progress of the internship. The objectives of reports include:

1. To update the Intern Supervisor(s) on the work experiences of the intern.
2. To provide the student with a record of his/her learning experience and to continuously assess the progress of the internship.
3. To guide the students to evaluate the progress of his/her work vis-à-vis with the stated intern objectives.

9. Final Written Report

At the end of the internship, the candidate has to prepare and submit a comprehensive written report of her/his internship experience to the Internship Evaluation Board through Intern Supervisor(s). The final written report would also help in assessing the effectiveness of the internship in terms of stated objectives. Further, it will provide an opportunity for fellow students and faculty members to benefit from intern's experience. The final written report would be one of the requirements on the basis of which grades for PBI will be awarded.

10. On-Campus Seminar and Oral Examination

At the end of internship, students will be required to present a seminar in the campus that will focus on the review of individual experiential learning. The students should be ready to present their intern observations and experiences and justify how they plan to utilize this experience for enhancing their career goals. The students would be advised to bring copies of projects, design layouts/flowcharts, drawings / CAD models/ code, photographs, technical manuals and relevant materials that have been associated during their internship, provided they have the permission of the unit to bring the same to the Institute.

11. Evaluation of the Internship

The evaluation will be done for individual students. Progress of the project will be continuously assessed by the Intern / Project Supervisor(s) in the form of two (midterm) interim evaluations (IEs). The final evaluation (including mid-term reviews) would be done by an "Internship Evaluation Board" that will also include the evaluation by "External Project Supervisor(s)" (for students who have gone to external units). One Evaluation Board will assess all the projects falling in the similar domain of expertise.

The Evaluation Board would comprise 3 members other than the Intern / Project Supervisor(s) of the student. At least one faculty member of the board should belong to the discipline other than the discipline of the candidate. The Intern/ project supervisor would act as the Convener of the Evaluation Board.

The following is the first set of guidelines that has emerged and may be used as a template for the grading pattern

Project Assessment		
Reviews	**Weightage (in percentage)**	**Executed by**
CASE I: In house Projects		
Interim Reviews (two in number)	40	Project Supervisor(s)
Mid Term Review (Report Based)	20	Project Supervisor(s)
Final Review	40	Project Evaluation Board
CASE II: Externally Carried out Projects		
Interim Reviews (two in number)	40	Internal Project Supervisor(s) + External Project Supervisor(s)
Mid Term Review (Report Based)	20	Internal Project Supervisor(s) + External Project Supervisor(s)
Final Review	40	Project Evaluation Board
Total	100	

- The grades for PBI may be awarded after proper moderation of the marks assigned by different Evaluation Boards.
- Each project may be carried out by minimum of one student and maximum of three.
- The duration for project review presentations will be 20-30 minutes including discussions.
- Publication in a referred conference/journal based on the project will be highly appreciated.
- The outcome of the project based internship must be recorded and in case it comes out in the form of a patent, then necessary formalities to patent the product should be taken up at the Institute level/by the project supervisor.
- A student on internship would be governed by term and conditions as on duty in the campus.
- Before departing for internship, a student has to give a signed undertaking on the prescribed format to the Academic Office.